

Common Framework for Biodiversity-Proofing of the EU Budget

Guidance for Cohesion Policy Funds

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1 Guidance on biodiversity proofing cohesion policy funds in the implementation cycle

Note, this document should be read in conjunction with Medarova-Bergstrom *et al* (2014), which provides the rationale for the Common Framework together with generic guidance on key biodiversity proofing principles and the application of key proofing instruments. This is hereafter referred to as the Generic Guidance.

The purpose of this guidance is to primarily help Managing Authorities and biodiversity experts to 1) maximise the possibilities presented by Cohesion Policy funds for increasing spending on biodiversity priorities (especially regarding Green Infrastructure), into the implementation cycle, where it is relevant, and 2) to ensure that detrimental impacts on biodiversity are avoided and minimised as much as possible, and if residual impacts remain, offset requirements to achieve no-net-loss are identified.

1.1 Introduction

The implementation of EU Cohesion Policy takes place through three dedicated EU funds: the European Regional Development Fund (ERDF), Cohesion Fund (CF) and European Social Fund (ESF). The underlining objectives of the Cohesion Policy funds are to provide financial support for reinforcing economic, social and territorial cohesion in the EU. The priorities for these funds are firmly in line with the EU's Europe 2020 Strategy, focusing on promoting sustainable regional development, creating opportunities for employment and increasing competitiveness. Mitigation of climate change is also considered of high importance, and therefore an earmarked share of 12 – 20 per cent has been allocated from ERDF in each Member State to promoting a low carbon economy.

During the 2014-2020 funding period, investment under the Cohesion Policy funds builds on the 11 EU common Thematic Objectives (TOs) that are outlined in the Common Provisions Regulation (CPR)¹ and further elaborated in dedicated fund-specific regulations². One of these common objectives is explicitly dedicated towards providing funding for preserving the environment and promoting resource efficiency (eg through investment in biodiversity and Natura 2000) (TO 6). Furthermore, several other objectives such as promoting climate change adaptation, risk prevention and management (TO 5) and supporting the shift towards a low-carbon economy (TO 4) are relevant for biodiversity (see Table 1-2 below).

Under the Cohesion Policy funds Member States have a substantial amount of flexibility to reflect their own national and regional development needs and to decide which EU-level priorities to take up in the context of Operational Programmes. Consequently, the funding priorities directly related to biodiversity are not obligatory for the Member States to take up (see section 1.1.2). However, Member States are required to ensure that biodiversity,

¹ Regulation (EU) No 1303/2013

² ERDF Regulation (EU) No 1301/2013, ESF Regulation (EU) No 1304/2013 and Cohesion Fund Regulation (EU) No 1300/2013

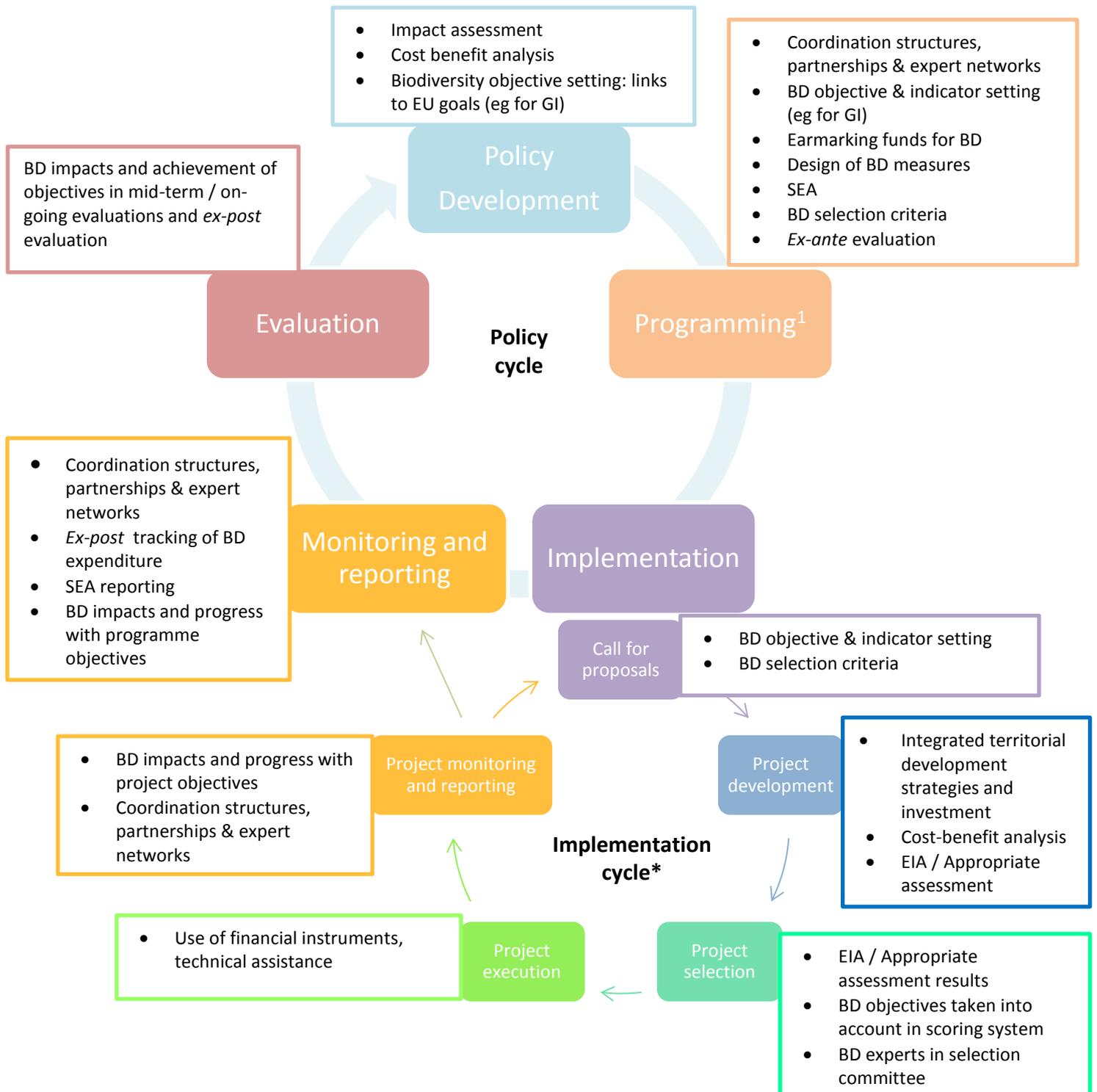
among other environmental objectives, are promoted in the preparation and implementation of Partnership Agreements and fund-specific programmes (Article 8 of the CPR). In practice, this means that the Member States are required to promote the implementation of the EU biodiversity legislation (in particular the Habitats and Birds Directives) and the EU 2020 Biodiversity Strategy also in the context of the Cohesion Policy and related funds (European Commission, 2014).

