Best practices in B@B
Compilation of case studies per sector

The European Union Business and Biodiversity Platform
October 2011
Introduction

Companies across Europe are increasingly recognizing the benefits of implementing pro-biodiversity actions, either to mitigate risks or capture new opportunities. As they become more accustomed to managing biodiversity alongside other environmental and social issues, they are also beginning to report on their practices.

To support the efforts of companies to report on their practices, the European Commission has developed a prototype list of key criteria which was made available to the members of the EU Business and Biodiversity Platform in 2011:

Prototype List of Criteria for Reviewing Company Biodiversity Practices

1. **Addresses biodiversity components?** Is the study clear about which of the four components of biodiversity it addresses: landscapes, ecosystems, species and/or biological resources?¹

2. **Addresses biodiversity objectives?** Is the study clear about which of the four biodiversity objectives it addresses: conservation of biodiversity, sustainable use of biological resources, equitable sharing of the benefits, and development outcomes (especially for cases in developing countries)?²

3. **Based on a corporate biodiversity policy?** Does the study clearly link the case to the company's biodiversity policy?

4. **Clear linkages to government biodiversity policies and regulations?** Does the study clearly link the case to relevant international, regional and national biodiversity policies and regulations?

5. **Integrated into a corporate biodiversity action plan?** Does the study show how the case is clearly linked to the company's biodiversity and action plan?

6. **Biodiversity performance indicators?** Does the study clearly describe which biodiversity performance indicators which are used in the case?

7. **Biodiversity performance monitoring and reporting?** Does the study clearly describe the performance monitoring and reporting processes for the case?

8. **Independent verification?** Does the study clearly explain whether and how the case has been independently verified?

9. **Sustainability of the biodiversity action(s)?** Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable?

10. **Replicability of the biodiversity actions(s)?** Does the study provide guidance on the how the case could be replicated or scaled up across the company or the sector?

11. **Is the ecosystem/habitat/species important?** E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?

12. **How extensive is the impact?** E.g. What is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects?

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¹ The CBD term for landscapes in the definition of biodiversity is ‘ecological complexes.’ Also, biological resources include genetic resources.

² The first three of these objectives are set out in Article 1 of the CBD, while the development objective is specified as an ‘overriding priority’ in the Preamble.
14. **Environmental benefit, including:** Integrating legal and ecological constraints and especially the European biodiversity policies — Birds and Habitats Directives, and Natura 2000 — into strategies considering the value chain with a sustainable sourcing policy.

A **prototype template** for reporting case studies of company best practices was also provided. This template was used by most of the submissions.

<table>
<thead>
<tr>
<th>Best Practice Case Study Prototype Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant name:</td>
</tr>
<tr>
<td>Contact person:</td>
</tr>
<tr>
<td>Address:</td>
</tr>
<tr>
<td>Telephone number:</td>
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<tr>
<td>Email address:</td>
</tr>
<tr>
<td>1. Background and Objectives</td>
</tr>
<tr>
<td>2. Description</td>
</tr>
<tr>
<td>3. Activities</td>
</tr>
<tr>
<td>4. Results</td>
</tr>
<tr>
<td>5. Please indicate which criteria match your case (see the attached list [above])</td>
</tr>
<tr>
<td>6. Any additional information (links, report, etc.)</td>
</tr>
<tr>
<td>7. Photo related to the case</td>
</tr>
</tbody>
</table>

With the use of the list of criteria and the template, in 2011 companies and industries associations have provided a first set of self-assessed best practices for the EU Business and Biodiversity Platform. Organised by sector, these cases provide evidence of the real commitments by companies to address biodiversity strategically and evidence of the substantive impacts of their pro-biodiversity actions.
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Agriculture
1. **EISA — European Initiative for Sustainable Development in Agriculture**

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**Best Practice Publication:** European Integrated Farming Framework

**Background and Objectives**

The EISA Integrated Farming Framework is a detailed document including guidelines, practices and suggestions for agricultural production, covering a wide range of aspects such as soil management, animal husbandry, landscape, wildlife and biodiversity. Even though the EISA framework is not meant to be a standard or an auditing scheme, demonstration / documentation are recommended for giving evidence of developments on farm.

The European Initiative for Sustainable Development in Agriculture (EISA) was founded with the common aim of developing and promoting Integrated Farming throughout Europe. Integrated Farming is a sustainable system, which helps farmers improve the way they farm for the benefit of the environment, the profitability of their business and social responsibility, including all important aspects of sustainable development.

1. **Description**

The IF Framework is a tool to enhance the farm business. A complete documentation of all quality systems and potential whole farm audits is suggested. Farm environmental plans and other records are recommended as they allow for monitoring and benchmarking for performance.

The Framework should be understood and used as a tool on two different levels:

- For an individual farmer (farm owner, farm manager), the EISA Framework offers a comprehensive management tool which may help to raise further awareness and continually improve everyday practice on farm in order to meet future environmental, economic and social challenges and hence achieve parallel progress in all dimensions of sustainable development.

- The EISA Framework presents a definition and characterization of Integrated Farming, giving the basis for a common understanding for political credibility and as the foundation of EISA itself. The framework can help influence potential legislative incentives and/or guidelines. It can be applied all over Europe, helping to harmonise agricultural performance through its forward looking and innovative approach.

2. **Activities**

The EISA Integrated Farming Framework has been developed as a workable system to address economic, environmental, social, and welfare issues. The eleven chapters are as follows:

- Organisation, Management and Planning,
- Human and Social Capital,
- Energy Use and Efficiency,
- Water Use and Protection,
- Climate Change and Air Quality,
- Soil Management,
• Crop Nutrition,
• Crop Protection,
• Animal Husbandry and Animal Health,
• Landscape, Wildlife and Biodiversity and
• Resource Management, Product Storage and Waste Disposal

Each chapter is divided into sections such as “General Considerations”, “Decision Making Process”, “Implementation of Measures on Farm” and “Evaluation”. This structure allows for detailed planning, thorough implementation and continuous evaluation of results and side effects, leading to improvement in farming practices.

Protecting and enhancing the wildlife and biodiversity of the landscape is of great importance within the concept of Integrated Farming. Management practices should consider biodiversity effects such as the thread to larches during mechanical weeding. The structural diversity of land and landscape features will create floral and faunal abundance and diversity.

4. Results

Management plans play a key role in the IF Framework. These plans have to be understood as the concepts for the farming and business policy of an individual farmer rather than lengthy documents. Such plans, concepts or policies can be seen as management tools which help farmers to identify targets, strategies and measures in the development of their enterprises in terms of environmental, social and economic advancement. In this context, the “Demonstration / Documentation” measures addressed in the Framework offer double benefits to the farmers: On the one hand, whilst keeping precise track of all inputs in terms of labour, feed-stuff, water, fuel, fertiliser, crop protection products, and other operating resources, the farmer will be able to evaluate the efficiency of the whole enterprise as well as the individual areas, hence allowing for a further development and fine-tuning of strategies and measures. On the other hand, demonstration and documentation can be used in all communication processes with clients, interest groups, authorities, and the general public, and so offers manifold chances to improve understanding, acceptance and trust.

In spite of the detailed characterisation of IF, however, the EISA Framework provides the flexibility for the farmers to meet the needs specific to their farm, location and situation. It is this dynamic quality of IF to embrace technology that is permanently developing that will make a difference to farmers to meet the challenges of modern farming, improve their performance and move their business forward.

5. Criteria

The following criteria are the most relevant:

1. Addresses biodiversity components
2. Addresses biodiversity objectives
4. Clear linkages to government biodiversity policies and regulations
5. Integrated into a corporate biodiversity action plan
6. Biodiversity performance indicators
8. Independent verification
11. The ecosystem/habitat/species are important

Integrated Farming goes beyond simple compliance with current farming regulations, reinforces the positive impact of farming practices on the environment and reduces their negative effects, without losing sight of the profitability for the farm.

Integrated Farming is geared towards the optimal and sustainable use of all farm resources such as farm workers, livestock, soil, energy, water, air, machinery, landscape and wildlife. This is achieved through the integration of natural regulatory processes, on-farm alternatives and management skills, to make the
maximum replacement of off-farm inputs, maintain species and landscape diversity, minimise losses and pollution, provide a safe and wholesome food supply and sustain income.

6. Additional information

http://www.sustainable-agriculture.org/

2. Agricultural entrepreneur ‘Hoeve Engelendael

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Telephone number: +32 (0)2 234 30 00
Email address: legal@elo.org

Best Practice Publication: Agricultural entrepreneur ‘Hoeve Engelendael

1. Background and Objectives

Hoeve Engelendael is an agricultural entrepreneur running an arable farm in Flanders. Since 1993 the entrepreneur started implementing measures to support nature and landscape on the farm on his own initiative.

2. Description

And

3. Activities

Initially these measures consisted of small landscape elements such as tree rows and ditches with reed. Gradually the measures were extended with larger scale activities such as plantation of shrubs and woodland, still on own initiative until 2007.

As from 2006, the entrepreneur adopted a more strategic approach towards diversification of his farm practices towards a multifunctional agricultural business. The thinking behind this was that this approach would create new economic value to the natural and cultural values of the surrounding environment and the farm itself. Also on the mid-term the economic value-added created by the diversification strategy would ensure continuity of the project and on the long term even continuity of the multifunctional farm by adoption of the approach by a successor.

In addition to the measures that are oriented towards increasing the biodiversity and landscape value and offering multiple uses, the process of implementing the measures involved a range of stakeholders. The farmer cooperated with the regional authorities (Province of Oost-Vlaanderen), a government agency (Flemish Land Agency – and EU B@B Platform participant), a local authority (municipality of Sint-Laureins), a water board, a tourism board, regional development platform, local NGOs etc. By adopting such participatory process the farmer ensured wide ownership of his approach and the results of it and at the same time arranged for wider uptake by other farmers in the region.

4. Results

The strategy or specific components of it (selected agri-environmental measures) were included in a number of regional, national and European projects, through which funding and outreach was generated. This ensures that the business approach adopted by the farmer will have a multiplier effect by demonstrating that agricultural practices can go hand in hand with biodiversity measures combined with other uses of the farm (such as education and recreation) and still be economically viable.

5. Criteria

The following criteria are the most relevant:

1. Addresses biodiversity components
2. Addresses biodiversity objectives
The case study clearly addresses a business performance regarding landscapes, ecosystems and biological resources as well as the conservation of biodiversity and the sustainable use of these resources given the fact that the measures that are oriented towards increasing the biodiversity and landscape value and offering multiple uses.

9. Sustainability of the biodiversity action(s)
10. Replicability of the biodiversity actions(s)
12. How extensive is the impact

The case study indicates that the biodiversity actions of the case are sustainable, since the entrepreneur adopted a more strategic approach towards diversification of his farm practices towards a multifunctional agricultural business which would ensure continuity of the project on the long term. This also allows that the business approach adopted by the farmer will have a multiplier effect for wider uptake by other farmers in the region. The involvement of the wide range of stakeholders makes the impact even more extensive and adopting such participatory process is also a key for sustainability on the long term.
3. Syngenta International - Sustainable agriculture and stewardship
EAME

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Telephone number: 00 41 61 323 5980
Email address: Bernard.Vivier@syngenta.com

1. Background, Purpose and Objectives

Farm for food, farm for biodiversity

Farmers need to produce food. They are also providers of public goods. Productive farms can operate in harmony with nature and contribute to a sustainable future through good management. A healthy farm environment supports a wide diversity of species and ecosystems living in natural equilibrium whilst producing profitable yields in field.

Purpose

To demonstrate that productive and competitive agriculture in Europe is compatible with the protection and enhancement of natural resources and biodiversity.

Objectives

- Showcase best practices and innovative approaches on ‘real farms’
- Challenge prejudices about modern agriculture
- Inspire farmers, food chain partners and political decision makers about sustainable agriculture
- Position Syngenta as a partner for our customers in helping them to achieve the sustainable intensification of agriculture in Europe

2. Description

The Interra farm network has a multiple functional approach. This approach is shared among the Interra team member and different criteria are taken into consideration. Base line surveys are performed and proposals are made to address particular concerns. Regular surveys are monitoring the progress made.

3. Activities

We have actually three farms running-One in Geispitzen (close to Basel)-on in Itres (South of Brussel)-one in Jeallots Hill (South of London). Specific support can be also provided on ad-hoc needs.

4. Results

The table shows the different criteria taken into account, actions put in place and results achieved on each farm
<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>ITTRES</th>
<th>JH</th>
<th>GEISPITZEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biodiversity monitoring (external experts-botanist-ornithologist)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey on flora</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey on insects</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey on birds and mammals</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Survey on aquatic</td>
<td>Not yet planned</td>
<td>yes</td>
<td>not yet planned</td>
</tr>
<tr>
<td><strong>Landscaping and Agricultural practices</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation pollinator strips</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Birds feeding areas</td>
<td>yes</td>
<td>yes</td>
<td>not yet planned</td>
</tr>
<tr>
<td>Set asides</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Bees - hives</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Run off margins</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Others</td>
<td>erosion</td>
<td></td>
<td>Improve local flora</td>
</tr>
<tr>
<td>No Till</td>
<td>yes</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Cover crops during winter</td>
<td>planed in 2012</td>
<td>planed in 2012</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Communication plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country communication</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Stakeholders site visit</td>
<td>yes</td>
<td>yes</td>
<td>Planed in 2012</td>
</tr>
<tr>
<td>Visual identity materials prepared by external agency</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Syngenta employees visiting the farm as part of training</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td><strong>Good agricultural practice (GAP)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training - farmer safety</td>
<td>Planed in 2012</td>
<td>Planed in 2012</td>
<td>Yes AARA</td>
</tr>
<tr>
<td>Various (Heliosec)</td>
<td>Heliosec* in 2011</td>
<td>Heliosec*</td>
<td>Heliosec*</td>
</tr>
<tr>
<td>Certification</td>
<td>Planed in 2012</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>BMP implementation</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Treatment advice and crop solution</td>
<td>Planed in 2012</td>
<td>Planed in 2012</td>
<td>Planed in 2012</td>
</tr>
<tr>
<td>Optimisation and calibration of the spraying material</td>
<td>yes</td>
<td>yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Weather station</td>
<td>yes</td>
<td>not yet planned</td>
<td>not yet planned</td>
</tr>
<tr>
<td><strong>Economics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm economics-optimising production parameters</td>
<td>Planed in 2012</td>
<td>yes</td>
<td>Planed in 2012</td>
</tr>
<tr>
<td>Carbon footprint</td>
<td>not yet planned</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Farm produce commercialization</td>
<td>Planed in 2012</td>
<td>yes</td>
<td>Planed in 2012</td>
</tr>
<tr>
<td>Subsidies support</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Various</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Heliosec*: tool to purify spray washing water
5. Please indicate which criteria match your case (see the attached list?)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Addresses biodiversity components?</strong> Is the study clear about which of the four components of biodiversity it addresses: landscapes, ecosystems, species and/or biological resources?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2. <strong>Addresses biodiversity objectives?</strong> Is the study clear about which of the four biodiversity objectives it addresses: conservation of biodiversity, sustainable use of biological resources, equitable sharing of the benefits, and development outcomes (especially for cases in developing countries)?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>3. <strong>Based on a corporate biodiversity policy?</strong> Does the study clearly link the case to the company's biodiversity policy?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>4. <strong>Clear linkages to government biodiversity policies and regulations?</strong> Does the study clearly link the case to relevant international, regional and national biodiversity Policies and regulations?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>5. <strong>Integrated into a corporate biodiversity action plan?</strong> Does the study show how the case is clearly linked to the company's biodiversity and action plan?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>6. <strong>Biodiversity performance indicators?</strong> Does the study clearly describe which biodiversity performance indicators which are used in the case?</td>
<td>Yes. We are following performance indicators like the ones of the British trust Ornithology.</td>
<td></td>
</tr>
<tr>
<td>7. <strong>Biodiversity performance monitoring and reporting?</strong> Does the study clearly describe the performance monitoring and reporting processes for the case?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>8. <strong>Independent verification</strong>? Does the study clearly explain whether and how the case has been independently verified?</td>
<td>Yes. Our approach and average initiatives benefits from the partnerships with Universities, Governmental bodies etc.</td>
<td></td>
</tr>
<tr>
<td>9. <strong>Sustainability of the biodiversity action(s)?</strong> Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable?</td>
<td>Yes. Monitoring of indicator species.</td>
<td></td>
</tr>
<tr>
<td>10. <strong>Replicability of the biodiversity actions(s)?</strong> Does the study provide guidance on the how the case could be replicated or scaled up across the company or the sector?</td>
<td>Yes Official process indicates how a case can be replicate.</td>
<td></td>
</tr>
<tr>
<td>11. <strong>Is the ecosystem/habitat/species important?</strong> E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?</td>
<td>While we usually do not intervene in any specific protected area (e.g. Natura 2000) sites we have cases of farms</td>
<td></td>
</tr>
</tbody>
</table>
Established next to habitat conservation sites. In any case a specific attention is paid to the introduction of indigenous species.

| 13. **How extensive is the impact?** E.g. What is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects? | We should expand the Interra network across other countries in EU and North Africa |

6. **Any additional information (links, reports...)**

British trust of Ornithology (BTO) annual review report 2011-BTO and business
BTO - EDF Business Bird Challenge 2010 - Awards Presentation [Birds & Business Alliance](#)


7. **Photo related to the case**

![Information posters at Itres](image1)

![Flowering strip at Itres](image2)
Training on operator safety of a group of Polish people

Insects monitoring via IPod. Results are automatically uploaded to the central database
4. McDonald’s Europe

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Best Practice Publication: McDonald’s Europe - Flagship Farms

1. Background and Objectives

The 3-year project has been developed by McDonald’s in conjunction with the Food Animal Initiative (FAI) to encourage sharing of sustainable agricultural practices and to demonstrate the long term commitment to agriculture that the company has.

2. Description

Europe has long been a leader of agricultural progress globally, in its development and use of techniques and technology. Sharing good practices is a great way of driving improvements in sustainable agriculture. This project aims to establish a direct dialogue amongst progressive farmers across Europe, and to facilitate the sharing of sustainable farming concepts across the producer network. These progressive farmers are keen to demonstrate the good practices they have adopted and are striving to continuously develop progressive sustainable practices.

Each ‘Flagship Farm’ is outlined in a case study and demonstrates practices that are scientifically valid, and supported by NGOs and other key stakeholders. The practices we have measured each farm against are outlined in our Good Practice Matrix.

3. Activities

McDonald’s has developed this matrix to outline the areas that we consider important in sustainable agriculture. This structure is not designed to be exclusive; there are many additional issues facing agriculture and these issues can be structured / categorised in any number of ways. We have chosen to work with this structure so that we can simply demonstrate good practice through our flagship farms case studies in these broad areas.

Farms must demonstrate good practice in selected areas on the Good Practice Matrix (Ethical, Environmental, and Economic).
### Results

The criteria that farms must meet before being included in the Flagship Farm programme include the following:

1. The farms must operate **good agricultural practices** generally and the farmers must be comfortable **sharing these good practices** and also striving for continuous improvement.
2. The farms selected will show industry/local market **leading practices** under some of the following areas.
   - **Ethical**: human welfare and labour rights, animal health and welfare.
   - **Environmental**: climate change, biodiversity, natural resources, agro-technology.
   - **Economic**: local economies, affordable food.

<table>
<thead>
<tr>
<th>Ethical (acceptable practices)</th>
<th>Environmental (protecting the planet)</th>
<th>Economic (long-term economic viability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Health &amp; Welfare</td>
<td>Climate change</td>
<td>Sufficient high quality production</td>
</tr>
<tr>
<td>Employee health &amp; welfare</td>
<td>Greenhouse gas emissions</td>
<td>Producer income security &amp; access to market</td>
</tr>
<tr>
<td>Food safety</td>
<td>Energy efficiency &amp; renewables</td>
<td>Agricultural input costs</td>
</tr>
<tr>
<td>Animal Health &amp; Welfare</td>
<td></td>
<td>Crop &amp; livestock disease</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Natural Resources - soil</td>
<td>Community investment</td>
</tr>
<tr>
<td>Medication &amp; growth promoters</td>
<td>Soil fertility &amp; health</td>
<td>Local employment &amp; sourcing</td>
</tr>
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<td>Genetic selection</td>
<td>Soil erosion, desertification &amp; salinisation</td>
<td>Support for community programmes</td>
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<td>Animal cloning</td>
<td>Soil contamination</td>
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<td>Husbandry</td>
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<td>Transport</td>
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<td>Slaughter</td>
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<td>Business ethics &amp; supplier relationships</td>
<td>Natural resources – water</td>
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<td>Water pollution</td>
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<td>Water usage efficiency</td>
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<td>Rural landscape preservation</td>
<td>Natural resources – air</td>
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<td>Air emissions</td>
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<td>Agrotechnology</td>
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<td>Agrochemical usage</td>
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<td>Bio concentration &amp; persistent organic pollutants</td>
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<td>Genetically modified organisms</td>
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<td>Ecosystem protection</td>
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<td>High conservation Value Land (HCVL)</td>
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<td>Habitat &amp; species preservation</td>
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<td>Production waste</td>
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<td>Hazardous waste</td>
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<td>Waste to landfill</td>
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3. The farms will demonstrate practices that are underpinned by the best science available and endorsed by NGOs/ academia and other experts.

Suppliers and McDonalds will nominate farms on the basis of the objectives laid out in the project overview, with particular emphasis on ethics, environment and economics.

The following are prerequisites of selection:

- High compliance with the standards of McDonald’s Agricultural Assurance Programme (MAAP) where applicable. For raw materials where there are no MAAP standards there must be compliance with a recognised and acceptable industry standard.
- The farms must have supplied raw material to McDonald’s during the last crop year or production cycle.
- The practices are reproducible and scalable.
- The enterprises are commercially viable.
- Farms must be tidy, well-presented, and medium- to large-scale (although small-scale operations with novel concepts and philosophies will be considered).
- All farming activities will be considered (poor practices on any of the three E’s or another farming enterprise are not acceptable).
- The farm must have no involvement in activities detrimental to the McDonald’s brand.
- Farmers must have good communication skills and be willing to share ideas and information.

