



Institute for
European
Environmental
Policy

**BACKGROUND STUDY TOWARDS BIODIVERSITY
PROOFING OF THE EU BUDGET
FINAL REPORT - ANNEXES**

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by

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In collaboration with

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Disclaimer

The authors have full responsibility for the content of this report, and the conclusions, recommendations and opinions presented in this report reflect those of the consultants, and do not necessarily reflect the opinion of the Commission.

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1 ANNEX 1: GENERAL INFORMATION ON THE COMMON AGRICULTURAL POLICY

1.1 Principles and priorities of the funding instrument

1.1.1 *General description and key instruments*

The CAP is structured around two ‘pillars’: Pillar 1 provides direct payments to farmers and Pillar 2 is used by Member States to support seven-year rural development programmes. The CAP's overall objectives remain centred around those originally set out in the Treaty of Rome but their specific focus has changed during the series of the past CAP reforms. All Pillar 1 payments and land based agricultural payments within Pillar 2 are subject to cross-compliance requirements, which include environmental requirements. Farmers risk payment reductions in case of non-compliance with these requirements. Cross-compliance encompasses statutory management requirements which are lifted from certain articles of the Birds and Habitats Directives and standards of Good Agricultural and Environmental Condition.

Pillar 1 direct payments—2007-13 EU budget is approximately €370 billion

Since the 2003 reform, there is no linkage between CAP support and agricultural output on farms, and ‘decoupling’ is the key structuring principle of direct payments to farmers. This means that support is calculated according to the area of land farmed irrespective of the type of production.

Pillar 2 rural development policy—2007-13 EU budget for is approximately €96 billion (€155 billion with national co-financing)

This element of the CAP is characterised by a programming approach designed around a seven-year long programming cycle. It offers a range of measures available to Member States and regions (in cases where powers are delegated to regional level) that can be funded from the European Agricultural Fund for Rural Development (EAFRD). The European priorities for the EAFRD are set out in the Community Strategic Guidelines for Rural Development. Member States/Regions have the flexibility to design their Rural Development Programmes in a way that uses the measures to target their specific issues and needs. National Strategy Plans set the strategic priorities for the RDPs and demonstrate how the EAFRD will be used in the Member State / region to meet the priorities set out in the Community strategic guidelines and those identified at the national level. Monitoring and evaluation is part of the programming cycle (ex-ante / mid-term / ex-post as well as annual reporting against a series of indicators set out within the Common Monitoring and Evaluation Framework (CMEF). Indicators are categorised as baseline, output, result and impact indicators. Biodiversity specific indicators are included with the result indicators (area of land subject to successful management for biodiversity) and impact indicators (farmland bird index and maintenance of High Nature Value farmland).

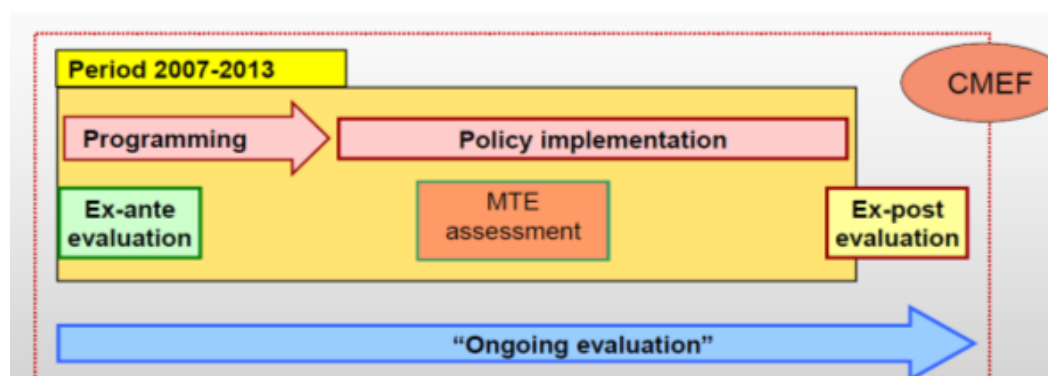
1.1.2 *Commission/Member State responsibilities*

Pillar 1: The rules governing Pillar 1 direct payments are set by the Commission and implemented by Member States. Each Member State is allocated a ‘national ceiling’ for these payments which are allocated currently on either a historic or a regionalised basis, depending on which approach MSs have chosen (EU-15) or on a flat rate per hectare basis (EU-12).