Furthermore, programmes and projects co-financed by the EU Cohesion Policy have to comply with the EU environmental legislation (Article 6 of the CPR), in particular with the Directives on environmental assessment, to receive approval for financial assistance. Environmental assessment has to be undertaken for the majority of Cohesion Policy operational programmes on the basis of the Strategic Environmental Assessment (SEA) Directive and individual projects in accordance with the Environmental Impact Assessment (EIA) Directive³. The common principle of both Directives is to ensure that plans, programmes and projects likely to have significant effects on the environment are made subject to an environmental assessment, prior to their approval or authorisation. The Directives on environmental assessment aim to provide a high level of protection of the environment and to contribute to the integration of environmental considerations (including the fauna, flora and biodiversity aspects as according to the EU Habitats and Birds Directives), into the preparation of projects, plans and programmes with a view to reduce their environmental impact. Hence, these Directives are important tools for biodiversity proofing (and are further described in the Generic Guidance on Biodiversity Proofing).

The Common Framework and available tools for biodiversity proofing Cohesion Policy are illustrated in Figure 1-1, taken from Medarova-Bergstrom et al (2014). The framework consists of the 'policy cycle' and the 'implementation cycle'. This guidance focuses on the implementation cycle, i.e. the part of the proofing process that is the most relevant for Managing Authorities and biodiversity experts. Issues related to the EU-level policy cycle are elaborated in Chapter 5 of the Generic Guidance on Biodiversity Proofing.

³ SEA Directive 2001/42/EC and EIA Directive 2011/92/EU

Figure 1-1: Application of the common framework for biodiversity proofing Cohesion Policy funds



1. For ESI funds, includes the development of Partnership Agreements (PAs) followed by RDPs for the EARDF, Operational Programmes for the ERDF, ESF and CF, and Fishery Programmes for the EMFF. Only includes Work Programmes for the CEF.

* The full implementation cycle applies to major investments in particular, and is likely to be significantly simplified for small grants.

1.2 Opportunities for proofing biodiversity impacts

In general, the projects selected by Member States which are co-funded by Cohesion Policy funds can have both positive and negative impacts on biodiversity. On the positive side, both ERDF and CP are used to improve the environment through investment in environmentally friendly technologies, such as waste water treatment, which have significant positive impacts on the quality of ecosystems. Furthermore, as highlighted above provisions exist under different funds to directly fund Natura 2000 and biodiversity. In general, given the emphasis of Cohesion Policy on growth and jobs, environmental and biodiversity-related investments are less frequent under Cohesion Policy than investments in 'traditional' infrastructure such as transport and energy infrastructure, which can have negative impacts on biodiversity. Consequently, biodiversity proofing of Cohesion Policy funds is of high importance, both in terms of increasing pro-active support to biodiversity conservation under these funds and mitigating negative impacts of non-biodiversity related investment.

1.2.1 Minimising detrimental impacts

When carrying out biodiversity proofing of Cohesion Policy funds particular attention should be given to checking whether the proposed projects may lead to adverse impacts on biodiversity. Where adverse impacts may be likely and significant, then measures should be identified, implemented, monitored and reported that avoid and reduce impacts to acceptable levels. If this is not possible, then remaining residual impacts (after feasible rehabilitation) should be quantified, so that post-proofing measures are taken to offset these impacts, for example through habitat restoration measures.

A range of key developments supported under the Cohesion Policy funds with possible adverse impacts on biodiversity are summarised in Table 1-1. These are all related to infrastructure development that can result in harm to species and habitats and also disturb the functioning of wider ecosystems. For example, dam construction for hydro-power and water storage can cause local – or even regional - loss of species and habitats. Furthermore, it can result in a disruption of down-stream flow regime that can cause low summer flows and reduced flooding of adjacent wetlands. Since floods play a key role in replenishing nutrients within river basins dam construction projects might lead to the reduction of soil fertility in down-stream areas. Similarly, the development of transport hubs and corridors are known to result in the fragmentation of habitats and landscapes, causing the disturbance both at species and wider ecosystem level. For example, building of road networks can affect the population dynamics of species that require large areas of habitat. It can also cause hydrological disruption and increase the risk of polluted run-off and air-pollutants with further impacts on ecosystems, their functioning and resources (e.g. food and clean water provisioning).

Linked to the above, the EU Biodiversity Strategy to 2020 seeks to restore and promote the use of green infrastructure (Target 2, Action 6). [Green infrastructure](#) is defined as a strategically planned network of natural and semi-natural areas designed and managed to deliver a wide range of beneficial ecosystem resources and functions (ecosystem services), with benefits to biodiversity conservation. In other words, green infrastructure aims to

create an overall spatial framework for the maintenance – or restoration – of well-functioning ecosystems, ecosystem services and biodiversity at the EU level. Consequently, the above described adverse impacts of Cohesion Policy investment on biodiversity and ecosystems risk degrading the EU's green infrastructure network.