5. Criteria

The following criteria are the most relevant:

1. Addresses biodiversity components
2. Addresses biodiversity objectives
9. Sustainability of the biodiversity action(s)
10. Replicability of the biodiversity actions(s)
11. The ecosystem/habitat/species are important

The case study clearly addresses biodiversity and the sustainable use of biological resources. McDonald’s has developed a matrix to outline the areas that are considered to be important in sustainable agriculture. The business approach adopted by certain farms can have a multiplier effect for wider uptake by other farms in the region.

6. Additional information

http://www.flagshipfarms.eu/about.php
5. Syngenta - Sustainable agriculture and stewardship EAME

Contact person: Patrick Weiss, Sustainable Agriculture + Stewardship Manager
Address: Schwarzwaldallee 210, 4002 Basel, Switzerland
Telephone number: +41 61 323 83 22
Email: Patrick.weiss@syngenta.com

1. Background and Objectives

1. Pollinators, such as bumblebees, honeybees, solitary bees and butterflies, are essential for food production, as they help a majority of food crops to flower and reproduce. This includes many fruits and vegetables we eat every day.

2. The number of pollinating insects has declined significantly across Europe in recent years because of loss of feeding sites and breeding areas as well as bee diseases (Varroa, Nosema) for some species particular *Apis* the honey bee.

3. The estimated value of the services pollinators provide to the global ecosystem is estimated at € 153 billion per year.

4. Syngenta’s aim is to help reverse this trend by creating an additional 10,000 hectares of dedicated habitat for pollinators. OPERATION POLLINATOR® importantly demonstrates that environmental sustainability and modern farming can coexist, which is critical for doubling global food production by 2050. The program is based on independent scientific research and progress is assessed annually by an independent scientific auditor.

2. Description and Activities

OPERATION POLLINATOR® creates essential habitat and food sources for pollinating insects. Growers are provided with targeted seed mixtures and innovative crop protection use practices along with agronomic advice designed to benefit pollinators. This enables growers to cultivate pollen and nectar rich field margins on their commercial farms. The field margins implementation on the farm is practical, cost-effective and maintains farmer’s profitability. Additionally careful site planning and management of OPERATION POLLINATOR® field margins can reduce soil erosion and protect valuable water resources.

Based on the scientific research and development work by Syngenta, the initiative is now being tailored to specific habitat and insect needs across Europe, on a wide range of farms, soil types and farming systems.

Initiated by Syngenta OPERATION POLLINATOR® is supported by a large number of partners across Europe such as Universities, Beekeeper + Farmer Associations, Governments, NGO’s and Food Producers.

3. Results

OPERATION POLLINATOR® has been hugely successful and enthusiastically adopted by farmers across Europe, and is starting to take off in the United States.

In the UK, where the project first started in 2001, over 1000 hectares of dedicated pollinator habitat have been created, with measured increases in bumble bee numbers of up to 600%. Other pollinators have also increased significantly and the rare bee *Bombus ruderatus* has reappeared in many locations where it was not seen for many years. In addition, there are measurable increases in other non-target species such as birds and small mammals. Furthermore increasing numbers of native pollinators has been shown to increase yields and quality of some key European farm crops.
In Europe the program has more recently been adopted in Germany, France, Italy, Spain, Portugal, Hungary, Greece, Sweden, Ireland, Belgium, Netherlands and Switzerland. Currently over 2000 farmers are engaged in growing pollinator strips on their farms, across 14 countries, representing over 2000 hectares of margins, and the numbers continue to increase.

Today, OPERATION POLLINATOR® is internationally recognised and has been presented in European Parliament as an example of a simple method for increasing biodiversity on farms and surrounding areas in the debate on managing public goods and the reform of European agriculture. In an increasing number of countries the OPERATION POLLINATOR® protocol qualifies for environmental payments. Farmers can get direct payments from €400-1200/ha.

OPERATION POLLINATOR® has proven to help growers successfully establish and manage pollen and nectar-rich habitats on less productive areas around the farm – with dramatic recovery in the fortunes of pollinating insect populations. In addition, farmer yields are maintained and improved through adoption of these sustainable practices. OPERATION POLLINATOR® clearly shows that biodiversity conservation and productive agriculture are not only compatible, but are beneficial for each other.
4. Please indicate which criteria match your case (see the attached list?)

<table>
<thead>
<tr>
<th>1. <strong>Addresses biodiversity components?</strong></th>
<th>Yes</th>
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<tbody>
<tr>
<td>Is the study clear about which of the four components of biodiversity it addresses: landscapes, ecosystems, species and/or biological resources?</td>
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<table>
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<tr>
<th>2. <strong>Addresses biodiversity objectives?</strong></th>
<th>Yes</th>
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</thead>
<tbody>
<tr>
<td>Is the study clear about which of the four biodiversity objectives it addresses: conservation of biodiversity, sustainable use of biological resources, equitable sharing of the benefits, and development outcomes (especially for cases in developing countries)?</td>
<td></td>
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<table>
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<tr>
<th>3. <strong>Based on a corporate biodiversity policy?</strong></th>
<th>Yes</th>
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<tbody>
<tr>
<td>Does the study clearly link the case to the company's biodiversity policy?</td>
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</table>

<table>
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<tr>
<th>4. <strong>Clear linkages to government biodiversity policies and regulations?</strong></th>
<th>Yes</th>
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</thead>
<tbody>
<tr>
<td>Does the study clearly link the case to relevant international, regional and national biodiversity Policies and regulations?</td>
<td></td>
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<tr>
<th>5. <strong>Integrated into a corporate biodiversity action plan?</strong></th>
<th>Yes</th>
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<tbody>
<tr>
<td>Does the study show how the case is clearly linked to the company's biodiversity and action plan?</td>
<td></td>
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<tr>
<th>6. <strong>Biodiversity performance indicators?</strong></th>
<th>Yes</th>
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<tbody>
<tr>
<td>Does the study clearly describe which biodiversity performance indicators which are used in the case?</td>
<td></td>
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<tr>
<th>7. <strong>Biodiversity performance monitoring and reporting?</strong></th>
<th>Yes</th>
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</thead>
<tbody>
<tr>
<td>Does the study clearly describe the performance monitoring and reporting processes for the case?</td>
<td></td>
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<th>8. <strong>Independent verification?</strong></th>
<th>Yes</th>
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<td>Does the study clearly explain whether and how the case has been independently verified?</td>
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<tr>
<th>9. <strong>Sustainability of the biodiversity action(s)?</strong></th>
<th>Yes</th>
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<tr>
<td>Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable?</td>
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<tr>
<th>10. <strong>Replicability of the biodiversity actions(s)?</strong></th>
<th>Yes</th>
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<tr>
<td>Does the study provide guidance on the how the case could be replicated or scaled up across the company or the sector</td>
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<tr>
<th>11. <strong>Is the ecosystem/habitat/species important?</strong></th>
<th>Yes</th>
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<tr>
<td>E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?</td>
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<tr>
<th>12. <strong>How extensive is the impact?</strong></th>
<th>No</th>
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<tr>
<td>E.g. What is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects?</td>
<td>We should expand the across other countries in EU.</td>
</tr>
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</table>

5. **Any additional information (links)**

www.operationpollinator.com
6. Photo related to the case

Bombus Ruderatus

Pollinating insect Megachile
Wildflower margin
6. SAI Platform

Contact person: Giovanni Malfatti
Address: Av. des Arts 43, Brussels, Belgium
Telephone number: +32.2.5008757
Email address: gmalfatti@saiplatform.org

1. Background and Objectives

i. Principles and Practices (P&P) for Sustainable Production of Arable & Vegetable Crops, Coffee, Fruit and Dairy

Producers aim to ensure that the safety and quality of their products will satisfy the highest expectations of the food industry and consumers. In addition, on-farm practices should ensure that crops are produced under sustainable economic, social and environmental conditions.

ii.

iii. To that aim, SAI Platform developed a set of principles and practices (P&P) for sustainable production of arable & vegetable crops, coffee, fruit and dairy for the mainstream market in all regions of the world.

iv.

v. These P&P are meant to be revised regularly on the basis of practical experience. It is also meant to be completed with specific guidelines and practical tools based on local innovations and adapted to local prevailing conditions (according to the region and its climates, ecological variables, farming systems, cultures etc) as well as respecting national laws and regulations.

2. Description

The basic framework of SAI Platform’s Principles & Practices looks as follows:

1. Item. An item refers to an object of management.
2. Principles identify the objective(s) of what should be accomplished with regard to an item.
3. Recommended Practices provide a set of identified non-exclusive tools and measures that can be implemented to achieve the objective(s) of a principle.

It is important to note that good management of a farming system constitutes the grassroots of the system’s economic, environmental and social sustainability. Therefore, it first pays attention to planning and managing well the overall farm system itself. The P&Ps’ scope of management action is limited to what farmers or groups of farmers themselves can achieve.

3. Activities

Farmers shall have taken into consideration applying the principles and practices to the whole farm system within a philosophy of continuous improvement, starting with the crop or livestock in scope.

The following headings and bullets summarize the sections and objectives when applied to a whole farm system. The individual sections in the document contain greater detail of practices.

Sustainable Farming Systems (chapter 1)

- Are varieties suited to the local climate, soil, pests & diseases being grown?
- Nutrients – how is crop nutrition calculated? How are nutrients stored considering environmental/safety risks?
- Pest management – Are all key pests known? Is IPM applied? Are pesticides stored safely & securely?

Economic sustainability (chapter 2)
• Is yield increase possible? Is food safety and food quality understood? Is the farm system diverse enough? Is there access to market information? Is group use of equipment or group purchasing an option?

Social Sustainability (chapter 3)

• Social & Human capital – including farm workers – Are workers treated fairly? Is training a priority?
• Local community /economy - Is there a positive impact in the local community from the farm system?

Environmental sustainability (chapter 4)

• Soil fertility/soil loss – how is soil fertility maintained, is soil erosion an issue?
• Water – Is total water use for irrigation known? How is irrigation amount calculated? Is the water source for irrigation sustainable? Are the impacts of fertilisers and pesticides considered?
• Biodiversity – Are there natural habitats on farm? Are rare species of plant/animal threatened by growing the crop?
• Energy – Are the major energy inputs known? How can their impact on climate change be reduced?
• Waste – Are the principles reduce, reuse, recycle, dispose understood? Are pesticides/fertilisers disposed of safely?

Biodiversity in detail

Farmers are encouraged to have a biodiversity action plan for their farm which includes:

• A map of the location of areas or features important to biodiversity on and around the farm
• An assessment of any particular biodiversity issues on and around the farm
• Details of how provision is made for wildlife habitats and food sources through hedges, field margins, extensive pasture, etc.
• Details of measures to protect important biodiversity features or areas
• A practical plan to make progress in an area of conservation/protection/education
• A periodic review to assess biodiversity improvements

The biodiversity action plan should also consider the following for guidance:
• The farm environment is enhanced for locally important, rare or endangered species by providing appropriate habitats and adopting appropriate cultural practices, and reducing the negative impact of operations such as using agrochemicals, ploughing, grass cutting and hedge cutting.
• Areas of higher ecological value located on the farm are protected via the minimisation of human intervention and the implementation of measures for the conservation of biodiversity, soil, water, flora and fauna. In particular, field margins and buffer zones is maintained and dominated by native species.
• Restoration of vegetation is encouraged in degraded areas that have been prone to loss of fertility or soil erosion, preferably by using native species.
• Farmers are also encouraged to create biodiversity habitats, e.g. field margins or beetle banks, which may encourage natural enemies of pests and hence contribute to their control by biological rather than chemical means.

4. Results

The P&Ps are publicly available; therefore it’s not possible to estimate the level of adoption

5. Please indicated which criteria match your case (see the attached list)

The following criteria are the most relevant:
1. Addresses biodiversity components
2. Addresses biodiversity objectives
4. Clear linkages to government biodiversity policies and regulations
6. Biodiversity performance indicators
9. Sustainability of the biodiversity action(s)
11. The ecosystem/habitat/species are important

The Principles and Practices elaborated by SAI are including very detailed indicators on the 3 pillars of sustainability. Farmers are encouraged to have a biodiversity action plan for their farm which includes among others details of measures to protect important biodiversity features or areas. The assessment of the farm environment focuses not only on locally important, rare or endangered species, but also on habitats.

6. **Any additional information (links, report, etc.)**

The Principles and Practices are available on SAI Platform’s website: [http://www.saiplatform.org](http://www.saiplatform.org)

7. **Photo related to the case**
7. Vlaamse Landmaatschappij (VLM) (Flemish Land Agency)

Contact person: Sylvie Fosselle  
Address: Ganzendries 149, 9000 Gent, Belgium  
Telephone number 0032(0)92448545  
Email address: sylvie.fosselle@vlm.be

Best Practice Publication: Partnership and Landscape Fund for landscape development in industrialized areas

1. Background and Objectives

Over recent years, the port of Ghent has undergone considerable development along the canal. This is putting pressure on the quality of life for the villages on the canal. The authorities are therefore investing in making the Ghent Canal Zone an area that is pleasant to live in, where there is a good business climate for companies and where farmers can continue to earn a living. Connecting areas are being developed between the economic zones and the port villages at the edge, in order to guarantee the quality of life. These connecting areas are transitional zones that act as buffers.

Buffer zones provide space for both agriculture and nature in ‘yellow’ and ‘green’ zones respectively. The governmental authorities set up green zones such as woodland, parks and nature areas. The yellow zones remain agricultural. The Vlaamse Landmaatschappij (Flemish Land Agency) set up the ECO² project with the aim of achieving cooperation between farmers, residents and the business community in order to realise more ‘green’ in the agricultural areas.

2. Description

To get farmers, residents and the business community in the Ghent port area to cooperate in putting the scenario for the buffer zones together by matching up their requirements and wish-lists. Citizens want a pleasant environment to live in. They don’t want to get bothered too much by the industrial activities, surrounding the villages they live in.

The farmers want to continue managing their land without further expropriations. They are interested in managing the landscape if they get rewarded for the job.

The industrial companies are interested in sustainable development, they want a good business environment and they have financial resources.

These three elements (demand, offer and financial resources) are the fundamentals of a market system on which the project ECO² is based.
Figure 2 the structure of the ECO² project based on a market system

Key-elements for the approach developed in the ECO² project are process management (for bringing together different stakeholders with opposite opinions), innovative financing (for bringing together private and government financing and for financing on long term), and support of the different stakeholders, local governments and win-win for every stakeholder (see upper page).

This project stands or falls by the cooperation, enthusiasm and voluntary commitment of the different stakeholders. The authorities provide the support and the inspiration.

3. Activities

The first move was made by the farmers. The Vlaamse Landmaatschappij (Flemish Land Agency) used discussions with a number of key players and information sessions for all farmers to get a picture of the requirements, interests and wish-lists of the farmers in the port area. The farmers who were interested also led a number of working sessions and signed the landscape development plan together with the Vlaamse Landmaatschappij (Flemish Land Agency).

This plan was then presented to and discussed by the citizens and the industrial companies. The Vlaamse Landmaatschappij (Flemish Land Agency) started a campaign called ‘Buffer boom(t)’ (together with some of the residents) aiming to generate enthusiasm among action groups, residents’ associations and the industrial companies and to ask for financial support for compensating the farmers for the landscape development they presented in the landscape development plan.

The Landschapsfonds Gentse Kanaalzone (Ghent Canal Zone Landscape Fund) has been set up to collect the private money and to make sure the money is properly managed. It is being handled by the Koning Boudewijnstichting (KBS, an independent foundation for social projects). The landscape fund handles the financing for the buffers planted in the landscape by the farmers. It will last for 20 years and can then be extended.

The steering committee decides annually on the use of budgets for achieving the objectives of the fund. The advisory group makes recommendations to the steering committee. It monitors and evaluates the cooperation between the various partners and the objectives of the fund. There are representatives of the farmers, the companies and the residents in the steering committee and the advisory group, as well as an expert representing the Flemish Land Agency.
4. Results

17 farmers planted trees and hedgerows on their land this autumn. In total, they will be providing 7 kilometres of green buffer in the agricultural area. They also take the maintenance for the next 20 years.

Planting and maintaining 7000 metres of rows of trees demands a lot, also in financial terms. Twenty companies put a total of 85,000 Euros into the landscape fund. That sum is paying for the creation of the green buffer and for the first 20 years of its maintenance. These 20 companies value socially responsible business practices highly. They are making a clear commitment to the quality of life in the Ghent port area.

Financing has been arranged for the first twenty years. Where one leads, others will follow. The new buffers will hopefully encourage other farmers to extend the port area landscape further. This approach is a new one for the Flanders region. And it is an approach that works. Farmers, residents and the business community acknowledge the need to look after the landscape and provide a good environment to live in, and they are doing something about it. Farmers are choosing to combine their agricultural activities with planting trees along the edges of their land. The project is being supported financially by the business community.

More green in the surroundings for the canal village residents, financial appreciation for the farmers’ commitment, and a socially aware profile for the business community. These are the motives for a unique and sustainable cooperative venture between farmers, residents and businesses in the Ghent Canal Zone.

5. Criteria

The following criteria are the most relevant:

1. Addresses biodiversity components
2. Addresses biodiversity objectives
4. Clear linkages to government biodiversity policies and regulations
9. Sustainability of the biodiversity action(s)
10. Replicability of the biodiversity actions(s)

One of the key-elements for the approach developed in the ECO² project is bringing the different stakeholders, local governments together and creating a win-win situation for every stakeholder. In order to ensure the sustainability of the action, farmers, residents and the business community in the Ghent port area were brought together to cooperate in putting the scenario for the buffer zones together by matching up their requirements and wish-lists.

6. Additional information

www.ecokwadraat.be/gentsekanaalzone (Dutch)

ECO² magazine (English)

ECO²krant (Dutch)

ECO²: Een markgerichte, gebiedsgerichte en participatieve aanpak voor landschapsbouw (publication 57p. in Dutch)

7. Photo

Figure 4 Village in between industrial and agricultural area
Finance
1. Background and Objectives

The ASN Bank is a sustainable bank which set out to, through their business activities, contribute and strengthen a sustainable society. One of the pillars of this sustainable business practice is their investment policy based on ‘special investment criteria. ASN realized that the impact they can have on nature and society through the proper utilization of their core activities is substantial. Therefore the bank has issued an investment policy to ensure that they only invest in enterprises and projects that conduct good practice towards nature and society.

Biodiversity is one of the three themes within this ASN investment policy and together with human rights and climate change it covers all subjects that are important for the selection of the investments made by the bank. The bank wants to utilize its investment practices to contribute to the conservation and even strengthening of biodiversity worldwide.

The ASN investment policy regarding biodiversity aims to invest in enterprises and projects that contribute to the protection and strengthening of biodiversity or take effective measures to mitigate or compensate biodiversity threats. In order to facilitate this process, the bank has formulated a number of criteria that indicate which activities are fit for investment. As mentioned above, the activities should fit not only the biodiversity criteria, but also the criteria regarding the other themes. These criteria apply to all investments and also the vote of the ASN Bank during shareholder meetings.

2. Description

In order to assess whether an enterprise or project is fit for investment, the ASN Bank employs a two-way system. There are a number of exclusion criteria regarding biodiversity and a number of acceptance criteria. The exclusion criteria set out the guidelines regarding practices and activities that an enterprise or project should refrain from and the acceptance criteria set out which practices or activities should be conducted in order to be eligible for investment. The ASN Bank has formulated a list of activities that could be a threat to biodiversity; this is than related to different sectors in which these activities are most relevant. As a third part there is a list of criteria to which businesses in these sectors need to adhere. Based on this system ASN only invests in enterprises or projects that do not form a thread for biodiversity based on their sector, or that do belong to one of the indicated sectors but adhere to the set criteria.

3. Activities

All activities related to the formulation of the Issuepaper Biodiversity, which entails the full biodiversity policy of the ASN Bank, have been completed. The remaining activities are related to the actual implementation of this policy in relation to all loans and investments by the bank. For every loan and investment, the company and the specific investment are being compared to the criteria and parameters set out in the policy to assess whether the investment or loan fits within the biodiversity policy of the ASN Bank.

4. Results

Through strict application of the special investment criteria, ASN Bank ensures that they only invest in enterprises or projects that fit within their sustainability profile and psychology and they can provide their
customers with the reassurance that their money is not invested in activities that harm nature or society and actively build a sustainable future.

5. Matching criteria

1. Addresses biodiversity components?
2. Addresses biodiversity objectives?
   It is clear that ASN Banks special investment criteria on biodiversity address biodiversity components and objectives. When applying the criteria to assess whether the business impact biodiversity the focus is on certain biodiversity components and after that stage the objectives of the enterprise or project are being assessed in order to see whether the measures to lower biodiversity impact are sufficient. In this way, both criteria are clearly met.

3. Based on a corporate biodiversity policy?
   This criterion is clearly met in the case of the special investment criteria regarding biodiversity. In their policy the ASN Bank states that they only positively evaluate enterprises or projects when they have formulated biodiversity policy addressing the issues raised in the special criteria.

6. Biodiversity performance indicators
   The special investment criteria regarding biodiversity meet this set criterion. The investment criteria themselves are the indicators which are used by the ASN Bank in order to evaluate an enterprise or project on its biodiversity performance and assess the possibility for investment. These criteria are clearly specified in the ASN Bank issue paper on biodiversity and also in a separate document containing the special investment criteria.