Cross compliance: The framework for cross compliance is set at the EU level under Council Regulation 73/2009. Member States are required to implement and enforce all Statutory Management Requirements in their country (for biodiversity this includes those articles of the Birds and Habitats Directives that are applicable at the farm level and as they are implemented in a Member State). In relation to the conditions of Good Agricultural and Environmental Condition (GAEC), Member States are given discretion to implement these in ways that are suited to their local conditions.

Pillar 2: The policy framework for Pillar 2 is set at the EU level, as are the Community Strategic Guidelines, which set out the EU priorities for action in relation to the core objectives of the EAFRD. Member States are given the responsibility for developing a National Strategic Plan, setting out the national priorities for rural development, under which the Rural Development Programme sits. All RDPs must be submitted to the Commission for formal approval. They are also subject to annual reporting requirements as well as periodic evaluation (see Figure A1.1).

Figure A1.1: Evaluation process for Pillar 2 of the CAP – 2007-2013 programming period



Source: Maier, 2011

1.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

1.2.1 Potential current impact

With regard to positive impacts on biodiversity, Pillar 1 cross-compliance and Pillar 2 agri-environment are the measures with the biggest benefit for biodiversity. GAEC cross-compliance helps to deliver a minimum level of management that result in biodiversity benefits across the EU's farmland. The agri-environment measure is the single most significant measure for pursuing environmental objectives across the farmed landscape in terms of the spatial coverage of schemes and the resources allocated to them. It incentivises farmers to undertake more demanding environmental management including actions that target biodiversity through payments provided for income foregone and incurred costs, on the basis of multi-annual voluntary contracts. There are a range of other Pillar 1 and Pillar 2 measures that could be used to provide benefits for biodiversity. Since there are many ways in which these measures can be used for delivering various environmental outcomes, it is important to prioritise between their benefits, and give biodiversity an appropriate weight in these prioritisations (Poláková *et al*, 2011).

As well as targeting positive biodiversity impacts, it is critically important to avoid adverse effects where they can occur. Since the focus of the biodiversity proofing is first of all on avoiding such adverse effects, the subsequent passages analyse them in more detail. It is worth noting that the impact of the CAP on biodiversity is not easy to assess with accuracy because agriculture has been greatly affected by technological developments and market forces (which increasingly act at a global scale). Technological advances dating back to mechanisation and more recent developments in crop breeding, pesticides and animal husbandry have undoubtedly led to profound changes in farming practices that would have occurred to some extent without the CAP. Furthermore, high and growing global demands for food and biofuels have led to recent increases in the prices of many agricultural commodities in Europe, which is stimulating the concentration and specialisation of farms and intensification of agricultural management in some areas, and is likely to influence the process of

agricultural abandonment in other areas. The adverse biodiversity impacts of the CAP are also to some extent connected to other EU policies and objectives, such as the Structural Funds, which support new infrastructure that is often necessary for some farm improvements (eg flood management and irrigation). Developments of on-farm and off-farm infrastructure can also be funded through Pillar 2 of the CAP. The development of new infrastructure does not necessarily lead to adverse impacts on biodiversity if implemented with the appropriate environmental safeguards.

The main CAP measures that are likely to have adverse effects on biodiversity are outlined below.

Measures:

- *Pillar 1 funding measures* including the principles and priorities of:
 - direct payments funded from EAGF under Council Regulation No 73/2009
 - specific support under Article 68.