Furthermore, due consideration should be given to the European Commission's commitment and initiative to develop a policy on no net loss of biodiversity (NNL) (EU Biodiversity Strategy Action 7)⁴. The overall objective of the NNL initiative is to support the implementation of Target 2 of the Biodiversity Strategy which states that by 2020 ecosystems and their services should be maintained and enhanced by establishing green infrastructure (above) and by restoring at least 15 per cent of degraded ecosystems. Given this objective, biodiversity proofing Cohesion Policy investment for possible negative impacts should always be carried out with the view of causing no net losses to biodiversity.

When adverse impacts of Cohesion investment on biodiversity, habitats and ecosystems are identified, appropriate actions should be taken to address these impacts (see Table 1-1). These actions should follow the widely adopted mitigation hierarchy: (1) avoidance of impacts; (2) reduction of negative impacts; (3) rehabilitation / restoration measures; and (4) compensation measures for significant adverse residual impacts. There are a number of ways to first try to avoid negative impacts by simply seeking to avoid areas that are sensitive to negative biodiversity impacts. If avoidance is not possible a range of measures can be taken to reduce the foreseen impacts. For example, in the case of dam construction minimum flow regimes can be established to reduce negative impacts on downstream ecosystems. Similarly, technologies exist to reduce or capture emissions, this way decreasing the risk of polluting areas with toxins or excess nutrients. Finally, if the identified negative impacts cannot be avoided they should be appropriately compensated for. This could be done, for example, through reducing other sources of disturbance in the area, or by habitat restoration or creation. In general, when offsetting of unavoidable negative impacts is to be carried out it should aim to achieve 'like-for-like-or-better' outcomes.

⁴ For further information on policy options to achieve no net loss see Tucker et al, 2014

Table 1-1: Potential adverse impacts on biodiversity from cohesion policy supported developments, and possible intervention measures to avoid, reduce and compensate for impacts

Source: Biodiversity Background Proofing Study

Impact source / impact type	Direct mortality	Direct habitat loss (footprints)	Habitat fragmentation	Disturbance ^a	Indirect habitat degradation	Secondary impacts
Buildings and associated lighting ¹	Tall glass and illuminated buildings can be significant hazards for birds	Variable	Can form barriers to movement for some sensitive species, causing fragmentation	Disturbance from people nearby, and some species avoid buildings, and lighting can affect nocturnal species	Normally minimal	The presence of buildings may encourage further development
Heavy industry, chemical plants, incinerators and power stations	Toxic pollutants can cause significant impacts	Generally relatively moderate	Can form barriers to movement for some sensitive species, causing fragmentation	As buildings	Ecosystem disruption from pollutants can reduce food resources	The presence of industry etc may encourage further development
Transport: roads, railways, ports, airports	Some collisions may occur especially where roads cross flight-lines animal crossing points , but impacts relatively low	Relatively low, but can be concentrated along biodiverse coastal strips (causing coastal squeeze), lakes and river valleys	Can be significant, eg where new infrastructure occurs in unfragmented landscapes, and where disturbance sensitive species occur that require large areas of habitat	Often substantial disturbance impacts, but some species become habituated especially if people are not visible	Hydrological disruption, polluted run-off and air-pollutants (esp NOx) can disrupt ecosystems and food resources	Increased hunting pressures and recreational disturbance if access is improved. Encourages further development
Water treatment plants and drains	Significant detrimental impacts are unlikely	Normally small	Significant detrimental impacts are unlikely	Normally small	Pollution of water-courses and coastal areas, near to outfalls, but higher levels of treatment reduce overall ecosystem impacts	Unlikely
Flood defences & land reclamation	Some impacts in flood storage areas	Can lead to significant loss of upper tidal habitat (coastal squeeze)	May fragment floodplain / coastal habitats	Disturbance during construction and maintenance works	Can have large-scale impacts on coastal geomorphology and adjacent habitat and profound hydrological impacts on adjacent floodplains	Encourages development of flood-protected areas
Dams for hydro-power or water storage	Losses of some species, eg ground-nesting birds from flooding	Increases open water but at the expense of other habitats (e.g. mires).	Causes significant fragmentation of river ecosystem and associated habitats	Disturbance during construction and maintenance works	Disruption of down-stream flow regime (e.g. causing low summer flows and reduced flooding of adjacent wetlands)	Reservoirs are frequently subject to significant tourism and recreational impacts
Overhead electricity transmission	Collisions occur especially where lines cross flight-lines and sites with large numbers	Generally insignificant	Generally insignificant effects, but lines can form barriers to movement for	Potential disturbance during construction	Normally no significant impact likely	Normally no significant impact likely