7. Biodiversity performance monitoring and reporting?
   Linked up to point 3 of the provided evaluation criteria (Based on a corporate biodiversity policy?), the ASN Bank also states in its biodiversity policy that it will only invest in those enterprises and projects that monitor their biodiversity policy and report according to the appropriate Global Reporting Initiative guidelines.

6. Additional information

- ASN Bank Issue Paper Biodiversity (pdf, Dutch)
2. ECNC-European Centre for Nature Conservation

Contact person: Andrew Schrauwen  
Address: P.O. Box 90154, 5000 LG Tilburg, The Netherlands  
Telephone number: +31 (0)13 5944944  
Email address: schrauwen@ecnc.org

1. Background and Objectives

The European Biodiversity Standard (EBS) is a methodology which is developed to measure and improve a business environmental performance. It focuses not just on one certain project or initiative, but instead assesses a business at the company level. It is an assessment of a business biodiversity management performance looking at ten components: commitment, survey, assessment, legislation, planning, implementation, measurement, partnerships, communication and review.

2. Description

The process consists of two stages of assessment; a self-assessment by the business in question to review their biodiversity performance and decide whether there is need for further improvement or the time is right to apply for the external assessment, and the external assessment by an independent assessor which verifies the self-assessment and seeks evidence of implemented management systems and progress made in each of the ten components of the EBS.

If a business makes the grade, the assessor will recommend that it is awarded the European Biodiversity Standard to the accreditation body (ECNC). If it is not quite there, the assessor will advise on the requirements for re-application. The European Biodiversity Standard is accredited for two years, with an interim self-assessment after year one and a full re-accreditation process at the end of two years.

3. Activities

The EBS is an on-demand instrument that can be applied by businesses in the first stage and consists of an external assessment in the second. ECNC undertakes a number of activities in both stages to facilitate the implementation and execution of the full process for applying businesses. These activities include the maintenance of the EBS website, brochure and necessary documentation. Provide support and information to applying companies in the first stage, the self-assessment. In the second stage ECNC will review the external assessment and decide if the company meets the criteria for the EBS.

4. Results

In essence, the result of the EBS will be increased awareness amongst the business sector on their impact on biodiversity and performance towards it. In order to meet the EBS a business will have to meet certain criteria which in many cases will include an upgrade of the biodiversity related actions and/or policy and therefore a better performance towards biodiversity. On the whole this would lead to increased performance of the entire business sector towards biodiversity and less negative impacts from businesses.

5. Matching criteria

1. Addresses biodiversity components?
2. Addresses biodiversity objectives?
   The EBS clearly addresses a business performance regarding ecosystems and biological resources as well as the conservation of biodiversity and the sustainable use of these resources by looking at the planning, implementation and measurement of measures taken by the business to mineralize the impact on biodiversity and even improve the biodiversity on company sites.
3. **Based on a corporate biodiversity policy?**
Throughout all ten components of the assessment procedure, the proof of certain actions, procedures, measures, monitoring, etc. should be traceable back to the business policy of the business being assessed.

4. **Clear linkages to government biodiversity policies and regulations?**
One of the components of the EBS is the demand that the business adheres to government legislation and policy. The assessed business needs to provide evidence that all relevant legislation is being identified and adhered to.

5. **Integrated into a corporate biodiversity action plan?**
The component 'planning' assesses if the business has set objectives, targets and action plans for biodiversity issues. Through this component therefore, the EBS assesses whether biodiversity action plans have been created to integrate the business biodiversity policy and actions.

6. **Additional information**

- Website EBS: [http://www.europeanbiodiversitystandard.eu/](http://www.europeanbiodiversitystandard.eu/)

3. Caixa Catalunya Obra Social

Contact person: -
Address: La Pedrera, c/ Provença 285, E-08008 Barcelona, Catalonia, Spain
Telephone number: +34 (0)93 4845900
Email address: info@fcaixacatalunya.es

1. Background and Objectives

The black vulture is a bird of prey which suffered a major decline from the middle of the 19th century (when it disappeared as a nesting bird in Catalonia) up to the end of the 20th century right across its European habitats. Over the last two decades, however, there has been a gradual rise in its numbers, mostly in the south-west of Spain.

The objective of this project is to reintroduce the black vulture into the Pyrenees.

2. Description

The black vulture plays a major ecological role as it gets rid of the carcasses it finds during its daily explorations. The reintroduction of the species in the Pyrenees means that its various European population groups will once more be able to communicate genetically, and this will be crucial for the long-term conservation of the species.

"The return of the black vulture to Catalonia project has so far taken 4 censuses in order to find and count the largest number of specimens of the species and also to gather data about other birds of prey. The last census counted 844 examples of the griffon vulture (Gyps fulvus), 31 bearded vultures (Gypaetus barbatus), 36 red kites (Milvus milvus) and 16 golden eagles (Aquila chrysaetos). Other species identified in other censuses are the black kite (Milvus migrans) and the Egyptian vulture (Neophron percnopterus).

3. Activities

The activities consist of acclimatizing black vultures in captivity and releasing them into the Pyrenees. Also, the ‘hacking method’ is being used, which consists of feeding the chicks without them perceiving a human presence, so that the bird associates the terrain with the presence of food and thus settles in the territory.

4. Results

So far 27 specimens have been released into the wild, 25 through acclimatization facilities and 2 black vultures using the hacking method. Catalunya Caixa Social Work and the Department of the Environment plan to release at least four more at the end of the summer in 2010.

On the 25th of April 2010, the first black vulture was born in the Boumort National Reserve since the disappearance of the species over a hundred years ago.
5. **Matching criteria**

1. **Addresses biodiversity components?**  
   The reintroduction of the black vulture clearly matches criteria 1 and 2. It concerns the reintroduction of a 'lost' species, which, when done successfully, will increase the biodiversity in the region where the animals have been released directly, but it will also influence the ecosystem bringing it back to its former, more original state.

2. **Addresses biodiversity objectives?**

3. **Based on a corporate biodiversity policy?**  
   Caixa Catalunya Obra Social is the part of the Caixa Catalunya savings bank which focuses on contributing to social and environmental efforts in Spain, and mainly Cataluña. Savings Banks in Spain are expected to make social contributions and in light of this, the efforts made in reintroducing the black vulture is based on company policy towards these social efforts.

10. **Replicability of the biodiversity actions?**  
    This criterion is met by way of the evidential possibility to replicate the approach itself. It concerns the reintroduction of a lost species into its former habitat, which can also be done with other species in other habitats. The approach has proven successful, even with breeding pairs, which gives rise to the assumption that adopting the approach could be successful in other locations.

13. **How extensive is the impact?**  
    The geographical region covered by the reintroduction of this species is the Boumort National Reserve in the Pyrenees. It can be assumed that these birds will not restrict themselves to this reserve, therefore the impact will be spread much wider throughout the Pyrenees.

6. **Additional information**


7. **Photo**

   ![Image of black vultures](image-url)
1. Background and Objectives

The risks and opportunities related to biodiversity and ecosystem services (BES) are of substantial effect on the business prospects of banks, insurance companies, investment companies and their clients, both directly and indirectly. The sector has been becoming more aware of this fact but did not take enough steps towards integration of BES into their main policy and mitigation of the possible risks or utilisation of the possible opportunities. Financial institutions are at the top of the ‘private sector’ food chain and should take biodiversity into account. Financial institutions needed to better understand BES risks and opportunities in order to gear up for the 21st century.

The aim of the CEO Briefing was to convince financial institutions that biodiversity and ecosystem services (BES) are material and to offer an avenue to build BES in banking, investment and insurance business operations. By convincing financial institutions to take biodiversity into account, the United Nations Environment Programme Finance Initiative (UNEP FI) expects to create benefits for both biodiversity and the different businesses.

2. Description

With the support of a number of financial institutions, the risks and opportunities related to biodiversity and ecosystem services have been elaborated in this CEO Briefing, a publication launched at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 10) in Nagoya, Japan, in October 2010.

3. Activities

The CEO Briefing, titled “Demystifying Materiality: Hardwiring Biodiversity and Ecosystem Services into Finance,” offers executives insight, examples and recommendations for managing BES risk. It refers to the report by the World Economic Forum (WEF) on global risks in 2010, and emphasizes that the loss of biodiversity is increasingly perceived as a risk that could have a USD 10 to 50 billion impacts on business over the next decade.

4. Results

The most important output of the above mentioned process is the CEO Briefing itself (and possible a BES statement for financial institutions). Financial institutions need to better understand BES and the risks and opportunities it entails to be able to cope with upcoming challenges in the future. This will also create benefits for financial institutions and biodiversity.

5. Matching criteria

1. Addresses biodiversity components?
2. Addresses biodiversity objectives?

These two criteria are matched. The CEO Briefing addresses the concept of biodiversity as a whole and highlights the importance of it for the corporate financial sector. Raising the awareness of the
finance sector towards the topic of biodiversity itself as a whole should anchor it into the consideration of senior management and with that substantially influence the way the sector influences biodiversity.

3. Based on corporate biodiversity policy?
5. Integrated into a corporate biodiversity action plan?
The CEO Briefing itself is not based on corporate biodiversity policy as such. The charter and work field of UNEP FI makes the topic one of their main concerns. It links more to corporate biodiversity policy in that it aims to influence finance sector companies into adopting corporate policy towards biodiversity. In that respect these criteria are being addressed in this case.

13. How extensive is the impact?
The CEO Briefing aims at reaching the global finance sector, which makes the impact quite substantial. A number of big multinational players, amongst others Credit Suisse, have already taken up the gauntlet based on the publication and have (further) incorporated biodiversity into their business practices and considerations. Therefore it can be argued that the impact of the CEO Briefing is very extensive.

6. Additional information

- The CEO Briefing

7. Photo
1. Background and Objectives

The WBCSD has been working on ecosystems issues for 15 years. Over the past years, a critical focus has been on identifying business risks and opportunities related to impacts and dependence on ecosystem services. One major milestone was therefore the Corporate Ecosystem Services Review (ESR) led by the World Resources Institute (WRI) along with WBCSD and the Meridian Institute. Since its launch in 2008, this methodology has been picked up by over 300 companies and is still the best practical approach for companies to assess their ecosystem-related risks and opportunities and integrate these into their strategy. WRI continues to provide excellent material, information and support on the ESR.

A logical next step is to consider the economic value of these impacts and dependencies. Since 2008, WBCSD has been leading work on ecosystem valuation and its relationship to business, and participating in complementary initiatives by, for example, editing several chapters in the Business report of The Economics of Ecosystems and Biodiversity (TEEB). Much of WBCSD's work aims to “operationalize” TEEB’s outcomes.

2. Description

The Guide to Corporate Ecosystem Valuation (CEV) was launched in April 2011 by the WBCSD (World Business Council for Sustainable Development) in collaboration with ERM, IUCN and PwC.

This approach can be useful to better understand and address some of the benchmarking criteria. In fact the valuation approach has been developed in line with a typical Environmental and Social Impact Assessment (ESIA) process. Different valuation approaches are considered: qualitative, quantitative and monetary. Ecosystem valuation techniques are presented according to different type of ecosystem services.

3. Activities

The main objective of this Guide is to provide a process to explicitly value and account for ecosystem costs and benefits in business decision making. It has been road tested by 14 international companies. It is downloadable at the following link: www.wbcsd.org/web/cev.htm

The Guide is divided on 2 parts:

• « Screening » process that could be performed following the Corporate Ecosystem Services Review (ESR) methodology
• « Methodology » to conduct a CEV divided in 5 steps (scoping, planning, valuation, application, embedding)

4. Results

5. Matching criteria

1. Addresses biodiversity components?
2. Addresses biodiversity objectives?

The first part of the methodology, that foresees a screening process through the ESR helps to address biodiversity components and objectives getting specific to their impacts and dependencies on the
organization. At this stage, those notions of impacts / dependencies have not yet been explicitly considered in the benchmarking criteria but the interest and relevance of their incorporation could be discussed during the workshop.

11. Is the ecosystem/habitat/species important?
12. How extensive is the impact?
13. Environmental benefit,
In the CEV methodology, the valuation in itself is presented as a 9 step process and enables to address some benchmarking criteria such as the relative significance of the ecosystem services affected, and the environmental changes (taking into account environmental and physic-chemical changes). The techniques suggested by the CEV approach to better understand and address those criteria should be discussed during the workshop. Moreover, the CEV Guide suggests other steps to the valuation of a biodiversity programme such as the evaluation of internal and external benefits and, if feasible, the valuation phase through monetization. The interest and relevance of the incorporation of those parameters in the benchmarking criteria could also be discussed during the workshop.

6. Additional information

- Website: http://www.wri.org/project/ecosystem-services-review/overview
Food Supply
1. Unilever Sustainable Agriculture Code

2. Background and Objectives

Unilever has always maintained a strong commitment to sustainability. It forms a core part of our company vision to double the size of our business while reducing our overall impact on the environment. At the same time we continue to serve billions of consumers across the world with products and innovations that help them feel good, look good and get more out of life. We expect our suppliers to work alongside us to achieve our ambitious consumer and sustainability targets.

The Unilever Sustainable Agriculture Code is our “definition” of Sustainable Agriculture. With this code, we ask our suppliers, and the farmers who supply them, to adopt sustainable practices on their farms. We expect all our suppliers of agricultural raw materials to commit to joining the sustainability journey with us, and to demonstrate that they agree to minimum standards of performance and to continuously improve performance over time.

The Unilever Sustainable Agriculture Code and the accompanying implementation guides aim to be a reference source of current better practices for sustainable agriculture. Although it is not (and cannot be) an exhaustive compilation.

3. Description

The Unilever Sustainable Agriculture Code tells suppliers and farmers what we expect in terms of sustainable practices, but doesn’t tell them how to achieve it. There are different ways in which the requirements could be met, and we don’t want to be prescriptive.

The Unilever Sustainable Agriculture Code covers practices that all our suppliers should strive to achieve. Where farmers are working with other assurance schemes, our aim is not to duplicate work for farmers. Our code will act as a benchmark and we will only ask for changes in areas where the standard in place and our code are significantly different. For example, we are committed to sourcing our Lipton tea bag tea from Rainforest Alliance certified growers, our palm oil from RSPO certified sources and Ben and Jerry’s ingredients from Fair-trade sources.

If farmers have found a better solution to increase yield and quality, or reduce pollution, than that listed in our code, we are happy to accept alternative approaches.

Guidance is provided. The implementation guide website is a source of information and reference on the aims of the Code, on how to get support and achieve compliance and to find information on the requirements.

The Code contains a full part dedicated to biodiversity (part 5.). It aims to provide growers and suppliers with some general principles for good biodiversity management on and around farmland, and practical advice on how to achieve the standards detailed in the biodiversity section of the Code. As well as a specific “biodiversity” section in the Code, there are many references to practices that maintain or enhance ecosystem services.

4. Activities

The part of the Sustainable Agriculture Code on biodiversity is divided into three chapters with actions identified as “Mandatory requirement”, “Must”, or “Should”.

5.1 Record keeping specifies the records that must and should be kept by the farmers in order to comply with the code. It includes the necessity of a Strategic commitment to at least one biodiversity initiative.

5.2 Overall Continuous Improvement lists recommendations on monitoring and knowledge development and sharing on biodiversity.

5.3 Biodiversity Management presents mandatory requirements consisting of “measuring progress”, “legal compliance” and “prohibitions” and good practices with detailed guidance on how to implement them.

Beside the actions implemented by the suppliers towards the compliance with the Code, it includes:

- The self-assessment/ third part assessment of our suppliers against it
- The use of the Code as a benchmark against which to judge other “sustainability”, social and environmental certifications and schemes (e.g. those linked to EU CAP systems and requirements for biofuels) where applicable for our agricultural raw materials.

We also currently have programmes underway with our suppliers in various EU countries, the Americas, Africa, and Asia, based on either direct application of the Code or Certification systems either wholly or partially substituted for it. The plan is to have ALL our agricultural raw materials classifiable as “sustainable”.

5. **Results**

The code is currently being deployed with the aim to be working with all our suppliers of agricultural raw materials to put Biodiversity Action Plans in place as part of our “Sustainable Agriculture” programmes. So far, besides its implementation by some of our suppliers, it is not mature enough for its results to be measured already. However, we keep working to reach our long term target through the following actions:

- We provide support and advice for them as to how to do this
- We launch pilot projects with supplier in order to implement the Code
- The written advice is available in the Implementation Guidance for the Code (see [http://www.growingforthefuture.com/unileverimpguid/](http://www.growingforthefuture.com/unileverimpguid/))

Note that the Implementation Guidance strongly recommends that the suppliers Biodiversity Action Plans (BAPs) link with national and local BAPs - and use local experts, as biodiversity is a local issue and we cannot afford nor require that all suppliers pay for an assessment study of biodiversity issues on their property. For us it is vitally important that the Commission ensure that member States are able to provide such resources (information and people to contact) as are needed to make the partnership work.

6. **Please indicate which criteria match your case** (see the attached list)

As a corporate initiative aimed at increasing biodiversity protection and reducing the indirect impact of Unilever, the Sustainable Agriculture Code and the actions induced are appropriate examples to test the applicability of the 13 criteria designed by the EC.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Unilever Sustainable Agriculture Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Addresses biodiversity components?</td>
<td>The Code is the tool for the application of Unilever’s policy (3, 5) therefore it presents a clear view of the biodiversity components addressed (1), the objectives (2), however the sharing of benefits and development outcomes are tackled more thoroughly in other projects at Unilever.</td>
</tr>
<tr>
<td>2. Addresses biodiversity objectives?</td>
<td></td>
</tr>
<tr>
<td>3. Based on a corporate biodiversity policy?</td>
<td></td>
</tr>
<tr>
<td>4. Clear linkages to government biodiversity policies and regulations?</td>
<td></td>
</tr>
<tr>
<td>5. Integrated into a corporate biodiversity action</td>
<td></td>
</tr>
<tr>
<td>Plan?</td>
<td>The compliance with national regulations is a mandatory requirement of the Code (4).</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7. Biodiversity performance monitoring and reporting?</td>
<td></td>
</tr>
<tr>
<td>8. Independent verification?</td>
<td>The Code is currently deployed on a self-assessment basis, but independent verification will follow.</td>
</tr>
<tr>
<td>9. Sustainability of the biodiversity action(s)?</td>
<td>The Code applies logically as long as the supplier sells to Unilever. It is otherwise not in Unilever's power to control it.</td>
</tr>
<tr>
<td>10. Replicability of the biodiversity actions(s)?</td>
<td>The code is designed as guidelines that can be replicated to other agricultural products and suppliers (Unilever plans to roll it out to all our agricultural raw material suppliers)</td>
</tr>
<tr>
<td>11. Is the ecosystem/habitat/species important?</td>
<td>This indicator is not applicable. Indeed the SA Code is designed to apply on a large variety of projects and is not a specific project in a specific environment. For specific cases, it relates to Biodiversity Action Plans (BAP).</td>
</tr>
<tr>
<td>12. How extensive is the impact?</td>
<td>This indicator is not applicable considering that the Code is a set of guidelines and not a specific project. See above.</td>
</tr>
<tr>
<td>13. Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy.</td>
<td>This is quite specific to Europe, and is applicable in some cases. However European companies can initiate projects worldwide and the Code was designed to be implemented both inside and outside the EU. In some cases, the European benefits will be addressed by actions elsewhere in the world along migration routes.</td>
</tr>
</tbody>
</table>

**7. Any additional information (links, report, etc.)**

Comprehensive information about the code is available on the following website:
2. Corporate Ecosystem Valuation: Presentation and Syngenta Case Study

1. Background and Objectives

The WBCSD has been working on ecosystems issues for 15 years. It has recently focused on identifying business risks and opportunities related to impacts and dependence on ecosystem services. One major milestone was the Corporate Ecosystem Services Review (ESR) led by the World Resources Institute (WRI) along with WBCSD and the Meridian Institute. Since its launch in 2008, this methodology has been picked up by over 300 companies and is a very practical and easy-to-implement approach for companies to assess their ecosystem-related risks and opportunities and integrate these into their strategy. WRI continues to provide excellent material, information and support on the ESR.

A logical next step is to consider the economic value of these impacts and dependencies. Since 2008, WBCSD has been leading work on ecosystem valuation and its relationship to business, and participating in complementary initiatives by editing several chapters in the Business report of The Economics of Ecosystems and Biodiversity (TEEB), for example. Much of WBCSD’s work aims at designing operational applications of TEEB’s outcomes.

2. Description

The Guide to Corporate Ecosystem Valuation (CEV) was launched in April 2011 by the WBCSD (World Business Council for Sustainable Development) in collaboration with ERM, IUCN and PwC. It provides a framework for improving corporate decision-making by valuing ecosystem services.

This guide can be used to better understand and address some of the benchmarking criteria. In fact the valuation approach has been developed in line with a typical Environmental and Social Impact Assessment (ESIA) process. Different valuation approaches are considered: qualitative, quantitative and monetary. Ecosystem valuation techniques are presented for different types of ecosystem services.

3. Activities

The main objective of this Guide is to provide a process to explicitly value and account for ecosystem costs and benefits in business decision making. It has been road tested by 14 international companies. It is downloadable at the following link: www.wbcsd.org/web/cev.htm

The Guide is divided on 2 parts:

- « Screening » process that could be performed following the Corporate Ecosystem Services Review (ESR) methodology
- « Methodology » to conduct a CEV divided in 5 steps (scoping, planning, valuation, application, embedding)

This case study focuses on a road tester of the CEV and presents the implementation and the results (current or expected).

Syngenta is a leading company in the Food Supply sector working on increasing crop productivity, protecting the environment and improving health and quality of life.

Through the CEV road-testing, it has assessed the value of pollination services provided by wild bees to blueberry farms in Michigan USA, and the added value of providing foraging habitat (buffer strips) for native bees.