- *Other Pillar 1 measures* including the priorities such as:
 - dairy quota/sugar quota
 - market measures providing support under the Common Market Organisation for sectors such as fruit and vegetable, rice, banana, cotton and tobacco, apiculture etc

- *Pillar 2 measures* are set out under Council Regulation No 1698/2005 and include the following priorities:
 - measures to improve the competitiveness of agriculture and forestry,
 - measures to improve the environment and countryside by supporting land management,
 - measures to improve the quality of life in rural areas and encourage diversification.
 - additional measures to support specific projects designed by local partnerships to address specific local problems (so called "Leader approach")
 - Community monitoring and evaluation framework provides principles for the collection of data and review of the results and outcomes of the programming cycle at Member State level.

- *Cross-cutting measures such as*
 - cross-compliance, including standards of good Agricultural and Environmental Condition (GAEC) and Statutory Management Requirements relating to the Birds and Habitats Directives
 - the use of the Farm Advisory System.

Activities:

Most of the CAP measures above do not have direct adverse impacts on biodiversity, but instead create favourable and stable economic conditions that help to maintain farming. This is beneficial in many semi-natural habitats that are dependent on extensive traditional management practices. However, continued management can be detrimental in some sensitive areas (eg natural habitats such as blanket bogs that are easily damaged by livestock). Indirectly, Pillar 1 is a factor alongside other factors such as commodity prices, technology, market requirements etc which directly drive investments to increase agricultural production and profitability, leading to the intensification and specialisation of farming systems, and consolidation of farms. Small scale agricultural improvements may be indirectly encouraged by some Pillar 2 measures (see above). Examples of agricultural practices with potential negative effects on biodiversity, which can result from intensification and increased productivity that was indirectly fostered by the CAP in the past, although not directly encouraged by the CAP at present, have been identified in Poláková *et al*, 2011.

They include:

- Land management activities, involving:
 - Inappropriate grazing (eg grazing of sensitive habitats, over-grazing due to high stocking densities, grazing in inappropriate conditions, such as in wet conditions that causes soil damage, or at inappropriate times of year, such as during the breeding season on sites that are important for ground-nesting birds);
 - Inappropriate burning (eg frequent or large-scale burning of grasslands and shrublands);
 - Drainage and flood control;
 - Fertiliser use (especially on sensitive semi-natural habitats);
 - Cultivation of permanent grasslands (especially ancient, semi-natural grasslands);
 - Specialisation in certain crops and reduced use of rotations;
 - Switch from hay cutting to silage production on intensively managed temporary grasslands;
 - Withdrawal of livestock from the grasslands, due to a switch to stockyard systems with livestock entirely fed on silage or other fodder crops;
 - Herbicide and pesticide use;
 - Irrigation
 - High levels of mechanical operations (which causes soil compaction and high levels of mortality of ground-nesting birds and some other fauna); and
 - Loss or intensive management of hedgerows and other boundary features, and amalgamation of fields.

- Investments in on farm or off farm and forest infrastructure (for example roads) that are not subject to EIA process and as a result permitted without an adequate assessment of their biodiversity impact (see for example Boccaccio et al, 2009).

- Afforestation in inappropriate locations (eg on open semi-natural grasslands and shrublands) or with inappropriate species for the local situation.

Impacts of current trends in agricultural restructuring:

The trends that have adverse effects on biodiversity (Stoate et al, 2009; Poláková et al, 2011; Ecofys, IEEP, Winrock forthcoming) include:

- Specialisation – *strong impact*
- Mechanisation – *strong impact*
- Consolidation – *medium impact*
- Intensification/extensification – *strong impact*
- New market/product development – *medium impact*
- Agricultural abandonment - *medium impact*

These trends are affected by the impacts of exogenous factors such as the prices of commodities and inputs, technological developments, market requirements, environmental regulation climate change and the impacts of the CAP.

Impacts of current policy measures

The way in which Member States fund, design and implement certain CAP policy measures, particularly those under Pillar 2, can have a range of impacts in different parts of the EU-27, both positive and negative, depending on how measures are implemented. Potential adverse effects are listed below. However, they may not occur in all places.