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Impact source / impact type	Direct mortality	Direct habitat loss (footprints)	Habitat fragmentation	Disturbance ^a	Indirect habitat degradation	Secondary impacts
lines	of birds; population impacts normally low for most species, but potentially high for some vulnerable species		some vulnerable species, causing habitat fragmentation			
Underground electricity transmission lines, gas, oil and carbon-dioxide pipelines and storage	Normally no significant impact likely	Impacts are normally low and reversible, but can lead to habitat loss of some sensitive habitats that cannot be restored; this can be significant if they are rare.	Normally no significant impact likely	Potential disturbance during construction	Excavation can lead to pollution of water courses from run-off	Normally no significant impact likely
Wind turbines	Bird and bat collisions can be significant where turbines are inappropriately placed	Normally insignificant from turbines, but service roads can be significant	Can form barriers to movement for some sensitive species, causing fragmentation	Some species avoid turbines. Some disturbance during maintenance	Can cause some hydrological disruption, e.g. as a result of service roads	Increased hunting pressures and recreational disturbance if service roads improve access
Intervention measures to address potential impacts						
Avoidance measures	Avoid areas with sensitive species or known movement corridors	Avoid areas with sensitive species or threatened habitats	Avoid areas with sensitive species or where habitat patches may become too small to support viable populations and ecosystem functions	Avoid areas with sensitive species	Avoid activities that lead to pollution levels that cannot be reduced to acceptable levels	Avoid sensitive areas and/or include regulations to avoid secondary development
Reduction measures	Mark structures to reduce collisions, fence off roads, remove tall vegetation close to roads / railways etc	Minimise footprint, eg for roads by reduction of carriageways and associated infrastructure, use of viaducts or tunnels to avoid especially sensitive areas	Maintain some habitat linkages, or if not possible then use wildlife tunnels and green bridges etc – at known key crossing points where ecological benefits are reliable and cost-effective	Sound and light barriers (eg fences, trees) use of low-noise technologies, limited use of lighting or screened lighting	Technologies to reduce or capture emissions, barriers to pollution (eg trees), pollution traps. Monitoring and if necessary actions to address alien species risks	Limiting access points from roads to adjacent habitats, especially in sensitive areas, eg by absence of joining secondary roads
Compensation measures	Reduction of other sources of mortality eg from alien predators	Habitat restoration or creation, if this is feasible	Strategically placed habitat restoration / creation to link up or increase the area of fragmented habitat patches	Reduction in other sources of disturbance, or habitat restoration or creation, if this is feasible	Habitat restoration or creation, if this is feasible	Habitat restoration or creation, if this is feasible

1.2.2 Maximising beneficial impacts

The Cohesion Policy funds provide several opportunities for financing biodiversity during the 2014-2020 period, thus proactively supporting biodiversity conservation. Firstly, dedicated financial support can be allocated under the Cohesion Policy funds for the protection of biodiversity and ecosystem services, including Natura 2000⁵. In order for this opportunity to materialise it should be 1) taken up by the Member States and integrated into the national Operational Programmes in the policy cycles' programming phase (see Generic Guidance: Chapter 5) and then 2) duly followed up with appropriate actions in the policy implementation phase, ie integrated into the implementation cycle.

Secondly, Cohesion Policy funds also finance a range of activities supporting broader sustainable regional development, with possible synergies with biodiversity, ecosystem services and green infrastructure maintaining them. For example, investment in climate action could be used to develop nature-based solutions for the mitigation of and adaptation to climate change. Similarly, measures aimed at enhancing cultural heritage can be directly linked to protecting and restoring a region's important natural areas and biodiversity. Consequently, even when Operational Programmes do not provide explicit opportunities for financing biodiversity such activities can be pursued in the implementation cycle phase within the broader framework of sustainable regional development, building on synergies between biodiversity and climate change, resource efficiency and cultural importance etc.

Key opportunities for financing biodiversity under the EU Cohesion Policy objectives are outlined in Table 1-2 below. Some examples of projects funded under the Cohesion Policy delivering benefits to both biodiversity and regional sustainable development are given in Box 1.1. Thematic guidance, intended to the EU desk officers but also useful for Member States' managing authorities, has been developed to support the integration of biodiversity, green infrastructure and Natura 2000 (TO6) into the Cohesion funds⁶. Finally, a dedicated EU guidance called 'The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure' (IEEP and Milieu, 2013)⁷ has been developed to communicate how nature based solutions can support the Cohesion Policy objectives.

⁵ ERDF Article 5.6 and CF Article 4 (c)

⁶ http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/guidance_fiche_biodiversity_n2000.pdf

⁷ http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/guide_multi_benefit_nature.pdf

Table 1-2: EU thematic objectives for co-funding in 2014-2020 under the Cohesion Policy funds with examples on synergies with biodiversity objectives

Note: the table purpose of the table is to highlight how biodiversity objectives can be synergetic with all EU thematic objectives. In practice, however, Cohesion policy Operational Programmes tend to concentrate biodiversity-related measures under certain thematic objectives (eg TOs 4, 5 and 6).

Source: adapted from Kettunen et al (2014)

EU thematic objective	Synergies between investment the thematic objective and biodiversity
Thematic objective 1: Strengthening research, technological development and innovation	Areas with high biodiversity value and/or areas under sustainable management regimes help to promote and increase the scientific understanding of ecosystems and can form a source for a range of nature-based innovations for regional bioeconomy (e.g. biotechnology, pharmaceuticals and sustainable nature-based solutions for natural resources management).
Thematic objective 2: Enhancing access to, and use and quality of, information and communication technologies (ICT)	Developing and piloting ICT solutions that can support, test and/or pilot innovative e-solutions for regional environmental management (e.g. environmental monitoring such as citizen monitoring, environmental governance, public access to information etc.).
Thematic objective 3: Enhancing the competitiveness of SMEs	Direct opportunities for SMEs including opportunities related to recreation and tourism and development of sustainable value added products. Furthermore, opportunities for enhancing the competitiveness of SMEs indirectly via providing nature-based solutions that enhance the resource efficiency of SMEs, e.g. cost-effective solutions for water management.
Thematic objective 4: Supporting the shift towards a low-carbon economy in all sectors	Promoting green infrastructure by creating nature-based low-carbon solutions for different sectors, e.g. using nature-based solutions such as restoration of wetlands and peat lands to sequester carbon or managing high biodiversity value grasslands also with a view to maintain/enhance soil carbon stocks.
Thematic objective 5: Promoting climate change adaptation, risk prevention and management e.g. adaptation to climate change, including ecosystem-based approaches, addressing specific risks, ensuring disaster resilience and developing disaster management systems	Promoting green infrastructure by taking up nature-based cost-effective solutions to address environmental risks within a region, including risks related to increased extreme events: restoring natural vegetation to mitigate wild fire risks, restoring wetlands to support water security, managing to maintain healthy pollination populations to support food security etc.
Thematic objective 6: Preserving and protecting the environment and promoting resource efficiency e.g. waste and water sectors, natural and cultural heritage, biodiversity and ecosystem services (e.g. soil), green infrastructure, urban environment and innovative technologies	Promoting green infrastructure by maintaining or restoring ecosystem functions and/or structure to complement and reduce the cost of operating conventional 'grey' infrastructure or even completely replace it with green infrastructure (e.g. wetland restoration for water management). Promoting nature related self-employment and business creation, e.g. improvement/restoration of habitats linked with creation of sustainable bio-business such as tourism. Removal of excess biomass to restore ecosystems, such as restoration of overgrown coastal areas due to eutrophication, and use of biomass as