The project consisted of a short term assessment using available data/information consisting of the following steps:
Evaluation of three scenarios of habitat restoration for blueberry production in Michigan:

- **Business as Usual**: Baseline for commercial production using conventional farming, with existing established land management practices.
- **Enrollment in Conservation Reserve Program (CRP) or modification of existing CRP land management project with establishment of pollinator habitat**: Grower qualifies for a basic cost share incentive through federal programs with environmental benefits with minimal investment of resources.
- **More intensive modification/management of CRP land with emphasis on pollinator habitat**: The grower receives increased cost share incentives through federal programs with significant environmental benefits as a result of higher economic input. This higher tier approach focuses on buffers or marginal areas with increased environmental quality for pollinator foraging/nesting with associated potential benefits from minimizing soil erosion; improving water quality; and improving overall farm biodiversity.

Development of a Conceptual Model illustrating the various components, processes, and interrelationships involved in assessing the value of pollination contributed by native pollinating insects – a valued ecosystem service. The model is based on:

- **Literature review and data collection** of historic and current status relevant to preferred pollinator habitats (screening native perennials) and native pollinator counts/populations (foraging evaluation for plant-pollinator interaction) in commercial blueberry production landscapes.
- **Review of available models for environmental benchmarking, ecosystem valuation, and population/persistence** (e.g. ARIES, ECOMETRIX, InVEST, SimBee, and BeePop).
- **Return on investment (ROI)** was also evaluated for the three scenarios. Published information on production costs (e.g. fixed, labor, harvest) and returns for commercial blueberry operations in Michigan were examined as previously described.

### 4. Results

The CEV provided important figures on the valuation of pollination:

- Pollination of Michigan blueberries would be valued at $112 million for commercially managed honeybees and $12 million by wild bees based on 2008 Michigan crop value per NASS Survey. The dependence on insect pollination and proportion pollinated by managed or wild bees was derived from the following formula: \(\text{Value of Crop (\$)} \times \text{Dependence on Insect Pollination (\%)} \times \text{Percentage Wild or Managed Bees}\)

It highlighted some potential benefits linked to the establishment of pollinator habitat surfaces:

- **USDA Farm Service Agency (FSA) SAFE Program** may provide growers with a 90% cost share for pollinator habitat establishment (green payment) as well as annual rental and maintenance payments. The goal of the CRP SAFE Program is to create 2,500 acres of pollinator habitat in 22 western Michigan counties.
- In the future, providing the right nesting habitats and foraging for native bees could potentially increase the ROI by at least $40/acre by improving yield or fruit quality; reducing the number of rented managed colonies; and reducing risk to managed hive health from supplemental foraging sources. Next steps would be to validate this opportunity through research.

The CEV aims at providing monitoring information and a financial outline of ecosystem services for a company, relying on existing material without undertaking expensive studies. However it specifies that the results and the opportunity should be confirmed through research. Furthermore, it does not suggest that
wild pollination services could replace managed services based on current commercial agriculture production but merely underlines the potential it represents and how it may secure pollination services.

5. Matching criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Guide to CEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Addresses biodiversity components?</td>
<td>The first part of the methodology that foresees a screening process through the ESR helps to address biodiversity components and objectives getting specific to their impacts and dependencies on the organization. Its purpose is thus to identify precisely which biodiversity component(s) the company/project should address and leads to a clear expression of the objectives in order to improve decision-making.</td>
</tr>
<tr>
<td>2. Addresses biodiversity objectives?</td>
<td></td>
</tr>
<tr>
<td>3. Based on a corporate biodiversity policy?</td>
<td>It is one of the objectives of the CEV to give information to improve corporate decision making, taking biodiversity into account.</td>
</tr>
<tr>
<td>4. Clear linkages to government biodiversity policies and regulations?</td>
<td>Depends on the company or project implementing the CEV</td>
</tr>
<tr>
<td>5. Integrated into a corporate biodiversity action plan?</td>
<td>Depends on the company or project implementing the CEV</td>
</tr>
<tr>
<td>7. Biodiversity performance monitoring and reporting?</td>
<td></td>
</tr>
<tr>
<td>8. Independent verification?</td>
<td>No</td>
</tr>
<tr>
<td>9. Sustainability of the biodiversity action(s)?</td>
<td>Depends on the case</td>
</tr>
<tr>
<td>10. Replicability of the biodiversity actions(s)?</td>
<td>The CEV is designed to be applied to a variety of situations and to serve as a monitoring, decision-making tool</td>
</tr>
<tr>
<td>11. Is the ecosystem/habitat/species important?</td>
<td>In the CEV methodology, the valuation in itself is presented as a 9 step process and enables to address some benchmarking criteria such as the relative significance of the ecosystem services affected, and the environmental changes (taking into account environmental and physico-chemical changes). The implementation of the CEV should thus provide answers to criteria 11, 12 and 13. Moreover, the CEV Guide suggests other steps to the valuation of a biodiversity programme such as the evaluation of internal and external benefits and, if feasible, the valuation phase through monetization which correspond to criteria 13 with a larger approach not only including environmental aspects.</td>
</tr>
<tr>
<td>12. How extensive is the impact?</td>
<td></td>
</tr>
<tr>
<td>13. Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy.</td>
<td></td>
</tr>
</tbody>
</table>

6. Additional information

Comprehensive information about the CEV is available on the following website: http://www.wbcsd.org/templates/TemplateWBCSD5/layout.asp?type=p&MenuId=MTc3Ng&doOpen=1&ClickMenu=LeftMenu
7. Photo

Guide to Corporate Ecosystem Valuation
Forestry
1. Forest Stewardship Council

Contact person: John Hontelez
Address: FSC International Center, Charles de Gaulle Str. 5, 53113 Bonn Germany
Telephone number: +32 (0) 486 512 127
Email address: j.hontelez@fsc.org

1. Background and Objectives

The Forest Stewardship Council (FSC) was founded in 1993, FSC is an international non-government organization dedicated to promoting sustainable forest management through voluntary certification. FSC describes how forests have to be managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. It includes managerial aspects as well as environmental and social requirements.

2. Description

As part of its mission, the Forest Stewardship Council shall promote environmentally appropriate, socially beneficial, and economically viable management of the world's forests. Environmentally appropriate forest management ensures that the harvest of timber and non-timber products maintains the forest's biodiversity, productivity, and ecological processes.

3. Activities

FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world’s forests. It is an international body which also accredits certification organizations in order to guarantee the authenticity of their claims. In all cases the process of certification will be initiated voluntarily by forest owners and managers who request the services of a certification organization. Corporations can therefore on a voluntary basis decide to integrate FSC in their corporate biodiversity policies.

The FSC P&C should be used in conjunction with national and international laws and regulations. FSC intends to complement, not supplant, other initiatives that support responsible forest management worldwide. In addition, the provisions of the Convention on Biological Diversity, shall be respected.

4. Results

FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. It is an international body which accredits certification organizations in order to guarantee the authenticity of their claims. In all cases the process of certification will be initiated voluntarily by forest owners and managers who request the services of a certification organization. Corporations can therefore on a voluntary basis decide to integrate FSC in their corporate biodiversity action plans.

FSC started with environmental goals in mind. Members wanted to create a system to guarantee that the forest industry was helping protect, rather than destroy, forests. FSC's environmental criteria recognize that forest management should:

- Conserve biological diversity and its values: water resources, soils, unique and fragile ecosystems and landscapes
- Maintain the ecological functions and integrity of the forest
- Protect threatened and endangered species and their habitats
5. Please indicated which criteria match your case

The following principles are of interest for the criteria on biodiversity:

- Reduction of environmental impact of logging activities and maintenance of the ecological functions and integrity of the forest.
- Appropriate and continuously updated forest management plans.
- Appropriate monitoring and assessment activities to assess the condition of the forest, management activities and their social and environmental impacts.
- Maintenance of High Conservation Value Forests (HCVFs) defined as environmental and social values that are considered to be of outstanding significance or critical importance.
- Plantations must contribute to reduce the pressures on and promote the restoration and conservation of natural forests.

The Forest Stewardship Council (FSC) addresses in its guidelines for certification, forest landscapes and ecosystems.

FSC describes that forest management should include the research and data collection needed to monitor, at a minimum, a number of indicators, including: growth rates, regeneration and condition of the forest and composition and observed changes in the flora and fauna.

As part of the FSC P&C Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

In addition, documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody. The results of monitoring shall be incorporated into the implementation and revision of the management plan. While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators.

6. Any additional information

http://www.fsc.org/

FSC does not issue certificates itself. The certification process is carried out by independent organizations called certification bodies. Before being able to certify according to FSC standards, certification bodies have to gain FSC accreditation. To do this, certifiers have to comply with an extensive set of rules.

FSC certification prioritizes the protection of particularly valuable forest ecosystems. This includes both ecological and social values. To this end, FSC has developed a concept, called High Conservation Value Forest (HCVF). Besides the particular attention given to HCVF, FSC certification does also protect biodiversity more generally on the whole forest areas managed in accordance with FSC requirements.
2. Forest Europe improved Pan-European indicators for sustainable forest management

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1. Background and Objectives

Forest Europe (The Ministerial Conference on the Protection of Forests in Europe) is the pan-European policy process for the sustainable management of the continent's forests. Forest Europe develops common strategies for its 46 member countries and the European Union on how to protect and sustainably manage forests. Founded in 1990, the continuous co-operation of Forest Europe has led to achievements such as the guidelines and criteria for sustainable forest management. The collaboration of the ministers responsible for forests in Europe has been of great economic, environmental and social importance on the national and international level. High-priority topics of Forest Europe are to strengthen the role of forests in mitigating climate change, secure the supply of good-quality fresh water, enhance and preserve forest biodiversity and provide forest products. Other important tasks are to develop a framework for future forest collaboration and to explore the possibilities for a legally binding agreement on forests in Europe. Several countries outside Europe and international, non-governmental and private sector organisations participate as observers. Forest Europe is linked to global and other regional processes and initiatives dealing with issues of highest political and social relevance related to forests.

2. Description

Forest Europe improved Pan-European indicators for sustainable forest management, which consists of a set of quantitative and qualitative Pan-European Indicators for Sustainable Forest Management.

Forest Europe has developed common principles, criteria and guidelines for sustainable forest management. The political declarations and concrete actions have established a solid ground for growth and diversity in today's forest ecosystems.

Under principle 6 of the FSC Principles and Criteria (P&C) for Forest Stewardship, on environmental impact, it is stated that: **Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.**

The Forest Europe guidelines for sustainable forest management promote the conservation and enhancement of biological diversity in woodlands, e.g., through increased natural regeneration and more mixed species stands.

3. Activities

The Forest Europe signatory countries and participants focus on elaborating strategies and solutions that meet new challenges such as climate change, bio-energy production and water protection. The work of FOREST EUROPE aims at maximising the contribution of Europe’s forests to the ecological, social and economic well-being of the continent. The Forest Europe commitments serve as a framework for implementing sustainable forest management in the European countries, but are not a legally binding instrument.

Through its work, Forest Europe contributes substantially to the achievement of the 2020 Biodiversity Target. An important task is to develop a framework for future forest collaboration and to explore the possibilities for a legally binding agreement on forests in Europe. Forest Europe is linked to global and other regional processes and initiatives dealing with issues of highest political and social relevance related to forests, such as the Alpine and Carpathian Convention and the Convention on Biological Diversity.
4. Results

Forest Europe provides guidance for sustainable mobilisation of wood in Europe. It is a useful tool to assist policy-makers and practitioners in taking appropriate and supporting measures.

Forest Europe works at policy level where vital decisions are made by the co-operation of ministers through identifying issues of high relevance and developing common strategies through political commitments. Remaining challenges include better ways and means for cross-sectoral coordination and continued political commitment to further develop national forest programmes into an effective policy tool.

Forest Europe countries are pursuing sustainable forest management through creating new policy instruments and adjusting existing ones. This is done by integrating sustainable forest management into legal and regulatory frameworks, through financial support measures addressing the different dimensions of sustainable forest management, through efforts to strengthen the forest-related information base, and by improving communication with the public. Changes in institutional frameworks in Europe indicate an emphasis on further improving the efficiency and effectiveness of state forestry organisations as well as on reorganising forest research. In addition, organisational structures for private forest owners are being further developed. However, coordination mechanisms between different levels of government and increasingly diverse stakeholder groups could be further improved.

5. Please indicated which criteria match your case (see the attached list)

The Forest Europe guidelines for sustainable forest management and associated indicators are used to assess progress in sustainable forest management at international level and in individual countries and consist of quantitative and qualitative measures.

(http://www.foresteurope.org/filestore/foresteurope/Conferences/Vienna/Vienna_Improved_Indicators.pdf)

Forest Europe states in one of its resolutions that the efforts already made to monitor the state of forest ecosystems, within the framework of the various regional, national or international programmes, must be reinforced.

6. Any additional information (links, report, etc.)

http://www.foresteurope.org/filestore/foresteurope/Conferences/Vienna/Vienna_Improved_Indicators.pdf

Forest Europe insists that priority must be given to the coherent long-term tracking of the data already gathered within the existing forest monitoring systems, as well as to complementing this data with new measurements, which can contribute as rapidly as possible to the thinking and decisions of national and international authorities.

Through its work, Forest Europe secures a strong and healthy basis for animals, plants, biodiversity, natural products and a clean environment.

Forest Europe regularly analyses and presents the status and development of sustainable forest management in the pan-European region. The latest report on the “State of Europe’s Forests” was jointly prepared with the UNECE and the FAO. The progress made by and the positive effects of sustainable forest management on our environment and society are evident.
3. Amorim and CE Liege

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1. Background and Objectives

By definition, ‘Ecosystems’ are ecological assemblages of habitats within a geomorphologic and climatic context, which leads mainly to a vision of Untamed Nature and the wilderness. Yet, some Ecosystems are dependent upon the interactions between the natural environment and human factors.

Such is the case of managed forests, like the Cork Oak Montado. The economic valuation of Ecosystem Services (ES) puts the multiple benefits provided by ecosystems in evidence and provides the much needed economic context, vital for further developments in conservation strategies. The assessment and valuation of ES in the private estate of “Herdade da Machoqueira do Grou” (HMdG) can facilitate voluntary improvements in the overall performance of the farm.

The main objectives of the study were:

1. To explore the link between Ecosystem Services (ES) and the spatial/temporal dynamics at the local level;
2. Understand the impacts and the possible changes on ES patterns promoted by the case-study land management throughout the years;
3. Assess, the most relevant ES; qualify identified ES as “Public or Communitarian/Shared Services”;
4. Assess the relationship between agroforestry management and the conservation state/trend on selected ES, at the land use level.

2. Description

The case study focuses on the ecosystem: cork-oak dominated man-managed forests in Portugal.

The study was a joint project between Corticeira Amorim (Cork Industry) and CE Liège, the European Cork Confederation and resulted from the Corticeira Amorim ‘Business & Biodiversity’ strategy, implemented since 2007, during the Portuguese EU Presidency. As an industry association representative, CE Liège cooperated with Corticeira Amorim in order to promote the study.

3. Activities

The study and report published aim to highlight the issues beyond the ES valuation applied to sustainable agro-forestry management. This study has classified the services that ecosystems provide to people in three primary categories according to the Millennium Ecosystem Assessment (MEA): Provisioning, Regulation and Cultural Services. All the work is focused in bibliographic information and information provided by the landowners. Evaluation and valuation methods were used as tools to estimate the value of different categories of land use and associated Ecosystem Services, at a local scale. Actually, by the time this report was finished, it represented the first consolidated attempt to assess and valuate ES at such a small landscape scale, considering not just the local scale but most important, the land management unit scale, crucial to link future Payments for Ecosystem Services (PES) to agro-forestry European Union subsidiary and financial support schemes.

4. Results
Proceeding with their joint cooperation, Corticeira Amorim and CE Liège have the intention to replicate the study, considering for that establishing contacts and protocols with both national and European entities, either companies, academia or sector associations within the range of CE Liège. From our point of view, replication of the study is feasible, and that's one of the goals.

The study focus primarily on the Cork Oak Montado Forestry based ecosystem, ‘Habitats’ Directive code 6310. The Montado is the Portuguese term applied to landscapes comprising of mixed farming, centred on extensive evergreen oak woodlands dominated by Cork Oak (Quercus suber) or/and Holm Oak (Quercus ilex) and occasionally other oak species (Q. faginea, Q. pyrenaica, Q. coccifera), and interspersed by areas of scrubland, grassland, wetlands and streamside galleries and cultivated fields. The Montado is the dominant system in the southern part of Portugal (especially in the Alentejo region, covering 72% of the total) existing for many centuries, in more or less developed and intensive management forms.

Montados provide a multifunctional land use, combining the use of the tree cover (mainly to extract cork or in the Holm Oak case to use the acorns for animal nourishing), with a rotation of grazing, cultivation and fallow in the understory. The Montado is adapted to poor soils with reduced fertility and it represents a traditional, sustainable land use. In Europe it can be found in Portugal, Spain, southern France and the west coast of Italy, covering 1,43 million hectares, and in Africa, in Morocco, north of Algeria and Tunisia were it occupies 0,85 million hectares. More than half the area of the Montado is found in the Iberian Peninsula, 32% of the total occurring in Portugal, comprising 736,700 hectares. The Cork Oak Montado’s prime product is cork, a renewable resource, whose exploration supports a considerable rich ecosystem and its maintenance possesses a recognized ecological, economical and social importance. This man-made / man-managed ecosystem contributes to biodiversity conservation, food production, water protection, acts as a carbon dioxide (CO2) long term sink, fibre production, soil restoration, natural hazards protection, and has a high potential for leisure, nature watching and outdoor activities. With regard to natural hazards protection, the Cork Oak constitutes an excellent example of a species resistant to fire, a common disturbance in the Mediterranean basin. The cork on the tree, if not harvested, can growth to very thick layer and constitute a protective barrier against fire, being a high-quality and natural insulating material.

Therefore, the development of adequate mechanisms of market based instruments and assistance to rural development that enable the protection of the Montado and its ecosystem services, including biodiversity is considered of extreme importance.

5. Please indicated which criteria match your case

The study focus on the evaluation of Ecosystem services. The methodology was carried out in three phases:

- Phase I – In the first phase all information needs were accessed and listed with the corresponding sources to obtain them. The methodology was defined and a preliminary assessment scheme was designed;
- Phase II – Needed information was gathered, sorted, prioritized and defined methodology applied. Some methods were readjusted;
- Phase III – The third and last phase involved the algorithm application (output 2) and assigning of economic value in total economic value matrix. Finally results were presented and the final report presented.

Methodology is presented as a scheme bellow, linking processes and outputs. In the results section some parts are explained in greater detail (e.g. the algorithm and calculating formulas for Output 3) in order to clarify results.
Corticeira Amorim and CE Liège are now developing new efforts jointly with the Higher Institute for Business Management (ISG – Instituto Superior de Gestão) research centre CIGEST in order to publish a scientific peer reviewed analysis of the study in a referenced journal, in the area of Forest Governance and Sustainable Management.

One of the main goals of this study is to support the Common Agricultural Policy (CAP) revision, in the area of calculating new ‘Payment for Ecosystem Services’ scheme. Therefore, the main idea is to mainstream the study as a case to help determining the mechanisms and economic models of subsidies for farmers who actively protect biodiversity and manage the outputs of Ecosystem Services, within the range of good farming and forestry sustainable practices. We reinforce the fact that the study used indicators from sustainable forestry management, namely from FSC and PEFC.

Some land uses are richer in ES than others; the Cork Oak Montado provides various ES with high scores for most of them. The only other land use that ranked higher in Output 2 was the Riparian gallery (higher provisioning, regulating and combined ES), although if criteria like minimal providing areas or habitat connectivity were taken into account the results would clearly benefit the Cork Oak Montado.

Private goods and services already provide a benefit to the landowner so future ES markets should favour public and shared/communitarian services, creating and building up on economical models focused on them.

The Cork Oak Montados showed the highest total economic value (96,045 €/year) for the area assessed and also when taking into account value by hectare, its value is also superior (94.64 €/year).

Although provisional and debatable, the economic value of Ecosystem Services estimated in this report provides us with a very concise answer: the economic value of the Ecosystem Services provided by agroforestry areas like the Cork Oak Montado and other with similar importance it’s NOT zero.

7. Any additional information

The case study THE ROLE OF THE CORK OAK MONTADO AT HERDADE DA MACHOQUEIRA DO GROU (PORTUGAL) is available on:
4. Confederation of European Private Forest Owners

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1. Background and Objectives

The case study, Living forests, about the Swedish forest industries work on the conservation of biodiversity – Swedish Forest Industries Federation together with the Swedish Forestry companies,

2. Description

In contrast to the forest in many other countries, the majority of the forest land in Sweden is privately owned – moreover, by a very large number of owners, more than 300,000. The estates are of varying size and extend over the landscape in a patchwork pattern. The very long rotation periods that characterise Swedish forestry contribute to species diversity.

Sweden has developed its own forestry model. It is particularly different from the plantation forestry mainly conducted in the southern hemisphere that is reminiscent of farming with trees as a crop. Our forests are semi-natural – they retain their original structures, but disruptions and intervention have affected the ecology. Instead of allocating some of the land entirely to timber production and making large conservation allocations on other land, the entire forest is covered by ambitious environmental objectives.

3. Activities

The semi-natural forests in Sweden have maintained their natural structure and while showing high rates of productivity, they are biodiversity rich. Swedish forest owners and the Swedish forest industry continuously work to improve the forest conditions, and this is today done through many different means. The action plan for “Living forests” is one example of how the work is implemented.

In addition to legislative requirements, the forest industry has also adopted its own environmental objectives to meet the high standards of environmental concern set by customers, but above all, the industry feels a moral responsibility for the living heritage of the forest's diversity of species.

Their overall objective is clear: we will manage the forest so that all species in the Swedish forest landscape can survive.