- **Pillar 1 funding measures:**
 - direct payments funded from EAGF under Council Regulation No 73/2009; in particular continued coupled payments in some sectors (suckler beef and sheep and goat) – *medium/ strong impacts or no adverse impacts at all* since coupled payments can act as incentives to produce and therefore exert considerable influence over the farming systems and practices adopted (Baldock et al, 2007). In the case of livestock, for example, coupled payments can give rise to both positive and negative consequences for the environment. Adverse impacts are experienced where the payments encourage stocking densities that are above the carrying capacity of the land. They can also have positive impacts, however, by encouraging the maintenance of extensive grazing systems (Tucker et al, 2010).
 - specific support under Article 68 – *variable, some schemes that target biodiversity management may have positive biodiversity impacts and others may have potential adverse effects*. No evaluation of the implementation of Article 68 has been carried out as yet.

- **Other Pillar 1 measures** such as:
 - Dairy quota/sugar quota – *variable impacts* (the dairy sector is now most often very intensive, with associated adverse impacts. The removal of the quota is thought likely to increase concentration of production in the most productive regions and will not reverse the trend for a decline in grass based systems as the sector orients itself increasingly to the market (Alliance Environnement, 2008)).
 - Market measures for sectors such as fruit and vegetable, rice, banana, cotton and tobacco, apiculture etc – *medium/strong adverse impact*. However, market measures also support environmental operational programmes which are implemented on a voluntary basis; thus the measures may have mitigating environmental impacts where they are implemented in the specific sectors.
 - Cross-compliance, including standards of good Agricultural and Environmental Condition (GAEC) and Statutory Management Requirements relating to the Birds and Habitats Directives; and – *no adverse impact potential positive impact*.
 - The interpretation of the criteria for eligibility and the definition of agricultural activity for Pillar 1 direct payments – *variable impact, from no adverse effect at all to potentially strong adverse impact to potential positive impact* (in some Member States eligibility rules were interpreted in a way that excluded some valuable biodiversity rich habitats from the receipt of Pillar 1 payments).

- **Pillar 2 measures** are set out under Council Regulation No 1698/2005 and include:
 - Measures to improve the competitiveness of agriculture and forestry – *variable: weak to strong adverse impacts; no to medium positive impact (eg from investments in manure storages or in improved environmental performance of the holdings)*.
 - Measures to improve the environment and countryside by supporting land management – *weak or no adverse impacts, strong positive impact (however it is important to ensure that implementation of the measures that are beneficial to biodiversity does not unwittingly lead to adverse effects*

- Measures to improve the quality of life in rural areas and encourage diversification – *variable: weak to medium to no adverse effect at all; potential medium positive effect.*
- Additional measures to support specific projects designed by local partnerships to address specific local problems ('Leader') – *variable, some projects that target biodiversity management may have medium positive effect.*
- Common monitoring and evaluation framework (CMEF) provides principles for the collection of data and review of the results and outcomes of the programming cycle at Member State level – *its effectiveness could be improved if the implementation of biodiversity related components of evaluation by Member States is better.*

1.2.2 Potential future impact – CAP Proposals for 2014-2020

Measures

- *Pillar 1 measures*, including a change in the priorities for the basic payment by proposing several additional payments/schemes/elements:
 - 'green' payments;
 - a payment for young farmers;
 - other payments that may be provided at the discretion of a Member States (a per hectare payment to farmers in areas facing natural constraints and coupled payments 'where specific types of farming or specific agricultural sectors undergo certain difficulties and are particularly important for economic and/or social and/or environmental reasons'; and
 - small farmers' scheme.
- *Pillar 2 measures* and the various new or modified *cross-pillar programming elements* including:
 - Measures under rural development programmes (RDP);
 - Community Strategic Framework (CSF);
 - Partnership Contracts (PC); and
 - European Innovation Partnership on 'Agricultural Productivity and Sustainability'.
- *Cross-cutting issues*:
 - Cross compliance The revised requirements for the Farm Advisory System; and
 - the revised CMEF

The main types of activities supported by the CAP that have the potential to be harmful to biodiversity are unlikely to change before 2020 and are therefore as listed in the section relating to present impacts above.