	biofuel.
Thematic objective 7: Promoting sustainable transport and removing bottlenecks in key network infrastructures	Developing nature-friendly transport corridors (e.g. new technology for overpasses and underpasses) as a part of larger transport network projects, this way also preventing possible negative impacts on green infrastructure.
Thematic objective 8: Promoting sustainable and quality employment and supporting labour mobility	Direct and indirect employment opportunities related to biodiversity conservation: opportunities related to managing activities on Natura 2000 sites (e.g. seasonal employment related to ongoing management) and opportunities related to recreation and tourism, value-added produce etc.
Thematic objective 9: Promoting social inclusion, combating poverty and any discrimination	Nature-based employment opportunities (Thematic Objectives 3 and 8) directly help to combat poverty within regions. Green spaces provide a wide range of physical and mental health benefits, enhancing public wellbeing and health while reducing health care costs. Engaging minority groups in nature-based activities can help to increase social inclusion.
Thematic objective 10: Investing in education, training and vocational training for skills and lifelong learning	Creating destinations for educational visits to enhance knowledge of children and youth on the natural environment. Nature-based opportunities for employment and/or resource efficient solutions support lifelong learning within a range of economic sectors within the region.
Thematic objective 11: Enhancing institutional capacity of public authorities and stakeholders and efficient public administration	Developing institutional capacity and public administration by supporting integrated biodiversity and natural resource management of and/or using this as a pilot example for integrated environmental management.

Box 1.1 Projects funded under Cohesion Policy with benefits for biodiversity and regional sustainable development

Ecological restoration of Comana wetlands (Romania)

The Comana wetland Natural Park, established in 2004, is a 25 000 hectare wetland complex located in the south of Romania. An ERDF project was carried out in 2009-2011 with a view to restore the wetland by restoring the initial high water levels in the Comana area, to implement monitoring and management systems, and to promote awareness among visitors/ tourists and local communities about the environmental protection and promoting of good practices on biodiversity conservation.

The restoration of the Comana wetlands greatly improved biodiversity in the area. The construction of the dam on the Neajlov River, downstream of Comana Lake, increased the level of water in the floodplain area and has maintained it at a constant level, which has had positive effects on avifauna. Moreover, the improved ecological conditions increased the quality of habitats and hence species richness for fish and invertebrates.

Other benefits include cultural ecosystem services. The park administration organises guided visits for school children and other groups, and thematic seminars and workshops with local authorities and interested local stakeholders. Also, an ecological research area was established in cooperation with scientific institutions of Bucharest and other nearby cities. The project includes the implementation of the first monitoring system for environmental parameters and bird species in the region. Twenty new jobs were temporarily created during the construction of the dam. More permanent economic benefits are to be expected from the development of tourism (the restoration of Comana wetlands is attracting an increasing number of tourists, especially during weekends) and from collaboration with scientific institutions in nearby cities.

Benefits of a natural wonderland - socio-economic importance of restoring wetland biodiversity (Thessalia, Greece)

Lake Karla sits in the south-eastern part of the Thessaly plain. It is Greece's biggest plain and most fertile agricultural area. During the past decades the lake went through radical ecological and socio-economic changes due to damming and draining. As a consequence, fishing in the area ceased and water extracted for irrigation depleted groundwater levels. As the land became less suitable for productive use, people migrated to the cities; the local economy stagnated. During 2000-2006 and 2007-2013 two Cohesion Policy funded projects were carried out to restore a part of the ecosystem and dynamics, and to revive the socio-economic situation in the area.

The Lake Karla projects have resulted in restoring the ecological status of an area while simultaneously creating a wide range of socio-economic benefits. While the projects devoted some funds to support sustainable tourism, the majority went directly to restore the lake and its ecosystems. Through this, the project is expected to provide benefits for fisheries, tourism, water supply for agriculture and urban use and flood prevention. As a result, a number of bird species have been observed and roughly 160 species of birds - including some endangered ones- are expected back once restoration is complete. Fish have reappeared in the Lake; and underground water levels have risen and are expected to continue to rise.

With regard to tourism, the area is expected to attract visitors such as bird-watchers, school children on study trips and amateur fishermen. This will create a small number of jobs in the area, to staff the management institute, the information centre and museum. Furthermore, private sector initiatives in the sustainable tourism sector, offering camping sites, horse raising farms etc. are also expected.

Source: [The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure](#)

1.3 Guidance for biodiversity proofing the Cohesion policy implementation cycle

Note: Key proofing tools for which more detailed guidance is provided in the Generic Guidance document are highlighted in bold and italic type.

1.3.1 *Call for proposals*

The establishment of dedicated biodiversity related objectives and indicators and/or explicit biodiversity criteria for projects in project calls - and assigning sufficient weight to such criteria calls in the selection phase (below) - is a way to stimulate biodiversity friendlier projects.

Integrating dedicated ***biodiversity objectives*** and/or ***selection criteria*** (Generic Guidance: A1.4 and A1.12) into project calls are the most straight-forward ways of ensuring that biodiversity-related concerns are picked up in the implementation cycle. Building on the section 1.2 above, the role of biodiversity objectives and criteria would be to 1) strategically encourage projects providing benefits to biodiversity and/or 2) ensure that possible negative impacts of projects on biodiversity are avoided. The set objectives and criteria should be in line with local, regional and/or national development needs as identified, for example, in national Priority Action Frameworks (PAFs) for Natura 2000 (Generic Guidance: section 3.3), regional sustainable development strategies, protected area management plans and green infrastructure maps. In addition, the objectives should also appropriately

reflect the higher level objectives set out in the Cohesion fund Operational Programmes (Generic Guidance: Chapter 4).