4. Results

As a result of the principle of freedom under responsibility, forest policy in Sweden assumes that the forest owner him or herself finances the conservation measures undertaken insofar as they are not so invasive that ongoing land use is substantially impeded (encroachment limitation). This means that it may be required that nature conservation be practiced without compensation on a harvest property at a cost of a proportion of the net harvest.

We can note that the politically set objectives have been achieved, often by a wide margin, without detailed regulation and without sanctions. The objectives the companies have set themselves are more extensive. Strong results have been achieved in some areas, but there are also needs for improvement.

The Swedish model leads to us being able to have a continued high level of growth in the forest. Because growth is larger than harvesting, the forest binds a net amount of carbon dioxide. At the same time, the
amount of mature forest and the amount of dead wood increase in the entire forest landscape, which improves the living conditions for plants and animals.

With the aim of further developing the environmental work, the Environmental Objective Council was charged to propose strategies, objectives and action plans in the environmental area. Forestry is one of the areas that the Environmental Objective Council will address first and a strategy will be presented as soon as the end of 2012.

5. Please indicated which criteria match your case

Swedish forest policy gives a framework which builds on freedom under responsibility. This implies that the forest owner when he takes out timber must follow different environmental goals and will not damage nature unnecessarily. This also implies that a part of the potential profit from a harvest is left in the forest to increase biodiversity and natural features. To increase the impact of these general environmental measures, several environmental quality goals are in place. “Living forests” is one of them and it includes seven different goals that should have been reached in 2010. New goals are currently under discussion. The results of the measures taken to achieve the goals and the fulfilment of them are monitored and evaluated by the Riksskogstaxeringen and the Forestry Agency.

The environmental quality objectives that are of the greatest significance to forestry are “Sustainable forests”: “the value of forests and forest land for biological production must be protected, at the same time as biodiversity and cultural heritage and recreational assets are safeguarded”. Sustainable forests comprise seven interim targets that should have been fulfilled no later than 2010 and are now being evaluated. The base year for the targets is 1998.

State set objectives:

- A further 900,000 hectares of forest land of high conservation value will be excluded from forest production (2010). Of these 900,000 hectares, 400,000 shall have some form of formal protection and 500,000 hectares voluntary protection
- Green; 970 000 ha are voluntarily protected
- The amount of hard dead wood shall increase by a minimum of 40 percent nationwide, with considerably more in areas in which biodiversity is particularly threatened (2010)
- Green; Amount of dead-wood has grown with 60-80 percent
- The area of mature deciduous forest shall increase by a minimum of 10 percent (2010)
- Green; Area of mature deciduous forest increased with 10-25 percent
- The area of old forest shall increase by a minimum of five percent (2010)
- Green; Area of old growth forest has increased by 29-55 percent
- The area regenerated with deciduous forest shall increase (2010)
- Yellow; too early to evaluate since forests have not yet been pre-commercially thinned

Voluntary objectives from the industry side:

- Increase of large trees so that it gets closer to historical numbers
- Green; Positive trend in three large regions
- Protection of key-habitats
- Green; taken care of as voluntary preservation areas and through certification schemes
- Higher quality of nature consideration
- Yellow; Could still be improved more, there is still more work that can be done
- Larger area left per tract of land after harvest
- Green; increase from five percent to about 7-8 percent
- Water quality improvement
- Red; Ambitious efforts have been made by the industry, but for full impact of these measures to be visible time is needed
- Active work with action programmes for red-listed species
- Red; Number of finished programmes connected with forests and forestry is still low
- Promotion of quality trees and restoration of wetlands
- Red; Relatively new measures, but results inspire hope
- Continuity forestry
- Yellow; No comprehensive scientific evaluation of the advantages and disadvantages of continuity forestry has ever been done, which is why this indicator is yellow.
- Increased burning activity
- Green; Number of among other fire-dependent insects have increased
- Knowledge development in forest organisations
- Yellow; Education is never finished, and knowledge development can always be improved

In addition to the Forestry Act’s requirements, the forest industry pursues voluntary nature conservation within the scope of the certification systems of the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification schemes (PEFC).

The intention is to follow up the presentation of results with annual reports. The results report is based on the following criteria. They have been chosen to provide as comprehensive a view of the forest industry’s nature conservation work as possible.

- This report will comprise the most significant factors in the work of preserving biodiversity.
- Where possible, the report will be based on publicly available fact bases.
- The report will refer to a perspective framed by existing political decisions.
- Special emphasis will be placed on the work done in addition to that required by law.
- The report will be so comprehensive and well planned that the chosen criteria will remain relevant over time.

6. **Any additional information**

More information will be available in the publication soon made public by the Swedish Forest Industries at [www.skogsindustrierna.se](http://www.skogsindustrierna.se)
5. ELO – European Landowners’ Organisation

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1. Background and Objectives

Dafnondas Estate, located in the centre of the upper half of the island of Evia, is a natural and historical Greek treasure and consists of a total area of 1494.4 Ha. The ideal combination of a verdant wooded mountain environment with beaches of superlative beauty makes Evia different from other areas of Greece. The variety of flora and fauna is amongst the widest in Europe and the estate has the particularity of evergreen mountains. The estate is now owned by a private company, Dafnondas S.A and specially created to manage and develop its forests.

The objectives of the Forest Estate are: the conservation, protection, wildlife and sustainable management of the forest of “Dafnondas” in order to enhance its value and revenue by promoting its protective, productive, aesthetic and recreational values and to enable to stand economically and to satisfy the respective needs of the local and wider area population.

2. Description

The actions and means involved to achieve the objectives are twofold. First a new management plan was formulated and officially approved, designed to include the appropriate treatment of all natural resources including the aesthetic and recreational assets. Secondly, the entire forest was fenced in order to assure complete protection and potentially creating hunting grounds. New forest roads were built to facilitate the production and protection as well as the development. Fire breaks were created, observation posts were assigned, an early warning system was installed, water tanks were placed and fire suppression equipment was procured. In addition, plans are under preparation for the creation of basic constructions for serving the visitors according to the local style not affecting the natural environment but helping the valuation and development of all potential resources. The concepts of multi-purpose and sustainable forestry are best served making Dafnondas a good example for the future of Greek forest policy.

3. Activities

- A new management plan was formulated and officially approved, designed to include the appropriate treatment of all natural resources including the aesthetic and recreational assets.
- The entire forest was fenced in order to assure complete protection and potentially creating hunting grounds.
- New forest roads were built to facilitate the production and protection as well as the development.
- Fire breaks were created, observation posts were assigned, an early warning system was installed, water tanks were placed and fire suppression equipment was procured.
- Plans are under preparation for the creation of mild constructions for serving the visitor of the particular local style not affecting the natural environment but helping the valuation and development of all potential resources.
- The concepts of multi-purpose and sustainable forestry are best served making Dafnondas a good example for the future Greek forest policy.

4. Results

In 2009, Dafnondas Estate won the award promoted by the Anders Wall Foundation (Sweden), the Friends of the Countryside, DG Environment and the Royal Agricultural Academy of Stockholm. The Anders Wall Award was created to encourage and promote efforts made by creative entrepreneurs who have contributed to the creation of a “positive rural environment”. This includes landscape preservation,
biodiversity enhancement, cultural heritage conservation and contribution to the rural economy within the European Union.

More than twenty years of interrupted management (1965-1988) and several forest fires had negative effects on the quality and quantity of the growing stock. This lack of appropriate management – even mismanagement – together with forest fires and other illegal activities, reduced the growing stock and degraded the land. The infrastructure was minimal and for protection it was necessary to rely on the state guards and fire suppression. In general the area was abandoned, to a point of minimal revenue and practically no investment.

Currently, the forested area covers 35.2% of the estate but the prospects for the future are very high since the partially forested lands are gradually becoming denser and regeneration is also improving.

5. Please indicate which criteria match your case

The forest of Dafnondas is no more confined exclusively to material production. Following the provisions of the management plan and new trends in forest techniques and environmental science the forest of Dafnondas is now a model of rationally treating natural resources. The forest management is nowadays fulfilling all the principals, criteria and indicators of sustainable forestry practice as established by the various international organizations.

With its present ownership, careful investment policy and new updated management plan to fit modern forestry ideas, the ecological conditions are gradually improving and the estate is now able to produce forest products sustainably. Protection from fires, local employment opportunities, landscape enhancement and cultural benefits are essential in the process.

The new management plan provides for the appropriate treatment to assure the achievement of regularity in the forest in due time, as well as the production of increased quantities of quality products. Thinning, regenerative fellings and removal of diseased trees will be among the measures proposed for improving the quality of the growing stock and enhancing its incremental potential.

Examples of actions to preserve and enhance the landscape in relation to logging, forest fires and water streams are as follows. Assist the natural regeneration without affecting the general appearance of the forest and not creating unnecessary openings. Many old trees are not harvested as they are part of the landscape and essential for ecological purposes. Sites which were destroyed in the past, mainly by forest fires, are given priority when re-establishing the forest with native vegetation and thereby to return it to its former shape. The necessary protective firebreaks are expected to be covered with low vegetation and maintained this way in order to serve their purpose but without causing any visual intrusion, while water supply tanks are mainly removable. All water streams are left intact as an essential part of the landscape and water sources are marked and preserved. No construction is planned directly on the coast, and any facility planned will be of a size to fit under the tree cover.

With regards to biodiversity the following measures are taken: Visitors are advised to exercise the greatest possible caution in terms of environmental preservation. All potentially vulnerable places like streams and creeks are left intact. The sea coast is confined to very modest activities. More detailed investigations to locate possible areas with rare or endangered species as sites of protection and demonstration and a small museum of natural history are under way. The future development of controlled hunting activities will also be beneficial compared with the free unlimited hunting that is exercised today in the entire area of the property of Dafnondas.
6. Bavarian State Forest Agency

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1. Background and Objectives

The forest service Ebrach is responsible for the protection of diversity of one of Germany’s most important broadleaf forest areas. The protection of biodiversity is central to the nature conservation concept. This includes 480 beetle species, which have a key role, as they secure the survival of many other species. The Ebrach integration concept (‘Protection through use’) combines protection of biodiversity with use of the forest.

The Bavarian State Forest Service is certified according to the PEFC (Programme for Endorsement of Forest Certification Schemes) standard.

The availability of living and dead wood is of vital importance to biodiversity protection. There is a network system which excludes certain forest areas from use and creates extensive management in others. The part of the forest which is not used contains forest reserves, ‘stepping stones’, wet and dry areas and transition zones, covering in total 997 hectares, which is equal to 6% of the forest.

The areas that are not used guarantee biodiversity conservation and establish corridors and stepping stones as part of the network. The stepping stones consist of forests that are not used for commercial purposes or areas that are under extensive management.

In addition to non-use forest, 3.824 hectares of the forest are under extensive management, which consist mainly of old and young forest land. There are requirements for the amount of dead wood and the maintenance of old growth trees and in all cases the protection of nature and biodiversity is carefully monitored.

The non-use and extensive managed areas lead to a loss of income, but is a voluntary contribution to the international year of biodiversity. Next steps foreseen are cooperation with nature protection organisations to follow up on protection measures.

The objectives of the Bavarian State Forest Agency are:

- Awareness raising for the value of the forest land for nature and biodiversity protection for all involved stakeholders
- Recognition of the Ebrach Forest Agency as a competent partner in nature and biodiversity protection.

2. Description

The Bavarian State Forest Agency sustainability concept "Protection through use" consists of two components 1) increasing the structural diversity of the commercial forest areas and 2) protecting species populations in connected forest reserves, and has integrated and embedded the objectives for nature and biodiversity protection in the timber production activities with concrete operational measures. Examples of these measures are: leaving dead trees and branches in the forest, mother trees are protected; young trees are kept under low management intensity.

3. Activities

The State Forest Agency strategy focuses on:
1. Protection of the beech-broadleaf character of the 'Steigerwald'
   • Use of single trees, without logging complete areas
   • Forest regeneration through rejuvenating indigenous species
   • Integrate broadleaf species in pine forests in addition to natural beech renewal
   • Protect biodiversity through conservation of forests as well as other habitats

2. Protection of social functions
   • Improve the biodiversity functions and ensure conservation of nature, landscape, water provision
   • Support research and education
   • Fundraise for social functions of forest

3. Strengthening the financial situation
   • High value timber based on close to nature forestry
   • Reduce human interaction by increasing natural processes
   • Hunting deer for financing forest renewal
   • Reduce activities with low financial support
   • Increase the financial flows from additional activities

4. Results

**Achieved benefits for the company and for biodiversity**
Protection of biodiversity, and increasing resilience, for factors, such as climate change impacts and secure future supply of timber and maintain important tree species as 'mother trees'. The concept increases the quality of the forest resources by bringing the forest back to its natural development process.

**Other sustainability benefits (economical, environmental, social)**
Maintenance of the natural landscape and no pesticides are used in the forest. During logging activities, soil, vegetation and trees are treated with care, to reduce the harm to the existing forest biodiversity. The use of paint to mark trees is limited and used as invisibly as possible. No hunting is allowed for red list species and birds, and lead free ammunition is used.

The biodiversity protection programme will at first reduce the timber production and change the tree species composition, but in the medium and long-term, the improvement of soil composition, to capture more water and nitrogen and the three growth will have a positive impact and increase the supply of timber.

The forest and its exploitation cannot build on an economic analysis of the protection of the ecological value of the forest, as many of the elements involved (habitats for species, clean water, CO2 sequestration, protection against floods, recreation space) cannot be quantified easily. This has implications for the economic value of the timber operations.

5. Please indicated which criteria match your case

Biodiversity protection goes hand in hand with sustainable forest management and increased supply of timber. The protection of forest areas is not in conflict with the use objectives. Sustainable use goes hand in hand with increasing the biodiversity value of the forest.

It is important that all employees of the forest service identify with and understand the new concept for protection and use and are committed to implement it in their daily practices.

The Bavarian State Forest Services is determined to establish closer collaboration with parties interested in the "protection through use" concept.
6. **Any additional information**

The Bavarian State Forest Agency is open to collaboration with all interested parties, no matter what their background is. The objective is to have a regular dialogue concerning nature protection themes.

[http://www.baysf.de](http://www.baysf.de)
7. Confederation of European Pulp and Paper Industry

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1. Background and Objectives

Restoration of forest and forest covered mires⁴ in Finland. As part of a Forest Life project, forests and forest-covered mires were restored with the support of the EU Life - Nature fund. Another project objective was to spread information about ecological restoration, and thus to promote a favourable attitude towards ecological restoration of forests.

2. Description

Natural forest-covered mires have become scarce especially in southern and western Finland, and very few of them are situated in conservation areas. Forest-covered mires provide a habitat for a number of bird, insect and cryptogam species. Mires that today belong to conservation areas but used to be commercial forests often contain drainage ditches, that where constructed to facilitate exploitation. Through the restoration of the hydrology of drained mires, the natural features of mires, such as the formation of peat and typical mire species, can be recovered.

3. Activities

Ecological restoration works were carried out in forests and mires to speed up the recovery of the structure of natural boreal forests and of the hydrology of natural forest-covered mires. The work was carried out in 34 Natura-2000 sites and included former commercially managed forests. Key steps in the project included:

- Land acquisition of 290 hectares of land by the state for conservation purposes
- Training in ecological restoration for 300 forest workers
- Inventories of the habitat structure in each area and assessments of the need for restoration measures in forests and forest-covered mires
- Damming and filling of drainage ditches
- In mature forests, promoting deadwood by felling, girdling and blowing up trees
- Providing aspen deadwood to support species of beetles and polypores⁵ that depend on the aspen
- Controlled burning to attract beetles, including threatened species, and to promote structural diversity in young forests managed initially for commercial conifers
- Hundreds of hectares of sunny esker habitats were recovered by small-scale controlled burning, by making small clearings and by increasing decaying wood
- Large clumps of coniferous trees were felled or girdled around broadleaved trees in young forests to favour growth through increased light and promote structural diversity
- Promoting White-backed woodpecker habitat by removing spruces and small rowans from deciduous forests in order to increase the amount of light in them. Decaying wood was increased by both girdling and felling birches
- Restoring unused logging roads that fragment conservation areas by felling trees across them, ripping the surface with an excavator to encourage tree regeneration and shaping the soil to fit the landform.

4. Results

The main results are:

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⁴ Mires are areas of wet, swampy ground, such as bogs and marshes
⁵ A type of fungus
• deadwood creation in an area of over 2700 ha
• controlled burns in an area of more than 350 ha
• creation of 200 ha of White backed Woodpecker habitat
• promotion of deciduous trees and a diverse forest structure in 2800 ha; and,
• Mire restoration over 400 ha.
• Drainage ditches of forest-covered mires on an area totalling around 400 hectares on ten Natura 2000 sites were dammed and filled. Thus water will return to its natural course and the drained area will become mire again.

Monitoring of the restored forests and mires will over the years reveal the detailed effects of the restoration. Besides ecological effects, the project also had a significant employment effect and trained over 300 forest workers.

5. Please indicated which criteria match your case

6. Any additional information

Published in 2009: 'Sharing experiences, promoting biodiversity in the European Pulp and Paper Industry' by CEPI and Eurosite:


Forest owners, forest and protected area managers, forest workers are participating in this initiative.

The project was part of The Forest Biodiversity Programme for Southern Finland (METSÖ-programme). The objective of METSO is to secure a favourable level of conservation of forested habitats and endangered species, i.e. the habitats and structural features of forests that are important for the species. Metsähallitus was responsible for the execution of the Forest Life project with its partners, The University of Joensuu, The Finnish Defence Force (Karelia Brigade), WWF Finland and UPM-Kymmene.

www.metsa.fi/forest-life
Tourism
1. The Ljunghusen Golf Club biodiversity management

1. Background and objectives

Ljunghusens GK lies within a heathland dominated coastal nature reserve. The links characteristics of the landscape have changed over centuries through different usage. Remains of this are found in form of old fisher huts, tong walls, peat pits and heather meadows. Constant improvements to the management of the landscape are being carried out. Irrigation water comes from boreholes and surface water. Efficiency is continually improved. No alien grass species are used on the course and since the 1980’s fertilizer use has been reduced by about 80%.

Ljunghusen Golf Club main reason to undertake a biodiversity conservation program is to maximize the ecological value of the natural site. Therefore, the golf will continue in the near future to undertake actions such as removing unwanted trees and shrubs and updating surveys for birds, mammals and frogs.

2. Description

The Ljunghusen Golf Club in Sweden is located on an international wetland area in South West of Sweden. The public opinion does not consider golf course as an environmental friendly place (fertilizers are too heavily used as well as pesticides, no or little access for general public, little or no wildlife and flora). However, environment and biodiversity are a central concern of many golf courses and golf associations all over the world.

3. Activities and Results

For more than ten years, the Ljunghusen Golf Club indeed performed several tasks aiming to protect the environment on site and especially the rich local biodiversity. Like some other well involved golf courses, this initiative received the Golf Environment Organization Certification in 2009 which is an international certification designed for golf courses.

This initiative is furthermore integrated in the European Golf Association 10 steps-guideline aiming at protecting, enhancing and restoring biodiversity on golf courses dedicated for golf courses all over Europe. This guideline was discussed with the European Commission. The dissemination of the guideline is done through the national associations.

The tasks performed by the Ljunghusen Golf club include:

- Ecological studies on plants, birds, mammals amphibians and red listed species.
- Work on habitats (increase the size of habitat patches, connect internal habitat patches, connect patches with external habitats, create new habitat corridors, improve and diversify habitat edges).
- Consultation with local nature conservation organizations.
- Activities for environmental education.
- Conservation and enhancing landscape and cultural heritages.
- Activities to conserve reduce and minimize water consumption.
- Careful use of fertilizers.

4. Application of criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does the criterion match your case?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Addresses biodiversity components</td>
<td>Yes</td>
<td>Species and/or biological resources are main object</td>
</tr>
<tr>
<td>2. Addresses biodiversity objectives</td>
<td>Yes</td>
<td>Conservation and increase of biodiversity.</td>
</tr>
<tr>
<td>3. Based on a corporate biodiversity policy? Does the study clearly link the case to the company's biodiversity policy?</td>
<td>Yes</td>
<td>Incorporated in the European Golf Association 10 steps-guideline aiming at protecting, enhancing and restoring biodiversity on golf courses dedicated for golf courses all over Europe.</td>
</tr>
</tbody>
</table>
| 4. Clear linkages to government biodiversity policies and regulations? Does the study clearly link the case to relevant international, regional and national biodiversity policies and regulations? | Yes | Since the activity directly depends on a natural site, the case study addresses habitats and wildlife species (birds, flora, and mammals). The biodiversity objectives addressed are the conservation of biodiversity (golf course close to nature reserves), and the equitable sharing of benefits between golfers, birdwatchers, walkers. Estimated area of habitats at Ljunghusen Golf Club: 
- Rough 'ecological' grassland: 25 ha; of National Importance 
- Wetlands: 10 ha; of National Importance 
- Open water features: 7 ha; of National Importance 
- Heather and other dwarf shrub communities: 33 ha; of National Importance |
<p>| 5. Integrated into a corporate biodiversity action plan? | Yes | This case study is part of bigger initiatives, the 10 steps guideline for golf courses and the Golf Environment Organization (GEO) certification. |
| 6. Biodiversity performance indicators? Does the study clearly describe which biodiversity performance indicators which are used in the case? | Yes | Regular inventory of flora and fauna. Ecological surveys on botanical, birds, mammals and amphibians aspects have been performed. |
| 7. Biodiversity performance monitoring and reporting? Does the study clearly describe the performance monitoring and reporting processes for the case? | Yes | It’s in the regulation of the GEO programme. |
| 8. Independent verification? | Yes | There is an independent verification by an accredited auditor of the Golf Environment Organization Sustainability Associate. |
| 9. Sustainability of the biodiversity action(s)? Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable? | Yes | This can probably be increased, it’s difficult to measure. |
| 10. Replicability of the biodiversity actions(s)? | Yes | The case study indicates that the biodiversity actions of the case are sustainable since the studies and certification proved the efficiency of the management. Furthermore such actions are bound to be replicated on other golf courses since they face the same environment and biodiversity problems. The European Golf Course Association |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Is the ecosystem/habitat/species important? E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?</td>
<td>Yes</td>
<td>The area has been a nature reserve since 1987 with a special maintenance plan for the golf course and then we’ve got areas within our premises that are located as Natura 2000.</td>
</tr>
<tr>
<td>13. How extensive is the impact? E.g. what is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects?</td>
<td>Yes</td>
<td>The Baltic Sea and a rather large nature reserve are close to the golf course and no negative effect has been identified over the time.</td>
</tr>
<tr>
<td>14. Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy.</td>
<td>Yes</td>
<td>A large audience (and not only golfers) has access to this high biodiversity zone without any loss of biodiversity identified. And hopefully this can contribute as good examples to other areas and organizations.</td>
</tr>
</tbody>
</table>

5. **Additional information**

Through our website we regularly inform members and golf players about our programme. Through our contacts with local and regional environmental organizations we’re sharing experiences not only in the golfing world. This type of communication can be taken up by many more, there’s a lot of knowledge and it’s a matter of getting in to your daily work.