Potential impact of policy and funding measures

Pillar 1

- ‘Green’ payments: The three types of payments proposed (crop diversification, permanent grassland, ecological focus areas) are intended to be compulsory for all farms in receipt of the basic payment. These measures should improve biodiversity to some extent as well as soil, air and water quality. The impact could be expected to be most significant in regions where the current uptake of agri-environment schemes remains low. In theory, this could lead to having more funds for more ambitious agri-environment measures under Pillar 2.
 - Ecological Focus Areas have a strong potential to have positive impacts on biodiversity. Details of the requirement need to be established. Benefits could be lower if the ecological area can shift across the farm from year to year – *positive (medium) impact*.
 - Maintaining permanent grassland – *medium to positive impacts*.
The rules maintain the area of permanent grassland rather than protecting or enhancing its ecological quality. The proposals provide protection only after 2014, which could lead to significant losses in the interim – although the Commission have proposed to extend the current national permanent pasture cross compliance requirement for a few years in order to minimise this risk.
 - Crop diversification – *positive low impact*.
- Cross-compliance – *positive (medium/strong) impact*.
Restructured GAECs, including the new standard on maintaining soil organic matter and protecting wetlands and carbon rich soils, and a new GAEC standard for the retention of landscape features which now also includes a ‘ban on cutting hedges and trees during the bird breeding and rearing season and possible measures for avoiding invasive species and pests’. Revised SMRs with new requirements for the Water Framework Directive and the Framework Directive for Sustainable Use of Pesticides
- Flexibility between pillars – *variable impact depending on uptake, but potentially medium to negative impact*.
Certain Member States (Bulgaria, Estonia, Finland, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia, Spain and the United Kingdom) can move up to 5 per cent of rural development funding to their national envelopes for Pillar 1 direct payments – *variable depending on uptake, but potentially medium negative impact*.
- Small farmers scheme – *variable impact*.
This proposed scheme could represent risks for biodiversity given that farmers choosing to operate under this scheme will not need to adhere to cross compliance requirements and will not need to undertake the new ‘greening’ measures in Pillar 1. This may not be such an issue on farmland of High Nature Value, characterised in many areas by a large number of small farms and would reduce the administrative burden on such farms.

Pillar 2

- The Rural Development budget will suffer a decline in real terms for 2014-2020 – *adverse (medium) impact*.
- Earmarking, as a recommendation, of 25 per cent of rural development funds for ‘issues related to land management and the fight against climate change’ – *positive (strong) impact*.
- Requirement for all RDPs to address the sustainable management of natural resources and climate change adaptation and mitigation priorities – *positive (medium) impact*.
- Community Strategic Framework – *positive (weak to medium) impact*.

- Development of Partnership Contracts – *positive (weak to medium) impact*.
- Introduction of ex ante conditionalities for each objective – *positive (medium to strong) impact*.
- Move from axes to 6 objectives – *neutral or positive (medium) impact* – should encourage more flexibility in measure and scheme design at the regional level; the new objectives include three cross-cutting themes, one of which is the environment and climate mitigation and adaptation.
- Compulsory for RDPs to implement the agri-environment-climate measure – *positive (strong) impact* – the continuation of the compulsory nature of the agri-environment-climate measure is critical for the delivery of biodiversity benefits.
- Possibility of implementing agri-environment-climate measures by collective beneficiaries – *positive for the delivery of certain environmental benefits at landscape scale*.

Cross-cutting issues

- the increased emphasis on advice and training in Pillar 1 and Pillar 2 – *positive (medium) impact*.
- European innovation partnership on ‘Agricultural Productivity and Sustainability’ – *positive – strong impact* (Environment is a key issue for the EIP which is aiming to achieve more with less, can in theory be used to support ecosystem-based approaches and innovative biodiversity measures).
- the extension of monitoring and evaluation requirements from Pillar 2 to cover all elements of CAP support – *positive (medium) impact*.