As regards biodiversity criteria, investments affecting biodiversity would at a minimum need to demonstrate compliance with EU, national and regional biodiversity legislation and be transparent as regards possible adverse impacts. To contribute to biodiversity proofing, biodiversity-related selection criteria should be included in the Cohesion Policy calls for funding where there is a risk of damage to biodiversity, reflecting the need to avoid, or at least mitigate or compensate for any adverse impacts. Additional criteria encouraging proactive investment in biodiversity, such as a criterion to consider possibilities for integrating nature-based solutions into the project proposals, could also be considered. Biodiversity related criteria for Cohesion policy projects could, for example, include the following: increasing total permanent vegetation cover and/or soil quality in the context of rehabilitating contaminated areas; use of native species; increasing habitat and/or species diversity in the area of infrastructure projects; and when feasible and cost-effective, prioritising nature-based solutions based on green infrastructure over grey infrastructure (see also cost-benefit analysis below)⁸.

Measuring the progress of biodiversity-related objectives requires the development of **biodiversity indicators** (Generic Guidance: A1.4). While the indicators will be used to mainly provide guidance and information for the later phases of implementation cycle, the most appropriate time for their development - jointly with the objectives – is in the project call phase. The set of developed indicators should be practical and measurable. Understandably, this usually means that indicators – especially quantitative indicators - are more commonly developed to monitor the biodiversity oriented results of projects, rather than measuring the avoided negative impacts. They also need to be consistent with the operational programme indicators, to enable them to demonstrate how the project is contributing to the objectives of a programme as a whole. Box A4.1 in the Generic Guidance document provides further information about the indicator setting for biodiversity objectives, including concrete examples for possible indicators.

In addition to the concrete objectives, indicators and criteria, calls for proposals could also include some informative instruments, eg formulating the calls for proposals in a way that they steer a positive approach to taking biodiversity consideration into account or ensuring the participation of biodiversity experts in the project call and selection committees.

Finally, for major Cohesion Policy projects, which do not go through calls for proposals, the use of Strategic Environmental Assessment (SEA) already in the policy cycle process is essential, to flag up possible negative impacts on biodiversity already at the very start of project planning and initiation (see Generic Guidance: A1.8). Dedicated EU 'Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment' (European Commission, 2013a) has been made available to assist Managing Authorities to integrate biodiversity concerns into the SEA procedure, including those carried out on

⁸ For further ideas see for example http://www.ceeweb.org/wp-content/uploads/2011/12/Proposed_priorities_for_Cohesion_Policy_Biodiversity.pdf

Cohesion Policy programmes and related national or sectoral plans that identify major development projects.

1.3.2 Project development

Environmental Impact Assessments (EIA)s (Generic Guidance: A1.10) will apply to many Cohesion funded projects in accordance with the EIA Directive (ie to project types listed in the Directive). The appropriate use of EIA is a key instrument in biodiversity proofing project development and selection, for example making links with Appropriate Assessment under the Habitats Directive (Generic Guidance: A1.10). In accordance with the Directive, EIA must include consideration of impacts on biodiversity, with particular attention to species and habitats protected under the Birds and Habitats Directives. Furthermore, the recently revised Directive notes that EIA should contribute to achieving the EU's headline biodiversity target for 2020, ie in other words contribute to avoiding any net loss of biodiversity. Dedicated EU 'Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment' (European Commission, 2013b) has been made available to assist Managing Authorities in integrating biodiversity concerns into the EIA procedure.

When appropriately carried out, EIA is an important tool for identifying suitable measures that may avoid or reduce potential detrimental impacts to biodiversity, and if necessary offsetting residual impacts, in accordance with the mitigation hierarchy (section 1.2.1). However, the practice has shown that in several cases EIAs are already completed by the time a Cohesion Policy project is submitted for EU co-financing. Also, the quality of EIA can be fairly poor. In these cases it would be important that the Managing Authorities review the submitted EIA carefully and request updates or additions to the assessment. Furthermore, not all projects are covered by the EIA Directive and therefore additional measures are required to ensure that biodiversity concerns and ecosystem service opportunities are appropriately identified and addressed during the project call and selection phases (above and below).

In some cases **cost-benefit analysis** (CBA) or assessments (Generic Guidance: A1.11) could provide an additional tool for biodiversity proofing Cohesion Policy investment both at the project development and also at the evaluation stage. When appropriate such assessments could, for example, be used to compare the costs and benefits of grey versus green infrastructure developments. However, in order to be effective such assessments should adequately integrate all aspects of biodiversity and ecosystem services, including qualitative and quantitative information. CBAs are systematically required for the so-called "Major Projects"⁹ within Cohesion Policy. For smaller projects CBA is not required which limits the use of this proofing tool. An option for smaller projects is not to request full CBA but rather to require a short qualitative assessment about biodiversity benefits, costs and impacts in the project application forms.