Main report from our case is published at the GEO website:

6. Photo related to the case
2. Polvese Island - Perugia Province

Contact person: Mr. Gianluca Paggi
Address: Via Mario Angelucci, 8 - Madonna Alta - PERUGIA - Italy
Telephone number: +39 075-368.2560
Email address: gianluca.paggi@provincia.perugia.it

1. Background and Objectives

Perugia province's territory is located in Umbria region (NUTS2) in the centre of Italy. Its territory is constituted by: mountains areas (32%), hills (61%) and plains (7%). Perugia Province is crossed by the Apennines, a large part of the province has got limestone composition. These areas are subjected to "choreographies" of erosion: sinkholes, natural springs, rivers, streams and lakes embellish the expanses of woods, pastures, and fields cultivated with care.

Perugia Province is a local authority, an intermediate level between the municipalities and the region (Umbria region). It represents the community of the province, protects its interests and promotes and coordinates economic, social, civil and cultural development. It aims at achieving a sustainable balance in the structure of its territory taking into account the environmental quality as well as quality of life.

Perugia province's territory has got many protected areas (78 areas of which 75 SIC sites of Community interest and 3 SPAs – Special Protection Areas), the objective of Perugia province authority (together with the other local institutions) is to help sustainable development of economical activities (where it's possible) without damaging natural elements.

The good practice here described it's titled "Polvese Island" and it demonstrates that public-private partnership is fruitful in particular to obtain sustainable development of economical activities in natural-protected areas.

2. Description

The good practice is about Polvese Island which is an island (69,9ha) inside Trasimeno Lake, completely integrated into a Park area. Polvese Island has got a huge naturalistic heritage and Perugia province wants to preserve it. The biological aspect of the Polvese Island is constituted by: wetland and forest. The wetland is formed by a strip of hydrophytes that surround the island in a discontinuous way: the maximum amplitude on the eastern and southern sides (about 50 meters) thins out consistently on the North due to the increased steepness of the banks and the nature rocky - pebble fund. The forest covers an area that extends for about 25% of the total area of the northern part of the island. The plant species are Mediterranean species: oaks, flowering ash and buckthorn, in the undergrowth viturno, laurel, holly and privet. The lake has always represented an important area for waterfowl wintering, resting and reproduction, and for a perfect habitat for fish species live and reproduce.

This practice is also about the collaboration between Perugia province and three private cooperatives in managing economical activities on a protected area: Polvese Island. They signed an agreement in which the Province engages in giving public buildings, and other facilities to the three cooperatives: "Aurora Cooperative" which is involved in catering sector, "II Progresso Cooperative" which manages olive oil production on the island and "Plestina Cooperative" which is involved in environmental education activities, aimed especially to scholarship. Thanks to this agreement Perugia Province wanted (1) to guarantee (and to monitor) sustainable development of economical activities in a natural side; (2) to increase new kind of tourism (environmental, eco-tourism, sport-tourism); (3) to make alive a natural area through letting people enter a protected area and through continuous monitoring of biological parameters; (4) to increase induced development for other economical operators.

The stakeholders involved in this practice are: Perugia Province (public authority), the three private cooperatives (beneficiaries of direct economical inputs), the ferry boat company (beneficiary of indirect
3. **Activities**

Thanks to the valuation of the natural area, at now on Polvese Island it’s possible to undertake the following activities:

- Tourist tours along the island: Polvese Island is linked with visual heritage it preserves interesting historical legacies, such as **S. Secondo Monastery, S. Giuliano Church, and a 14th century castle.** Also remarkable is the Water Plants Garden. Recently, the Castle was restored, in order to use it also for didactic-cultural aims (theatre, exhibitions, etc.)
- Didactic tour: "Plestina Cooperative" manages many recreational activities aimed to tourists and to scholarship, such as: educational routes to discover nature, history, enogastronomy of the island.
- Sport activities: kitesurf and sailing school (since summer 2012)
- Enogastronomic tours: once a year in October there is the event "**Open House at the Oil Mills**" during which people enter mill and taste olive oil just compressed.

4. **Results**

At now on Polvese Island there are many tourists (in spring-summer season) and schoolarship visits (in autumn-spring season). Actions undertaken for biodiversity conservation are explained to the different visitors.

5. **Please indicated which criteria match your case (see the attached list)**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does the criterion match your case?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Addresses biodiversity components? Is the study clear about which of the four components of biodiversity it addresses: landscapes, ecosystems, species and/or biological resources?</td>
<td>Yes</td>
<td>Landscape, ecosystems and species. Wetland and forest areas are specific ecosystems that are maintained, especially to keep and adequate habitat for the species living there.</td>
</tr>
<tr>
<td>2. Addresses biodiversity objectives? Is the study clear about which of the four biodiversity objectives it addresses: conservation of biodiversity, sustainable use of biological resources, equitable sharing of the benefits, and development outcomes (especially for cases in developing countries)?</td>
<td>Yes</td>
<td>See above</td>
</tr>
<tr>
<td>3. Based on a corporate biodiversity policy? Does the study clearly link the case to the company's biodiversity policy?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>4. Clear linkages to government biodiversity policies and regulations? Does the study clearly link the case to relevant laws and regulations?</td>
<td>Yes</td>
<td>The best practice Polvese Island is a clear example of how local government (Perugia Province authority) is trying to promote local development through nature conservation.</td>
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<tr>
<td>Question</td>
<td>Response</td>
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<tr>
<td>5. Integrated into a corporate biodiversity action plan? Does the study show how the case is clearly linked to the company's biodiversity and action plan?</td>
<td>No</td>
<td></td>
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<tr>
<td>6. Biodiversity performance indicators? Does the study clearly describe which biodiversity performance indicators are used in the case?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Perugia Province constantly monitors biological and environmental parameters on the island. For example (1) Perugia Province put some batboxes on the island to monitor bat populations (bats are an ecological parameter about safeness of an area). (2) Perugia province manages natural treatment of wastewater using phytodepuration systems. (3) Perugia province has promoted since 1998 wintering waterbird census (IWC programme) at Lake Trasimeno. In the past Perugia Province together with local public authority managed a Life Nature project on&quot;Habitat Restoration and Conservation Herons on Lake Trasimeno&quot;, thanks to this project they restored 12 ha of alluvial forests along banks.</td>
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<tr>
<td>7. Biodiversity performance monitoring and reporting? Does the study clearly describe the performance monitoring and reporting processes for the case?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>8. Independent verification? Does the study clearly explain whether and how the case has been independently verified?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>9. Sustainability of the biodiversity action(s)? Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable?</td>
<td>No</td>
<td></td>
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<tr>
<td>10. Replicability of the biodiversity actions(s)? Does the study provide guidance on the how the case could be replicated or scaled up across the company or the sector?</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Through B2N project, it aims at disseminating this best practice for other applications in other European countries.</td>
<td></td>
<td></td>
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<tr>
<td>11. Is the ecosystem/habitat/species important? E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Polvese island is completely integrated into a Natura 2000 site (IT5210070).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. How extensive is the impact? E.g. what is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects?</td>
<td>Not specifically covered</td>
<td></td>
</tr>
</tbody>
</table>
16. Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy.

| Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy. | Not specifically covered |

6. Any additional information (links, report etc.)

Please visit [http://polvese.provincia.perugia.it/](http://polvese.provincia.perugia.it/)

7. Photo related to the case
3. The Federation of Associations for Hunting and Conservation of the European Union (FACE) best practices towards biodiversity

1. Background and Objectives

Background

The Standing Committee of the Parliamentary Assembly of the Council of Europe (PACE) adopted Recommendation 1689 (2004) regarding Hunting and Europe’s environmental balance on 23 November 2004 in Warsaw, Poland. This document recommended *inter alia* that the Committee of Ministers (CM) of the Council of Europe “draw up a European charter on hunting, as a guide setting out common principles and good practices for hunting, particularly for the organisation of hunting tourism on the continent”. The Bureau of the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) adopted its Opinion at its meeting of 8 April 2005. In this Opinion, the Bureau welcomed the Recommendation, stating that “it considers that hunting, if properly managed, can play a role in maintaining and enhancing many areas of natural interest in Europe”. The Bureau further welcomed *inter alia* “the idea of elaborating, in cooperation with concerned stakeholders, a European Charter of Hunting dealing with all relevant aspects of hunting and wildlife conservation”. To this end, the Bureau recommended that “the Deputies invite the Standing Committee to the Bern Convention (SC) to consider the elaboration, in collaboration with concerned stakeholders, of a European Charter on Hunting dealing with all relevant aspects of hunting and wildlife conservation”.

The Deputies considered this issue at their 909th meeting, brought it to the attention of their governments, as well as of the SC for information and possible comments, and invited the Rapporteur Group on Education, Culture, Sport, Youth and Environment (GR-C) to prepare a reply. The CM then informed PACE that the Bern Convention Bureau was in favour of elaborating such a Charter, in cooperation with the stakeholders concerned, which would deal with all relevant aspects of hunting and wildlife conservation. The Bureau decided to include this project in the agenda of the next meeting of the SC and, subject to its agreement, in the work programme for 2006. Pursuant to this recommendation, the SC appointed a Working Group (WG) of relevant experts and representatives from non-governmental organisations (NGOs) and governments of Member States to undertake the formulation of the European Charter on Hunting and Biodiversity in November 2005. This Charter is the result of a process which has involved the active participation by the WG on the basis of draft input by contracted consultants. This process was aided by the World Conservation Union/Species Survival Commission – European Sustainable Use Specialist Group (IUCN/SSC-ESUSG), the Federation of Associations for Hunting and Conservation of the European Union (FACE), and the International Council for Game and Wildlife Conservation (CIC).

Objectives

The main aim of the Bern Convention is the conservation of wildlife and its natural habitats. Hunters can contribute to the fulfilment of this aim through regulating game populations and caring for their habitats, assisting in monitoring and research, and raising public awareness for conservation issues. Thus, hunters and hunting play an important role in the conservation of biodiversity. This Charter provides a non-binding set of guidelines for hunters, hunting tour operators, regulators and managers that address common principles and good practices for sustainable hunting (including hunting tourism) in Europe. These principles and guidelines also aim to help fulfill the commitments of European States on conservation through use of components of biodiversity as laid down in the CBD, and as developed by the *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* and the *Malawi Principles for the*.

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6 [http://assembly.coe.int/Documents/AdoptedText/ta04/EREC1689.htm](http://assembly.coe.int/Documents/AdoptedText/ta04/EREC1689.htm)

7 Paragraph 6.i.

8 [http://www.coe.int/t/e/cultural_cooperation/environment/nature_and_biological_diversity/nature_protection/sc25_tpvsa03erev.pdf?L=E](http://www.coe.int/t/e/cultural_cooperation/environment/nature_and_biological_diversity/nature_protection/sc25_tpvsa03erev.pdf?L=E)


Although the Principles and Guidelines in this Charter apply specifically to hunting, they are designed to have wider application regarding the consumptive use of biodiversity.

The Charter promotes principles and guidelines intended to ensure that hunting and hunting tourism in Europe are practiced in a sustainable manner, while avoiding negative impacts on biodiversity and making a positive contribution to the conservation of species and habitats and the needs of society.

**Sustainable hunting - The Charter:**

- Provides a set of non-binding principles and guidelines for sustainable hunting (with firearms, bows, traps, hounds or birds of prey) to facilitate biodiversity conservation and rural development;
- Encourages hunter involvement in monitoring, management, and research efforts directed towards stewardship and the conservation of wildlife and their habitats;
- Promotes cooperation between hunters and other stakeholders in the conservation and management of biodiversity.

**Hunting tourism - The Charter:**

- Seeks to ensure that hunting tourism is sustainable;
- Promotes forms of hunting tourism that provide local communities with socio-economic incentives to conserve and manage wildlife and their habitats, as well as general biodiversity;
- Makes recommendations for hunting tour operators and hunters who engage their services.

**Standards for European hunters - The Charter:**

- Promotes measures that increase hunter proficiency and safety;
- Encourages hunter education, awareness and information measures;
- Promotes best hunting practices.

### 2. Description

This Charter addresses hunting as a consumptive and recreational form of utilisation and/or management of species of birds and terrestrial mammals in Europe, in accordance with the provisions of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1979).

The Charter promotes principles and guidelines intended to ensure that hunting and hunting tourism in Europe are practiced in a sustainable manner, while avoiding negative impacts on biodiversity and making a positive contribution to the conservation of species and habitats and the needs of society.

### 3. Activities

The Bureau of the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) recommended that “the Deputies invite the Standing Committee to the Bern Convention (SC) to consider the elaboration, in collaboration with concerned stakeholders, of a European Charter on Hunting dealing with all relevant aspects of hunting and wildlife conservation”. The SC appointed a Working Group (WG) of relevant experts and representatives from non-governmental organisations (NGOs) and governments of Member States to undertake the formulation of the European Charter on Hunting and Biodiversity in November 2005. This Charter is the result of a process which has involved the active participation by the WG on the basis of draft input by contracted consultants. This process was aided by the World Conservation Union/Species Survival Commission – European Sustainable Use Specialist Group (IUCN/SSC-ESUSG), the Federation of Associations for Hunting and Conservation of the European Union (FACE), and the International Council for Game and Wildlife Conservation (CIC).

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4. Results

Almost all principles of the charter are targeting biodiversity conservation and respect of ecosystems:

**Principle 1** – Favour multi-level governance that maximises benefit for conservation and society.

**Principle 2** – Ensure that regulations are understandable and respected

**Principle 3** – Ensure that harvest is ecologically sustainable

**Principle 4** – Maintain wild populations of indigenous species with adaptive gene pools

Example: FACE Members are working with the Guidelines to ensure pragmatic conservation of Large Carnivores. For instance, the DinaRis Project deals with the management of lynx between Slovenia and Croatia, which was developed and managed in association with the Slovenian Hunters Association.

**Principle 5** – Maintain environments that support healthy and robust populations of harvestable species

**Principle 6** – Encourage use to provide economic incentives for conservation

**Principle 7** – Ensure that harvest is properly utilised and wastage avoided

Example: FACE has played a key role in drafting a project for a reference document for good hunting practice in relation to the handling of animal by products during hunting operations.

5. Please indicated which criteria match your case (see the attached list)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Does the criterion match your case?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Addresses biodiversity components? Is the study clear about which of the four components of biodiversity it addresses: landscapes, ecosystems, species and/or biological resources?</td>
<td>Yes</td>
<td>Biological resources</td>
</tr>
<tr>
<td>13. Addresses biodiversity objectives? Is the study clear about which of the four biodiversity objectives it addresses: conservation of biodiversity, sustainable use of biological resources, equitable sharing of the benefits, and development outcomes (especially for cases in developing countries)?</td>
<td>Yes</td>
<td>Conservation of biodiversity &amp; Sustainable use of biological resources</td>
</tr>
<tr>
<td>14. Based on a corporate biodiversity policy? Does the study clearly link the case to the company’s biodiversity policy?</td>
<td>Not applicable</td>
<td>Neither the Bern convention, nor FACE are companies – a charter for the hunting tourist sector (tour operators) was produced</td>
</tr>
<tr>
<td>15. Clear linkages to government biodiversity policies and regulations? Does the study clearly link the case to relevant international, regional and national biodiversity policies and regulations?</td>
<td>Yes</td>
<td>Produced by the Council of Europe and based on the Bern Convention</td>
</tr>
<tr>
<td>16. Integrated into a corporate biodiversity action plan? Does the study show how the case is clearly linked to the company’s biodiversity and action plan?</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>17. Biodiversity performance indicators? Does the study clearly describe which biodiversity performance indicators are used in the case?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>18. Biodiversity performance monitoring and reporting? Does the study clearly describe the performance monitoring and reporting processes for the case?</td>
<td>Not applicable</td>
<td>No reporting in place – only principles</td>
</tr>
<tr>
<td>19. Independent verification? Does the study clearly explain whether and how the case has been independently verified?</td>
<td>Yes</td>
<td>Through the participation of various stakeholders during the drafting process the</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td>Notes</td>
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<tr>
<td>20. Sustainability of the biodiversity action(s)? Does the study indicate whether and, if so, why the biodiversity actions of the case are sustainable?</td>
<td>Not applicable</td>
<td>The action “producing a charter” is per se not a direct action for biodiversity. This should be the consequence when applying the principles.</td>
</tr>
<tr>
<td>21. Replicability of the biodiversity actions(s)? Does the study provide guidance on the how the case could be replicated or scaled up across the company or the sector?</td>
<td>Not applicable</td>
<td>Same reason as criterion n°9</td>
</tr>
<tr>
<td>22. Is the ecosystem/habitat/species important? E.g. Is the action in a Natura 2000 area or one covered by the Habitat or the Birds Directive? Is it threatened? Is it indigenous?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>23. How extensive is the impact? E.g. what is the geographical area covered? What other types of land use can be found in the region? Are there negative side effects?</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>24. Environmental benefit, including: Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives, and Natura 2000 – into strategies considering the value chain with a sustainable sourcing policy.</td>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

6. **Any additional information (links, report, etc.)**

FACE has been active in promoting these principles and produced a publication with examples on how it delivers on each of the Principles laid down in the charter: [http://www.face.eu/Communication/Publications/Bern%20Brochure.pdf](http://www.face.eu/Communication/Publications/Bern%20Brochure.pdf)

**Participant name:** Gabor von Bethlenfalvy  
**Contact person:** FACE
7. Photo related to the case

European Charter on Hunting and Biodiversity
Non-energy extractive industry
1. CEMBUREAU

Contact person: Heloise Chardigny  
Email address: heloise.chardigny@cemex.com

1. Background and Objectives

Recording invertebrates, reptiles and amphibians, birds and mammals in the region around the existing quarry with a view to improving the management of them and their habitats.

2. Description

The entire quarry has been designated as a geological Site of Special Scientific Interest (SSSI). While this status does not prevent quarrying, CEMEX allows access to interested parties and must ensure that the exposure is maintained when the quarry is restored.

3. Activities

The restoration provides for the retention of a chalk sequence in sections of the northern quarry face, which is a geological feature of national interest. When assessing the feasibility of extending the quarry in 2006, CEMEX funded an archaeological survey which covered 360 hectares and yielded some significant finds.

There is a progressive restoration scheme in place for the quarry to provide, on completion of working, an area of high quality agricultural.

The workings are visually well screened from the nearby village with over 20,000 trees and two miles of hedgerow. The drainage of the land has been designed to allow for the creation of a wetland and pond area in a location where there is insufficient soil to effect satisfactory agricultural restoration.

In 2005, CEMEX commissioned a specialist environmental assessment to record invertebrates, reptiles and amphibians, birds and mammals in the region around the existing quarry with a view to improving the management of them and their habitats. This revealed the Small Blue butterfly, which decline is rapid. CEMEX is working in partnership with Butterfly Conservation to maintain the Small Blue population in Barrington. The partnership includes involvement of CEMEX employees in voluntary work and fundraising activities.

4. Results

As well as pieces of pottery, the archaeological survey uncovered two Roman quarries, Iron Age settlements and a Roman farmstead complete with human remains.

Barrington Quarry has an active engagement programme and receives on average between 300 and 400 visitors per year. A majority of these are pupils and students. Over the past four decades quarry visitors have been able to witness fascinating geological finds. This includes the discovery of the fossilized remains of an ichthyosaur, which has been donated to the Natural History Museum in London.

5. Please indicated which criteria match your case (see the attached list)

Species ecosystems and landscapes

6. Any additional information (links, report, etc.)

- Partners
- Butterfly Conservation
- Cambridge University Archaeology Unit
2. CEMEX UK

Contact person: Sam Tarrant
Email address: Biodiversity@CEMEX.Com

1. Background and Objectives

Working in partnership with Butterfly Conservation, CEMEX UK has significantly enhanced land for threatened butterfly UK Biodiversity Action Plan priority species at Southam Quarry, Warwickshire, UK. This work is part of a larger conservation programme across Warwickshire in which Southam Quarry is an essential core element. The site provides some of the last refuge populations for small blue butterflies in the wider Midlands region.

The biodiversity work has been overseen by Butterfly Conservation, and has seen significant benefits for the butterfly species targeted. This conservation work has shown significant results in doubling the small blue butterfly populations form 3 to 6 colonies. CEMEX UK see the work carried out on this site is very valuable and is promoting the best practices across the wider area and further within its own land management.

2. Description

Southam Quarry is located approximately 1 km north of Southam, Warwickshire 52° 16' 14" N, 1° 22' 47" W (see http://bit.ly/k8wLkU). Quarrying for limestone and clay at Southam has taken place since the early 1800s and is still active. Initially the mineral was used in the production of agricultural lime and then, from around the 1840s, for the production of Portland Cement. A cement works was established about that time, supplied with raw material from the quarry. Cement production ceased at Southam in 2000, at which time cement manufacture was consolidated at Rugby.

3. Activities

Habitat Management
Work has included habitat creation through land forming and sowing locally sourced seeds, creating florally rich grassland for small blue and dingy skipper butterflies. Scrub management has created a mosaic habitat and provided valuable ‘Butterfly Banks’. Butterfly Conservation has also used the site to undertake experimental conservation through creating micro-habitat areas for invertebrates and is publishing these findings for the wider conservation community. Approximately 3 hectares of scrub have been cleared and a series of bunds have been created. Some scrapes have also been created to expose the sub-soil to enable a comparison of how habitat establishment differs to un-scraped areas. A number of these lens scrapes have been seeded with Kidney Vetch and these will be compared with those that have not been seeded. A baseline study of the area has been undertaken and the new area mapped to aid future monitoring of the site.

The site will have more rotational habitat management, to keep open grassland mosaic by digger across adjacent land areas managed by CEMEX. Also more plant introductions of Kidney Vetch specifically required for Small Blue butterflies. Further conservation experiments to determine best practices and effective methods, including ‘lens’ scapes to provide micro habitat niches. Conservation grazing by a local grazier is being trialed onsite.

Further conservation enhancement opportunities exist in extending and continuing the program of scrub management across the site. The continuing implementation of the site biodiversity management plan will ensure the site further aids in meeting priority habitats and species targets, with likely hood that the threatened butterfly populations will continue to grow and in so doing colonies neighboring sites.
Project Development

<table>
<thead>
<tr>
<th>Steps</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All stakeholders were drawn together to discuss potential of the site and project. This included site manager and conservation organization - Butterfly Conservation.</td>
</tr>
<tr>
<td>2</td>
<td>The site was mapped for habitats and species.</td>
</tr>
<tr>
<td>3</td>
<td>A site management plan was produced.</td>
</tr>
<tr>
<td>4</td>
<td>The management work began.</td>
</tr>
<tr>
<td>5</td>
<td>Regular monitoring of invertebrates undertaken to see effectiveness of management.</td>
</tr>
<tr>
<td>6</td>
<td>Results from the project as shared with various stakeholders, including local authorities, other mineral operators and schools.</td>
</tr>
<tr>
<td>7</td>
<td>The success of the project is being examined and the management process improved.</td>
</tr>
</tbody>
</table>

4. Results

UK and Local Biodiversity Action Plan Priority Species and Habitats
Priority Habitats and Species managed onsite are listed below. The site is making a particular contribution towards the Small Blue Butterfly local BAP target for restoring 4 new colonies, of which the site provides 3. This is a substantial 75% of the Warwickshire BAP target.

<table>
<thead>
<tr>
<th>Species / Habitat</th>
<th>Priority</th>
<th>Results (as of 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland Calcareous Grassland</td>
<td>Local and UK</td>
<td>Increased extent to 1.5 ha</td>
</tr>
<tr>
<td>Small Blue (<em>Cupido minimus</em>)</td>
<td>Local and UK</td>
<td>Doubling in colony numbers from 3 to 6.</td>
</tr>
<tr>
<td>Chalk Carpet Moth (<em>Scotopertyx bipunctaria</em>)</td>
<td>Local and UK</td>
<td>Increasing the number of colonies from 1 to 3</td>
</tr>
<tr>
<td>Dingy Skipper (<em>Erynnis tages</em>)</td>
<td>Local and UK</td>
<td>Increasing the number of colonies from 1 to 3</td>
</tr>
<tr>
<td>Grizzled Skipper (<em>Pyrgus malvae</em>)</td>
<td>UK</td>
<td>Increasing the size of colonies</td>
</tr>
</tbody>
</table>

5. Please indicated which criteria match your case (see the attached list)

- Species

6. Any additional information (links, report, etc.)

Lessons learned

- Quarries can provide area of habitat ideal for rare and threatened invertebrate species.
- Working with conservation organizations on sites can be productive for delivering biodiversity.
- Conservation projects should be focused towards local and national biodiversity action plan priority habitats and species.
- Volunteer ecologists can be very effective at undertaking species monitoring.
- Management can be effectively done on large scale using quarry plant.
- Management plans are most effective when they adopt a landscape scale approach.
3. Eurogypsum

Contact person: Christine Marlet
Email address: info@eurogypsum.org

1. Background and Objectives

Eurogypsum has a total of 18 case studies relating to biodiversity and its conservation. These are spread across Austria, Germany, Italy, Romania, Spain, the UK and France.

2. Description

The case studies address the conservation of biodiversity and sometimes even the creation of biodiversity where it did not exist before. They show that biodiversity is a concern taken into account when carrying out the impact assessment study embedded in the restoration plan in harmony with the local community’s wishes. Biodiversity is enhanced in partnership with local authorities, NGOs and widely speaking interested parties.

3. Activities

Activities in the various case studies include: protection of species, the connection and implementation of various biotopes, checking biodiversity, valorization of the local environment, ecological restoration, monitoring of impact on species, promotion of wildlife, rehabilitation of the environment and many more.

4. Results

Integrating legal and ecological constraints and especially the European biodiversity policies – Birds and Habitats Directives and Natura 2000 into strategies considering the value chain with a sustainable sourcing policy.

Other results include the discovery of new species some of which are red listed, and their monitoring, preservation of habitats, reproduction and increase of species, re-forestation, enhancement of wildlife habitat and many more.

5. Please indicated which criteria match your case (see the attached list)

Combined, the case studies address all four components of biodiversity.

6. Any additional information (links, report, etc.)

Please see the attached pdf containing information on all 18 case studies
4. Holcim

1. Description

- Type of exploitation: open-pit
- Total surface of exploitation: 180 ha
- Start date of exploitation: 1979 (under Holcim ownership since 1989)
- Start date of rehabilitation: 1990
- Anticipated end date of exploitation: between 2014 and 2020
- Rehabilitation process: in parallel to exploitation
- Financial input: €600,000
- Rehabilitation plan budget: €90,000/year

The site lies in the path of one of the biggest “migration highways”, the route followed by birds on their seasonal journeys between the warm climates of the south and the milder climates of the north. This key location is one of the reasons behind El Puente's tremendous biodiversity.

2. Activities

Planning of the rehabilitation processes at the Holcim gravel pits is carried out prior to the extraction work, not after the machines have left the site. Before initiating the work, the technicians are already thinking about the site's restoration.

The first step is to remove the layer of topsoil, the depth of which may vary from a few centimetres to two meters. At El Puente, the soil is rich in nutrients and is gathered in large piles for later use in the reforestation stage. After this first step, the actual extraction process begins.

Restoration starts from the moment the machines stop excavating an exhausted seam. With restoration starts the long term work, which can be done in two ways.

The simplest and more traditional way involves filling the basin until it is level with the adjacent land. In this case, inert material is extracted from other areas of the gravel pit, or material received from third parties is tipped into the basin.

Holcim takes charge of shaping the terrain every day, and the independent biologist participates in this ongoing transformation of the landscape, such as screening many areas with vegetation in order to protect the birds' privacy and prevent direct contact with humans.

Together with Holcim technicians and employees, the biologist draws up the contours of the future lakes, and ensures the banks are filled out to make them less steep.

They also create islands and berms which, in some cases, after they have stabilized, are divided up in order to increase the number of islets. In other areas, a greater quantity of material is added in order to create wet areas which do not become lakes but form marshes, which are ideal for many birds.

In this phase, the top soil that was set aside before starting the excavation is brought out of storage and spread around the lakes so that vegetal species have good soil in which to take root. Some of the islands were not reforested, since several bird species prefer to nest or congregate in places with no vegetation.

The young birds which live in these exposed areas do not use nests and their eggs are camouflaged to blend in with the terrain as a defence against enemies. One example is the seagull, which defends its nest aggressively. At El Puente the great depth of the basins after the gravel extraction process was a problem, as light could not penetrate that deep and help generate the hoped for explosion of life. The
basins were thus filled with inert material and the slopes of the banks were made less steep so that the animals could walk without any problems and the marshy vegetation which protects them could take root.

However, in other areas where light excavation took place, no refilling took place, so water could collect in the lower areas, which were rapidly populated by water plants such as bulrushes (*Typha latifolia*) and reeds (*Phragmites australis*), providing a sheltered zone to be enjoyed by birds which require more privacy. The biologist asserts that the regeneration of the area will occur only by following this process, and then by leaving nature do her work. Soon, the first vegetation appears on the banks and the marsh species form a border around the basins with reeds and bulrushes. However, the company's restoration work is not yet over, as it also carries out measures to help speed up the process.

The biologist asserts that the regeneration of the area will occur only by following this process, and then by leaving nature do her work. Soon, the first vegetation appears on the banks and the marsh species form a border around the basins with reeds and bulrushes. However, the company's restoration work is not yet over, as it also carries out measures to help speed up the process. Advised by the independent biologist every step of the way, Holcim keeps a nursery where the plants and trees to be used in the forestry rehabilitation are grown. These species are selected because they are the best adapted to the environment and will help obtain the most natural results possible.

3. Results

The small lakes distributed throughout the rehabilitated and reforested zones of El Puente’s 180 hectares provide regular shelter for tens of thousands of birds, representing 171 species, of which 72 are aquatic birds and 27 are also nesting birds. Tomás Velasco's inventories also include about 200 different species that appear occasionally at the El Puente lakes, in addition to those which are always there.

Throughout the year, over half the species of Spain pass through El Puente’s reserve. In the past year, a monthly average of 4,300 birds were seen, a record even on an international level.

The biologist has his own particular ranking for the birds passing through the lakes of El Puente. He notes that the Mediterranean gull (*Larus melanocephalus*), which only breeds in the Albufera in Valencia and in Tarragona’s Ebro Delta, is extremely rare and that there are only 20 nesting couples in all of Spain. He also highlights the purple swamphen (*Porphyrio porphyrio*), which is very rarely seen outside Andalusia, and the ferruginous duck (*Aythya nyroca*), of which there are only 40 species during the winter and 10 breeding couples in all of Spain.

The eight purple heron (*Ardea purpurea*) couples are another emblematic species of El Puente, especially considering that there are only 2,000 couples in Spain, of which 150 fly through Castile-La Mancha. The greater flamingos (*Phoenicopterus roseus*) also populate the lakes and, although these birds are from a saline habitat, they are not averse to using fresh water areas to rest on their long seasonal migrations. In addition, rarely seen cranes have also been spotted at the El Puente gravel pit lakes.

These are some of the more outstanding species at El Puente. All of them are special due to the extreme fragility of their endangered populations. The biologist emphasizes that, of the more than 200 species censused in the gravel pit lakes, about 123 are included in the National Catalogue of Endangered Species.

Specifically, four of these: squacco heron (*Ardeola ralloides*), the black stork (*Ciconia nigra*), the ferruginous duck and the white-headed duck (*Oxyura leucocephala*) are considered to be “in danger of extinction”. Moreover, another 125 species are included on Castile-La Mancha’s “endangered species” list, of which 119 are catalogued as “of special interest” at a national level.

However, the biodiversity of the area does not just include birdlife. This refuge also attracts many mammal species, such as the fox (*Vulpes vulpes*), the marten (*Martes foina*), the common genet (*Genetta*...
genetta) and, especially, the rabbit (Oryctolagus cuniculus). Sometimes even wild boar (Sus scrofa) evading local hunters find refuge in the area.

In addition, the lakes contain carp (Cyprinus carpio), which were introduced to the zone in the form of eggs, transported on the legs of birds from other marshlands.

There are also catfish (Ictalurus melas), gambusias (Gambusia sp) and even the leprous turtle (Mauremys leprosa) in the lakes. At the edges of the basins there are red crabs (Procambarus clarkii), green frogs (Rana perezi) and running toads (Epidalea calamita).

Water snakes (Natrix natrix) also abound, as do montpellier snakes (Malpolon monspessulanus), two types of lizards (Iberolacerta sp), and the impressive ocellated lizards (Timon lepidus). The avifauna of the gravel pit represents a vast catalogue of species which coinhabit in a space where, had it not been for human endeavour, would not exist.

4. Please indicated which criteria match your case (see the attached list)

2. Addresses biodiversity objectives?
The study focuses mainly on conservation of biodiversity, but also underlines the sustainable use of biological resources, especially water.

7. Biodiversity performance monitoring and reporting?
The rehabilitation monitoring program consists of planned periodical visual inspections and collection of materials from the restored areas. During these inspections, all aspects of vegetation and soil allowing the observation of biodiversity evolution over time, as well as detect the slightest problem that may occur, are carefully noted. The objective is to follow the performance of the various vegetal materials as well as techniques used in the gravel pit’s rehabilitation process in order to evaluate the impact and apply corrective measures.

8. Independent verification? Does the study clearly explain whether and how the case has been independently verified? The case study won in 2010 the special Biodiversity Awards of the UEPG Sustainable Development Awards, which was delivered by an independent jury of experts:

• Jean-Claude Lefeuvre, emeritus professor at the National Natural History Museum (President of the Jury)
• Shulamit Alony, Head of the Countdown 2010 Secretariat, IUCN
• Prof. Christian Niemann-Delius, Institute of Mining Engineering, RWTH Aachen University, Germany
• Brenda O’Brien, Manager Brussels liaison office, European Agency for Health and Safety at work

11. Is the ecosystem/habitat/species important?
Out of the more than 200 species censused in the gravel pit lakes, about 123 are included in the national catalogue of endangered species.

13. How extensive is the impact?
In 2010: total surface of exploitation: 18ha, surface affected by exploitation at time of candidacy 80ha, surface rehabilitated (at time of candidacy) 100ha, the gravel pit is surrounded by roads, farmland, railways and mining exploitations.

5. Any additional information (links, report, etc.)

The collaborative work between scientists and technicians has been fundamental to improving the area. These efforts led to a first award in 2008, when the area was recognized as one of the marshlands with the greatest wealth of birds in Castille-La Mancha and also designated as a zone of special protection for birds (ZEPA). In 2009, the rehabilitation was further recognized when El Puente won the First National Biodiversity Prize from the National Aggregates Federation (FdA).
In 2010 it was the co-winner of the special Biodiversity Awards of the UEPG Sustainable Development Awards. The case study was acknowledged by IUCN and the local authorities.

6. Photo related to the case
5. Hülskens GmbH & Co. KG, Wesel

1. Background and Objectives

The enhancement of biodiversity in the Rhine floodplain and particularly in the bird sanctuary “Lower Rhine Area” as well as in several nature conservation and FFH areas along the Lower Rhine is of special concern, as the riverbed deepening of the Rhine and a lack of natural floodplain dynamics have drawn attraction to e.g. the drying up of the plain or a lack in sandy-gritty pioneer locations.

2. Description

Like many other extractions the former extraction site Reeserward is located in today's Rhine floodplain and bird sanctuary “Lower Rhine”. The design of the connection to the Rhine, the segmentation of the water and land areas, the side ditches and flood channels as well as the creation of dynamic largely open biotopes combined with extensive agricultural usage are the main focus areas.

It is being investigated in how far specific measures affect the fish and other water organisms, as well as in how far they affect the breeding or passing migrant birds and vegetation. In collaboration with

- Farm Organisation
- City of Rees
- State Environmental Agency
- Forestry Commission Office Kleve
- Water and Shipping Administration

3. Activities

- Partially filled Rhine estuary - helps stabilise water level while conserving ecological balance
- Islands on various water levels - encourage nest building
- Side ditches & shallow water zones - structural enhancement
- Diversified relief and areas without top soil - encourage bird habitat & renaturisation

4. Results

“A man-made nature haven”

If existing and future extraction respectively renaturisation areas are managed in a more ecological way with direct reference to flood plain characteristics, they can serve as valuable manmade habitats. Their impacts often exceed local aspects and can – as shown by spawning migration of fish to the backwaters and ponds or the migration of juvenile fish into the Rhine – positively influence the entire system of the Lower Rhine system.

5. Please indicated which criteria match your case (see the attached list)

1. Addresses biodiversity components?
The study addresses the ecosystem of the Rhine floodplain and especially birds as the site is located within the bird sanctuary “Lower Rhine Area”.

2. Addresses biodiversity objectives?
The study addresses conservation of biodiversity.

4. Clear linkages to government biodiversity policies and regulations?
With the project “Renaturisation Reeserward – a man-made nature haven” the enterprise Hülskens GmbH & Co. KG in Wesel and the Centre for Nature Conservation in Rees-Bienen participate in the campaign “Countdown 2010” conducted by the International Union
for Conservation of Nature and the State of North Rhine-Westphalia whose goal is to maintain and support biodiversity.

7. Biodiversity performance monitoring and reporting?
A long-term monitoring plan has been introduced to analyze which of the ecological structures established on a trial basis prove particularly effective for enhancing the diversity for species and allow the area to function as an ecological valuable part of the Rhine floodplain.

10. Replicability of the biodiversity actions(s)?
The visionary target is to identify those measures which have proven successful and apply them to other renaturisation in the region in form of a model project. This way, a substantial contribution with respect to diversity of species can be attained in terms of the Alliance for Nature, if contrary to traditional, often poorly structured and ecologically, not exactly optimally designed renaturisation the functions as floodplain habitats stands as the main objective and can serve better as paradigm for prospective planning.

6. Any additional information (links, report, etc.)
Co-winner of the Special Biodiversity Award 2010 – UEPG Sustainable Development awards 2010.

7. Photo related to the case
6. IMA Europe

Contact person: Amina Langedijk
Address: IMA-Europe aisbl, Brussels, Belgium
Telephone number: +32 (0)2 210 44 12
Email address: a.langedijk@ima-europe.eu

1. Background and Objectives

Summary information on over 20 biodiversity case studies from across Europe. See the annex to this report for more details.

2. Description

The cases, in general, focus on restoration activities and the associated conservation of key indicator species – both fauna and flora.

3. Activities

For each site a set of biodiversity actions are defined and implemented. Specific interventions are based on the site’s particular circumstances and needs.

4. Results

Consistently the biodiversity actions have resulted in restored ecosystems and habitats supporting an increased population of native, wild species.