⁹Major projects are large-scale ERDF and CF infrastructure projects in transport, environment and other sectors such as culture, education, energy or ICT. They also concern big productive investments and research & development projects. They cost more than €50 million and therefore are subject to an appraisal and a specific decision by the European Commission. See: http://ec.europa.eu/regional_policy/projects/major_projects/index_en.cfm

While it is not very likely that there will be large Cohesion projects with biodiversity as primary objective, biodiversity component can be an important part of these projects. For example, projects related to risk management (e.g. climate change adaptation) can have significant synergies with biodiversity objectives (see section 1.2 above) and in these cases benefits flowing from biodiversity protection should be an integral part of the benefit analysis. With regard to costs, any infrastructural project (energy, transport etc.) can generate substantial environmental costs. The costs related to negative impacts on biodiversity, ecosystems and related services - caused by the loss or degradation of green infrastructure – should be systematically taken into consideration. Furthermore, while environmental integration measures resulting from the EIA procedure are usually treated as costs an appropriate and early integration of environmental concerns into project development ensures that impact assessment procedures run more smoothly, leading to a faster decision and reduced overall costs (Ecosystems LTD, 2013)¹⁰. If, however, EIA procedures are not followed correctly this can lead to substantial delays and additional costs.

Feasibility studies for projects can also provide an important means of biodiversity proofing Cohesion Policy investment. However, in order to do so feasibility studies need to be done appropriately, if possible with dedicated consideration of their biodiversity impacts. The studies should also be carried out in the early stage of the project development, not simply to provide a justification for a project in a later stage.

Finally, in the project development phase there might be a possibility to strategically use the ***integrated territorial development strategies*** (Generic Guidance: A.13) for EU funds to ensure that biodiversity objectives and criteria are mainstreamed into regional development at a territorial level and using them as a way to leverage funding from several EU funds. In the context of Cohesion Policy funds urban areas are an explicit target area for such integrated territorial strategies. It is recommended that cities combine actions supported by the urban-specific sectoral investment priorities (promote low-carbon strategies for urban areas, improve the urban environment and/or promote sustainable urban mobility) and embed them in the integrated urban development strategy of the city to implement the principle of integrated urban development. It is foreseen that green infrastructure should in particular be considered in urban development programmes (European Commission, 2014). Investments in measures such as maintaining or developing high-quality green public spaces and business parks/premises, green roofs and vertical gardens, city rivers and storm pond systems in urban and peri-urban areas are considered key tools for building climate resilient cities, improving well-being, maintaining urban biodiversity and reaching social and educational objectives.

1.3.3 Project selection

The project selection phase should pay due consideration to proofing project proposals both for the negative and positive impacts on biodiversity.

It is important that the outcomes of EIA should be carefully considered. As emphasised above, Managing Authorities should aim to ensure that the assessments are carried out in

¹⁰ http://ec.europa.eu/environment/nature/natura2000/management/docs/AA_final_analysis.pdf

an appropriate manner, requesting updates and additional information if required. A checklist could be developed and used for assessing the compliance of projects with **biodiversity selection criteria** (as outlined in section 1.3.1 above) (Generic Guidance: A1.12), building on the existing guidance at the EU level for Cohesion Policy waste and water projects¹¹. Developing a checklist, which includes the need to ensure compliance with relevant biodiversity and nature conservation policies and legislation, has the potential to be beneficial in ensuring that all pieces of infrastructure comply with EU, national and regional policies and legislation. The checklist would also provide an entry point for systematically assessing actions and measures that need to be taken to avoid and mitigate negative impacts on biodiversity and, where necessary, compensate for residual impacts in order to achieve no net loss. With the help of the check list the credibility of the impact mitigation measures can be carefully assessed, including ensuring adequate arrangements for their monitoring.

It is also important to ensure that any biodiversity-related selection criteria are given an appropriate weight in the evaluation, to ensure that the most appropriate projects are funded. As mentioned earlier, the selection criteria should at minimum take into consideration the existence of measures to avoid negative impacts on biodiversity. Furthermore, selection criteria could be used to give priority (ie more weighting) to Cohesion projects that proactively seek to enhance green infrastructure and use nature based solutions for regional development, for example showcased in 'The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure' (IEEP & Milieu, 2013).

Finally, consideration of biodiversity issues, especially those relating to ecological and other technical / scientific issues - such as in the appropriateness of EIA, fulfilling project selection criteria, assessing sufficient measures for monitoring and evaluation - should be primarily carried out by suitably qualified and experience biodiversity experts. Consequently, involving biodiversity experts in the expert bodies for Cohesion Policy investment is of crucial importance.

1.3.4 Project execution

The use of technical assistance can support biodiversity proofing of Cohesion projects along the whole implementation cycle. At the national level, Managing Authorities could try to ensure that the national and regional institutions providing technical assistance to the implementation of Cohesion Policy projects are able to also provide guidance on biodiversity related issues.

National and regional expert networks (Generic Guidance: A1.3) and exchange of information on good practice can support the implementation cycle, also at the project execution and monitoring phase (see 1.3.5 below).

¹¹ http://ec.europa.eu/environment/integration/cohesion_policy_en.htm

At the EU level, Joint Assistance to Support Projects in European Regions (JASPERS)¹² promotes the efficient use of EU Structural Funds and could provide similar horizontal assistance to major EU Cohesion projects.

1.3.5 Monitoring and reporting

Monitoring and reporting on the impacts and progress with project objectives - using appropriate biodiversity indicators – can be considered as the most important tool for biodiversity proofing projects during their execution and/or finalisation.

National and regional expert networks (Generic Guidance: A1.3) and exchange of information on good practice can support monitoring and reporting. In practice, this requires building expertise and managing knowledge on biodiversity among national and regional Managing Authorities in institutions that traditionally do not have such expertise (finance ministers, sectoral administrations, managing authorities but also external stakeholders such as urban / regional rural authorities and socio-economic partners). This could be done for instance through developing specific internal expertise on these issues, by appointing biodiversity/environmental experts in these structures, conducting in-house training and skill-share seminars, encouraging pilot projects and the promotion of good practices.

Ex post evaluations of projects (Generic Guidance: A1.14), in the light of their impact and other assessments, is also important. For example, it is likely that EIAs, CBAs and feasibility assessments cannot fully identify possible negative – or indeed positive - impacts of projects and therefore there is a need for a follow up process so that actual impacts get verified and appropriately integrated into the future phases of the implementation cycle.