5. Please indicated which criteria match your case (see the attached list)

- 1, 5, 6, and 10, in general.
<table>
<thead>
<tr>
<th>Country &amp; Region</th>
<th>Actors / Partners</th>
<th>Objective</th>
<th>Actions</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria (Upper Styria)</td>
<td>Rio Tinto Minerals Austria / Naintsch Mineralwerke GmbH &amp; Nature Park « Pollauer Tal »</td>
<td>Investigate plant and habitat diversity within and outside the mining area to gain information on how to treat the post mining landscape for ecological benefits.</td>
<td>Under the project «Habitat Mine», biologists investigated the habitat mine for several months and discovered 27 biotope types and 220 plant species. Scientists compared the concepts of re-naturation versus re-cultivation, resulting in invaluable recommendations for the sustainable development of the mining site.</td>
<td>The scientific results will be considered to optimise the legal framework and consequently increase ecological benefits of the post mining areas.</td>
</tr>
<tr>
<td>Austria (Salzburg)</td>
<td>Zementwerk Leube GmbH &amp; Institut für Ökologie, Haus der Natur Salzburg</td>
<td>Protection and enlargement of populations of red listed plant species, endangered reptiles, amphibians, dragonflies and bee species.</td>
<td>Realisation of different type of water bodies, the mowing of Molinia meadows and semi-natural dry grasslands and the building of special habitats for the endangered insects. During the resettlement projects, seeds of the endangered species are collected in the wild and seeded out in adequate habitats.</td>
<td>In the last 13 years the targets could be reached to great extent – all populations increased and the resettlement was very effective. The population of the bee species Chalicodoma parietina is in the meantime the only known in the province of Salzburg.</td>
</tr>
<tr>
<td>Austria (Gummern)</td>
<td>Omya GmbH &amp; Perau Grammar School</td>
<td>Living Quarry – transforming a disused quarry into a living classroom</td>
<td>In just 12 years a disused quarry site at Gummern has been transformed into a wetlands nature reserve. Local school kids greatly contributed by creating small biotopes &amp; dragonfly ponds and by careful mapping exercises and planting.</td>
<td>The former quarry is now a natural haven of wildlife for kids. Trout, newts, yellow-bellied toads and tadpoles found their habitat in the pools alongside a wide variety of anthropods like beetles, spiders and crayfish.</td>
</tr>
<tr>
<td>Belgium (Hoge Kempen)</td>
<td>SCR Sibelco &amp; RLKM, Community of Maasmechelen, Agentschap Natuur &amp; Bos (gov. org.)</td>
<td>Integration of restored silica sand quarries in a Nature Park and Nature Reserve</td>
<td>The move of the sand plant from the location “Berg” (middle of the park) to the new quarry location. Both new and existing quarry will be restored in such a way that they will be fully integrated in the national park and nature reserve.</td>
<td>Contribution to the realisation of the National Park which houses a lot of protected species and biotopes.</td>
</tr>
<tr>
<td>Country</td>
<td>Organization</td>
<td>Description</td>
<td>Results</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Belgium</td>
<td>Carmueuse &amp; ASBL « Les Bocages »</td>
<td>Preserving and developing a sand martin population on an industrial site</td>
<td>Development of an artificial colony in an exhausted part of the quarry. Refreshment or repair of the nesting area each winter.</td>
<td>This sand martins colony is now the biggest in Belgium with more than 200 nests. It provides bird specialists with the opportunity to closely follow the evolution of the swallows via capture and ringing.</td>
</tr>
<tr>
<td>Belgium</td>
<td>Dumont Wauthier (Lhoist Group) &amp; City of Amay and the Dept of the Nature and Forest Administration of the Walloon Region</td>
<td>Creation of a natural reserve and a geological path in the former quarry of Ampsin, nearby Liège</td>
<td>Signature in 2008 of a formal convention organising the cooperation over the next 30 years between the city, the department of nature and forest administration of the Walloon Region and the lime company. The Park was inaugurated on 31 March 2009.</td>
<td>The Natural Reserve covers 28 ha which is partly open to the public and includes a geological path equipped with didactic information. A more restricted and protected area can be visited on guided tour.</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Vapenka Certovy Schody (Lhoist Group) &amp; Landscape Protected Area Czech Karst Office</td>
<td>Limestone quarry land reclamation next to Natura 2000 area in Czech Karst</td>
<td>Technical part: filling quarry with limestone sand an soil, building an entrance chimney to Zabka Cave and technical cleaning of rocky slopes; Biological reclamation: introducing typical karstic plants and trees, creating a water reservoir and habitat for raptors, etc.</td>
<td>A nice nature area connected with the protected landscape that contains a higher biodiversity level than before mining. This successful experience will serve as example for two large quarries in the vicinity.</td>
</tr>
<tr>
<td>France</td>
<td>Quartz et Sables du Lot (Imerys Group) &amp; ONF (French Forestry Department), local industrial and environmental authorities, Biotope (ecology consultancy)</td>
<td>Restoring a site by ensuring highest possible biodiversity and ensuring nature takes its course Demonstrate that a site’s biodiversity can be even greater after mining than before</td>
<td>4 different habitats were created: wetlands, meadowland, woodland and dry moorland. Each area is restored in turn as mining operations end at a rate of 3ha/2y. Regular monitoring &amp; consultation with local stakeholders &amp; a community open day (May 2007) Biotope study (2007-2011) follows how the habitats evolve (on amphibians, insects and plants)</td>
<td>Wetland: 3 linked ponds have been excavated, lined with clay and covered with soil. Meadowland: a hillock based on sand from the quarry has been planted with traditional local species including gorse, Scotch heather and broom. Woodland: broad-leaved trees have been planted in several spots around the site: oak and chestnut trees and ash, alder and fruit trees. Dry Moorland: A 9,400m²</td>
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<tr>
<td>Germany (Sachsen)</td>
<td>Caminauer Kaolinwerk GmbH &amp; Förderwerk Land- und Forstwirtschaft Sachen e.V.</td>
<td>Create a Habitat Network – high quality reclamation of former lignite mining landscape with high diversity of species to offer lively experience of biodiversity to children especially.</td>
<td>Development of environmental concepts by means of labour-market policy. Creation of small areas with different biotopes as part of an initiative to educate and quality unemployed workers. Various school projects to impart the knowledge about nature and biodiversity.</td>
<td>A dendrological nature trail, dead wood park, collection of plants “arboretum sinensis”, “benjes”, hedges, insecthotels, grasslands of herbs and wild flowers, sensory path, forest playground.</td>
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<tr>
<td>Germany (Münzenberg-Gambach)</td>
<td>Quarzwerke GmbH &amp; Competent authorities and J. Müller-Lewinski (landscape architect) and Dr Heybrock (biologist) as external consultants</td>
<td>Protection and further settling of endangered birds</td>
<td>The 1997 mining operations plan sets aside steep banks for each respective breeding season of the population of bank swallows. The open and freshly excavated sand surfaces provide desirable breeding areas. No extraction takes place during the breeding period.</td>
<td>The populations of sand martin or bank swallows, wheatear and ring plover are amongst the biggest in the State of Hesse. The active mining operations at Gambach have been certified as a European Bird Sanctuary (V40 &quot;Wetterau&quot;)</td>
</tr>
<tr>
<td>Germany (Bayern)</td>
<td>Hoffmann Mineral &amp; Amphibian specialist BUND Bavaria</td>
<td>Expansion of a network of biotopes for (critically) endangered amphibian species</td>
<td>Development of a sustainable network of shallow pools for the reproduction of bombina variegata.</td>
<td>The network is already established over a large area.</td>
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<tr>
<td>Germany (Rügen)</td>
<td>Omya GmbH &amp; Chalk Museum Gummanz</td>
<td>Bringing nature back</td>
<td>Once the mining company ceased operations, the quarries remain barren for only a short time before nature starts to take over and flowering plants such as Coltsfoot and Orchids appear. Shortly after the habitats develop from species-rich, chalky soils to woodland.</td>
<td>The Rügen landscape was influenced by chalk quarrying and renaturing through the centuries. One of the most beautiful and interesting stages in this transformation is the growth of the grasslands – one of the most animal and plant rich habitats.</td>
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<tr>
<td>Country</td>
<td>Company &amp; Local Authorities</td>
<td>Project</td>
<td>Description</td>
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<tr>
<td>Germany (Niederbergisches Kalkrevier)</td>
<td>Rheinkalk GmbH &amp; Kalkwerke H. Oetelshofen GmbH &amp; Co KG, Kalksteinwerk Neandertal GmbH, City of Wuppertal and the county Mettmann</td>
<td>The “Uhu Projekt” – monitoring of eagle owls in the area between Düsseldorf, Wuppertal and Essen (Niederbergisches Kalkrevier)</td>
<td>Project of the local lime industry and the authorities. Assignment of an ornithologist on a three year contract to get detailed information about the owl habitats in the quarries, the development of the population, breeding and new generations and hunting practices of the owls. These active and closed quarries provide important secondary habitats in a densely populated area for this endangered and protected species.</td>
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<tr>
<td>Germany (Niederbergisches Kalkrevier)</td>
<td>Rheinkalk GmbH &amp; Land Niedersachsen</td>
<td>Abandonment of a permitted limestone mining area to conserve a country-wide important habitat of orchids.</td>
<td>Around the quarry Voska several species of orchids have successfully and continuously reproduced. The mining area created a raw soil which is in combination with non-forestal reclamation the precondition for an orchid habitat.</td>
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<td>Germany (Wülfrath)</td>
<td>Rheinkalk GmbH &amp; APS GmbH and the county Mettmann</td>
<td>Temporary use of the quarry Dachskuhle for a cross-country-vehicle testing area in combination with an important population of midwife toads.</td>
<td>In the quarry Dachskuhle midwife toads are successfully and continuously reproducing. The combination of commercial use and species protection is continuously possible.</td>
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<tr>
<td>Germany (Rheinland-Pfalz)</td>
<td>BKRI Bundesverband Keramische Rohstoffe und Industrieminerale &amp; Ministerium für Umwelt, Forsten und Verbraucherschutz Rheinland-Pfalz</td>
<td>Protection of endangered species while ensuring the extraction of ceramic raw materials.</td>
<td>Many companies have signed the BKRI agreement. The protection of endangered species is brought forward while at the same time the extraction of ceramic raw materials is ensured.</td>
<td></td>
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<tr>
<td>Germany (Neuwied)</td>
<td>Calderys Deutschland (Imerys Group) &amp; Local authorities, Nature conservation bodies, and occupants of the forest (see list in case study)</td>
<td>Promotion of flora and fauna biodiversity by way of sharing of benefits arising out of the use of resources</td>
<td>Valuable biotopes containing some endangered plants and animals have developed on the former extraction site. The area has since been classed as a special</td>
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<tr>
<td>Country (Location)</td>
<td>Lead Entities</td>
<td>Description of Project</td>
<td>Environmental Objectives</td>
<td>Photo</td>
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<tr>
<td>Italy (Sardegna)</td>
<td>IMI Fabi Sardegna Srl &amp; Dr Maria Grazia Cicardi &amp; Dr Federica Gironi (biologists)</td>
<td>Creation of a nature trail to increase awareness about biodiversity in this geographic region and demonstrate how mining activities and biodiversity can go hand in hand.</td>
<td>Environmental analysis &amp; identification of the local trees and shrubs, design and creation of a nature trail around the Sa Matta mine.</td>
<td><img src="image1.jpg" alt="Project Photo" /></td>
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<tr>
<td>Italy (Valmalenco)</td>
<td>IMA Fabi SpA &amp; Dr Maria Grazia Cicardi &amp; Dr Federica Gironi (biologists)</td>
<td>Identify and protect rare local species, identify best restoration technique, raise public awareness on biodiversity, create a nature trail and develop school kits on biodiversity.</td>
<td>Collaboration with biologists for the identification of rare species and reproduction programme in laboratories &amp; plant nurseries in view of identifying best restoration techniques, creation of a nature trail &amp; panels, didactic material for schools.</td>
<td><img src="image2.jpg" alt="Project Photo" /></td>
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<tr>
<td>UK (Cornwall)</td>
<td>Imerys Minerals Ltd &amp; English Nature, Forestry Commission, Restormel Borough Council, Cornwall County Council, DEFRA and Objective One</td>
<td>The Woodland Project – restoration of the landscape of mid Cornwall's clay mining regions for the benefit of both the environment and the community. It follows on the Heathland Project (1997-2004).</td>
<td>This 3.5 year project, involves the planting of a million trees. Upland oak and ash woodland has been identified as an endangered habitat in the UK and the project foresees also the replacing of non native, commercially planted species by these native broadleaved species, which open up the woodland floor and enable wildlife to flourish.</td>
<td><img src="image3.jpg" alt="Project Photo" /></td>
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<tr>
<td>UK (Cheshire)</td>
<td>Sibelco UK</td>
<td>Restoration of a silica sand quarry into Astbury Mere Country Park.</td>
<td>After extraction ceases, the silica producer completed extensive restoration works before donating the land to</td>
<td><img src="image4.jpg" alt="Project Photo" /></td>
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**Italy (Sardegna)**
- **Protection Area**: An educational trail along the Sa Matta mine with 8 panels with information on local fauna and flora.
- **Nature Reserve**: The entire area was registered as a Flora-Fauna-Habitat under the EU Habitats Directive in 2003.
- **Link to Case Study**: [Link to case study](#)

**Italy (Valmalenco)**
- **Environmental Analysis**: Environmental analysis & identification of the local trees and shrubs, design and creation of a nature trail around the Sa Matta mine.
- **Nature Trail**: An educational trail along the Sa Matta mine with 8 panels with information on local fauna and flora.
- **Link to Case Study**: [Link to case study](#)

**UK (Cornwall)**
- **Woodland Project**: The Woodland Project – restoration of the landscape of mid Cornwall's clay mining regions for the benefit of both the environment and the community. It follows on the Heathland Project (1997-2004).
- **Successful Reproduction Programme**: Successful reproduction programme for rare indigenous species, identification of best seeds for restoration purposes, monthly guided tours on nature trail through City Hall, school kit on biodiversity.
- **Link to Case Study**: [Link to case study](#)

**UK (Cheshire)**
- **Silica Sand Quarry**: Restoration of a silica sand quarry into Astbury Mere Country Park.
- **Community Access**: After extraction ceases, the silica producer completed extensive restoration works before donating the land to
- **Habitats**: Habitats consist of mixed woodland, a pond, and extensive wildflower meadows. Its grasslands
<table>
<thead>
<tr>
<th>UK (Cheshire)</th>
<th>Sibelco UK &amp; Landowner and planning departments</th>
<th>Restonation of the New Platt Wood site (1994) into agricultural land and a lake.</th>
<th>The 5.4 acre plot was returned primarily to agricultural land with a lake occupying one corner, which allows for fishing and also acts as a stand-by irrigation reservoir. The margins of the lake have been seeded with a special wildflower mix.</th>
<th>The 5-year aftercare period resulted in an area greatly improved for agriculture - the land produces good quality arable crops. The site won the QPA Restoration Award in 2001.</th>
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<tbody>
<tr>
<td>UK (Devon)</td>
<td>Sibelco UK &amp; Devon Wildlife Trust and Devon County Council</td>
<td>Restoration of the former clay extraction site</td>
<td>The 16 ha Little Bradley New Pond has been created through successful partnership which won the QPA Award for Excellence in Restoration in 2005. The site is now managed by Devon Wildlife Trust.</td>
<td>Today the site provides a diverse range of wildlife habitats and is officially recognised as a Nationally Important Key Site for dragonflies (20 species have been recorded with 13 breeding). It provides an ideal educational tool for raising public awareness of the importance of ecological issues.</td>
</tr>
<tr>
<td>UK (Norfolk)</td>
<td>Sibelco UK</td>
<td>See video &quot;Restoration &amp; Biodiversity in Wicken North&quot;</td>
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</tbody>
</table>
7. Imerys Minerals Ltd, United Kingdom

Contact person: Amina Langedijk
Address: IMA-Europe aisbl, Brussels, Belgium
Telephone number: +32 (0)2 210 44 12
Email address: a.langedijk@ima-europe.eu

1. Background and Objectives

“The Woodland Project – Restoration of the landscape of mid-Cornwall’s clay mining regions for the benefit of both the environment and the community”

2. Description

The woodland project is a post-mining restoration project. It aims to restore the landscape of the china clay area in Cornwall. It follows on from the Heathland Project. From 1997 to 2004, 750 hectares of lowland heath land – another endangered habitat - was restored on former mining sites. Together, the two projects form the biggest initiative of their kind in Europe.

3. Activities

Imerys Minerals Ltd. is a key partner in a 31/2-year program that involves planting a million trees. Under the Woodland Project, tips and surrounding areas on former mining sites will be planted with native broadleaved species to restore biodiversity and improve the landscape. Upland oak and ash woodland has been identified as an endangered habitat in the United Kingdom. To restore the sites, “non-native” or commercially planted species will be removed and oak, ash and other native hardwoods will be reintroduced. These deciduous trees open up the woodland floor, enabling wildlife to flourish. This will make a substantial improvement to the local landscape and make a valuable contribution by Imerys to the re-creation of local biodiversity.

The total budget for the project is £2.5 M. This project has many funding sources, the principle ones being Objective One, DEFRA and Imerys. Imerys’ contribution is approx. £0.5M made up of contributions in kind whereby Imerys carry out landscaping activities as a part of the project.

4. Results

Mid 2007: creation and management of 300 ha of new woodland, 300 ha of restoration of existing woodland, 180 ha of conversion of existing tree belts to native broadleaved trees, plus the creation of 12 kms of new access routes increasing community access. It is also hoped that as the woodland becomes established there will be economic opportunities for small businesses e.g. crafts, wood fuel suppliers etc.

5. Please indicated which criteria match your case (see the attached list)

- 1, 2, 3, 6, and 9
6. **Any additional information (links, report, etc.)**

Partners: English Nature works closely with Imerys co-coordinating the activities.

Other partners: Forestry Commission, Restormel Borough Council, Cornwall County Council, DEFRA and Objective One.

7. **Photo related to the case**

![Photo 1](image1.png)

![Photo 2](image2.png)

![Photo 3](image3.png)
8. IMI Fabi S.p.A.

1. Background and Objectives

Creation of a nature trail to increase awareness about biodiversity in this geographic region and demonstrate how mining activities and biodiversity can go hand in hand.

2. Description

IMI Fabi (talc producer) follows a code of practice consistent with policies of sustainable development. In 2009, the company launched several projects for the identification and safeguarding of rare botanic species around the mine of Brusada Ponticelli and the raising of public awareness on biodiversity, i.e.

- An educational and environmental laboratory
- An experimental area to test the most suitable re-naturation techniques for the area.
- A initiation project for the conservation of rare indigenous species in Valmalenco
- A nature trial with 8 panels on the key characteristics of local environmental morphology.

3. Activities

During summer 2009, a survey carried out with the help of biologists identified 4 rare species:

Armeria Alpina, Carex bicolor, Saxifraga Rotundifolia and Sanguisorba dodecandra. The species have been cultivated ex-situ in a laboratory and after germination been reintroduced in the nursery for biodiversity preservation. The biologists also helped to design the panels for the nature trail especially with information on local fauna and flora and on the evolution of species. The biologists tested two different local seed mixes in view of identifying the best one for use in local restoration.

4. Results

Three of the above mentioned species have been successfully reproduced in the nursery, whereas the fourth species (Carex Bicolor) has found some difficulty in germinating and is still in the laboratory for a new attempt of reproduction. The comparison of two indigenous seed mixes led to the identification of the best restoration technique.

The new nature trail is now open to the public; visitors can book guided tours at the City Hall each month. Didactic activities and a permanent laboratory kit have been developed especially for schools, so that children can experience the meaning of biodiversity through the workshops.

5. Please indicated which criteria match your case (see the attached list)

- Species and landscapes
9. Lafarge

1. Background and Objectives

Since the beginning of the operations of the Milaki plant 29 years ago, Lafarge Greece follows a defined restoration program to allow a full recovery of nature.

2. Description

Since the beginning of the Milaki plant operation in 1982, Lafarge has the firm commitments to:

- exploit the environment with care;
- ensure the minimal impact of the production effects on nature.

3. Activities

Since 1982, Lafarge in Greece has undertaken a substantial restoration plan to rehabilitate the landscape of the quarries of the Milaki plant. To this purpose, 70,000 m³ of soil was spread at the surface level to a thickness of between 80 centimetres and 1.5 meters to cover the excavation caused by the quarries' exploitation.

In the limestone quarry, benches of 10 m height permitted to plant trees, mostly slow-growing but resistant forest plants such as pine trees, acacias, wild olives and cypress trees.

In the schist quarry, the slopes were softened to cultivate fruit plants mainly olive trees, almond trees, pear trees and grapevines. Thus, the rehabilitated area is now covered by a new olive tree farm and a small vineyard in the style of the countryside farms surrounding the quarries.

Nothing indicates now that excavations and quarries were once present in this area.

Lafarge in Greece has also set very ambitious targets for the future to go beyond simple restoration by:

- Raising environmental awareness of the workers of the plant, the contractors, the neighbour community and the local authorities;
- Ensuring systematic and scientific studies on the biodiversity of the quarries area, with a special focus on fauna;
- Continuing to plant more than 2,000 trees annually according to the environmental licenses and laws;
- Communicating more on restoration results;
- Fully implementing Lafarge's policy, standards and best practices regarding environmental restoration and management;
- Implementing any new legislation and new rules of the Greek State and local authorities, the European Union, environmental organizations (e.g. WWF), in collaboration with the Lafarge's technical centres and all the stakeholders.

4. Results

Within 29 years, more than 110,000 trees and shrubs have been planted in an area of 320 acres in order to match the surrounding natural environment and agriculture.

Significant and unique financial investments continue to be made in the region of Evia, with very good results recognized by all stakeholders and mainly by Greek authorities.

5. Please indicated which criteria match your case (see the attached list)
6. Any additional information (links, report, etc.)

In this successful effort contribute:

- employees of Milaki quarries;
- contractors in the quarries and their staff;
- skilled forest scientists from the Forest and Environment Service of the Prefecture of Evia;
- municipal authorities of Aliveri.
10. Rio Tinto Minerals Austria / Naintsch Mineralwerke GmbH

1. Background and Objectives

Investigate plant and habitat diversity within and outside the mining area to gain information on how to treat the post mining landscape for ecological benefits.

2. Description

Talc mining at Rabenwald dates back to 1820, today, approx. 100,000 tons of talc are mined annually, shipped to the nearby production plant by cable. Final talc products are shipped to customers all over the world. In order to prepare a new mining project at the Rabenwald mine, Rio Tinto minerals Austria initiated an extensive biodiversity project. In 2001 this research project on biodiversity was initiated in cooperation with the natural park Pollauer Tal. The open pit area of Rio Tinto Minerals Austria Rabenwald mine makes part of this natural park, which covers 123km in total. The biodiversity in the present and future mining areas was of special interest in order to draw conclusions for the sustainable development of local species and the region as a whole. Thus, a cooperation between the Natural Park and Rio Tinto Minerals Austria began, representing a partnership of traditional antagonists: nature and mine.

3. Activities

Biologists investigated the habitat mine for several months, and found out that the habitat mine gives room to 27 types of biotopes and 220 different plant species. Some of the species are yet listed on the endangered species list, which means that the post mine area provides a habitat for those species to resettle. As a special focus, the scientists compared the concepts of re-naturation (a process that aims at closing up soils by pioneer plants), versus re-cultivation (seeds of weeds are applied by a spraying method). The investigation of advantages and disadvantages of both concepts resulted in valuable recommendations for the sustainable development of the post mining landscape.

4. Results

The results of this unique study have been widely communicated in the local community as well as to all major stakeholders. A two year exhibition at the area illustrated the major outcomes to thousands of visitors. Furthermore, Rio Tinto Mineral Austria produced a small booklet which was widely distributed to regional and national stakeholders.

The study’s results on re-cultivation and re-naturation concepts have also been forwarded to the Austrian Mining authorities who are in charge of legislation for re-cultivation. The scientific results will be considered to optimize the legal framework and consequently increase ecological benefits for post mining areas.

5. Please indicated which criteria match your case (see the attached list)

Landscapes and species
The European Union Business and Biodiversity Platform

The EU Business and Biodiversity Platform is a unique facility within the European Commission's Initiative where businesses can come together to share their experiences and best practices, learn from their peers, and voice their needs and concerns to the European Commission. The Platform aims to strengthen the link between the business sector and biodiversity conservation. The IUCN Regional Office for Europe, in partnership with PwC, ECNC and ELO, implements the B@B Platform which is funded by the European Commission. More information at http://ec.europa.eu/environment/biodiversity/business.

IUCN Regional Office for Europe
IUCN, International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN Regional Office for Europe covers the European continent, Russia, Central Asia and includes the overseas entities of European Union countries. Representing one third of the global membership, this is IUCN’s largest programmatic region.
www.iucn.org/europe

PwC
The French SBS practice (www.pwc.fr/dd), member of PricewaterhouseCoopers Advisory France and a part of PricewaterhouseCoopers Sustainable Business Solutions (SBS) network (www.pwc.com/sustainability) is dedicated to providing clients with environmental/sustainability advisory services.

ECNC
The ECNC, European Centre for Nature Conservation, works for the conservation and sustainable use of Europe’s nature, biodiversity and landscapes, developing partnerships with organizations, institutes and businesses.
www.ecnc.org

ELO
ELO, European Landowners’ Organization, is committed to promoting a sustainable and prosperous countryside and to increasing awareness relating to environmental and agricultural issues.
www.europeanlandowners.org

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