1.4 Checklist for biodiversity proofing the implementation cycle

The checklist in Table 1-3 below is proposed for use by the Managing Authorities to assist with biodiversity proofing primarily within the implementation cycle. More detailed and context-specific lists may need to be developed by authorities in consultation with other stakeholders to inform the design process along the way. The checklist does not aim to systematically identify legal obligations but to highlight key considerations in biodiversity proofing.

It is to be noted that the check list does not repeat the overall principles for biodiversity proofing. These key principles are outlined in section 3.3 of the Generic Guidance document and they should also be taken into consideration when applying the check list below.

¹² <http://www.eib.org/infocentre/publications/all/jaspers-serving-the-eu-cohesion-policy.htm>

Table 1-3 Check-list for biodiversity proofing Cohesion Policy funds during the implementation cycle

Questions related to specific legal requirements (ie included in the Funding Regulation, or other EU legislation) are highlighted in bold text.

Call for proposals	
Have you consulted and used the expertise of environmental authorities, NGOs, and academia in your region/country to help draw up calls that can support biodiversity benefits and minimise detrimental impacts?	
Have you taken into account national / regional biodiversity strategies and objectives in drawing up calls that can support biodiversity benefits and minimise detrimental impacts? Have you taken into account the EU objectives for Green Infrastructure and the EU No Net Loss ?	
On the basis of the above have you defined biodiversity objectives / biodiversity related selection criteria for projects and included them in project selection criteria?	
Have you appointed / created a specific institutional structure / role, e.g. sustainability manager, to coordinate biodiversity mainstreaming efforts and activities?	
Have you created special advisory groups who have expertise on biodiversity that will provide information to stakeholders and possible beneficiaries?	
Have you provided guidance and resources on biodiversity mainstreaming for applicants?	
Have you provided examples of good practice in the area of biodiversity mainstreaming? See The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure for concrete examples.	
Project development	
Have you ensured that the project will not potentially have a adverse impacts on a Natura 2000 site (eg by avoiding such sites)?	
If the project may have an adverse impact on a Natura 2000 site, have you ensured that an Appropriate Assessment has been carried out?	
Have you carried out an EIA if this is necessary under the EIA regulation, or, if it is not, some other form of proportionate environmental assessment?	
Have biodiversity issues been fully assessed in the EIA / environmental assessment, including the assessment of impacts on all EU and nationally threatened habitats and species, taking into account all possible significant direct, indirect and secondary on-site and off-site impacts, as well as cumulative impacts from similar projects? See ‘Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment’	
Does the EIA identify clear actions (and contingency measures) that must be taken to avoid impacts (including project alternatives), reduce impacts and compensate for residual impacts in order to achieve no net loss of biodiversity in accordance with the mitigation hierarchy?	
Does the EIA set out clear SMART biodiversity targets (with appropriate indicators) for mitigation and compensation measures (and thresholds that trigger contingency measures), and related monitoring and reporting requirements?	
Have biodiversity and ecosystem services been adequately taken into consideration in any cost-benefit analysis that has been undertaken of the project?	
Have you taken into account relevant guidance documents and other available information that can support creating biodiversity benefits in the context of the planned project (e.g. taking up nature-base solutions, enhancing or creating green infrastructure)?	
Have you checked whether an integrated territorial development (ITI) strategy for EU funds is in	

place in the area of the planned project? ITI strategy can be used to ensure taking into consideration biodiversity objectives at a territorial level and using biodiversity considerations as a way to leverage funding from several EU funds. In the context of Cohesion Policy funds urban areas are an explicit target area for ITI.	
Project selection	
Has selection taken into account the results of EIAs and other assessments of the expected beneficial and detrimental biodiversity impacts, to ensure that at a minimum detrimental impacts are within acceptable levels (normally achieving no net loss or ideally a net gain) and that projects with lowest detrimental impacts and greatest beneficial impacts are favoured (eg using an appropriate scoring system)? See ‘Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment’	
Has selection taken account the reliability of proposed mitigation measures and, where necessary, compensation measures for residual impacts?	
Is project funding provided on the condition that intended mitigation measures and compensation measures are implemented, as well as additional contingency measures if biodiversity objectives are not achieved?	
Have you factored in - and appropriately weighted - biodiversity benefits created by proposed projects (e.g. using nature-base solutions vs. other solutions, enhancing or creating green infrastructure vs. grey infrastructure)? See The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure for concrete examples.	
Project execution	
Has technical assistance been made available, ie are national and regional institutions providing technical assistance to the implementation of Cohesion Policy projects able to also provide guidance on biodiversity related issues?	
Have you ensured that the project is being carried out according to agreed permit conditions, with mitigation and compensation measures undertaken on schedule and to acceptable standards?	
Is specialist support (eg access to expert networks) available to help projects that are having difficulties with meeting their biodiversity objectives?	
Project monitoring and reporting	
Have you ensured that required biodiversity monitoring (eg identified under an EIA) are being carried out on schedule and to acceptable standards?	
Have you established reporting requirements on biodiversity related aspects, and will the results be publically available?	
Do the monitoring results indicate anticipated and acceptable biodiversity performance levels, or is it necessary to implement contingency / adaptive management measures to achieve agreed biodiversity objectives?	
To ensure the quality of monitoring and reporting, have national and regional expert networks been deployed to support the task (eg via independent reviews)?	
Are there mechanisms for identifying, documenting and publicising lessons learnt from the monitoring of impacts and the effectiveness and efficiency of implemented mitigation and compensation measures?	
Have you considered awarding additional funds to well-performing biodiversity-related projects?	
Have you planned for thematic biodiversity-related mid-term evaluations?	

2 REFERENCES

Ecosystems LTD (2013) *EC Study on evaluating and improving permitting procedures related to Natura 2000 requirements under Article 6.3 of the Habitats Directive 92/43/EEC*. Ecosystems LTD, Brussels.

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