1.3 Stipulation of safeguards in place

What **potential tools are in place** to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

The following brief list refers to the existing safeguards or the safeguards proposed for 2014-2010 period:

- EIA, SEA;
- Habitats Directive Articles 3, 6(3) and 6(4), Water Framework Directive Article 4(7);
- extension of monitoring and evaluation requirements from Pillar 2 to cover all elements of CAP support;
- earmarking of 25 per cent of rural development funds for ‘issues related to land management and the fight against climate change’;
- afforestation safeguard – will be set by a delegated act; and
- irrigation safeguard - only investments that lead to a reduction of previous water use by at least 25 per cent shall be considered as eligible expenditure (the new MS can be exempted if they provide environmental analysis documenting the sustainability of the investment safeguards).

1.4 Best Frame of Action

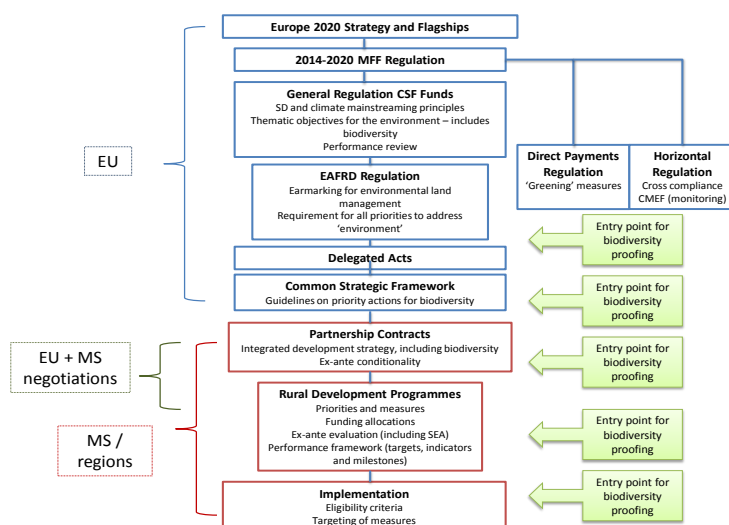
1.4.1 Stages, levels and timeframes for intervention

As described above, the rules governing Pillar 1 direct payments are set by the Commission and implemented by Member States. Each Member State is allocated a ‘national ceiling’ for these payments which are allocated currently on either an historic or a regionalised basis, depending on which approach MSs have chosen (EU-15) or on a flat rate per hectare basis (EU-12). Because of the non-programmed character, direct support itself provides little opportunity for interventions via biodiversity proofing, which focus mostly on cross compliance. This can partly change from 2014

onwards depending on the outcome of the political debate on the ‘greening measures’ in Pillar 1. The other major change in determining the level of Pillar 1 support, envisaged from 2014 onwards, will not extend opportunities for biodiversity proofing. This change means merely that Member States will make payments based on a per hectare basis, while these area payments will be differentiated according to region and Member States will have flexibility to determine how those regions should be delineated. Of high importance for determining the outcomes for biodiversity in holdings under Pillar 1 direct payments, the framework for cross compliance, set at the EU level under Council Regulation 73/2009. Member States are required to implement and enforce all Statutory Management Requirements in their country (for biodiversity this includes those articles of the Birds and Habitats Directives that are applicable at the farm level). An opportunity for intervention with regard to ensuring optimum biodiversity outcomes is particularly under the other element of cross compliance, Good Agricultural and Environmental Condition (GAEC). GAEC standards are divided into compulsory and optional and Member States are given discretion to implement them in ways that are suited to their local conditions. The design of GAEC standards is therefore a suitable entry point for biodiversity proofing. In addition, the proposed ‘greening’ measures provide opportunity for building on the basic cross compliance requirements and for targeting Pillar 2 measures to specific aspects of biodiversity.

Pillar 2 has a character of a programmed policy framework set at the EU level, with a shared management and responsibility for the design of programmes at Member State level, so entry points for biodiversity proofing exist at virtually every stage of the process. The Community Strategic Guidelines set out the EU priorities for action in relation to the core objectives of the EAFRD. Member States are given the responsibility for developing a National Strategic Plan, defining the national priorities for rural development, under which the Rural Development Programme sits. All RDPs must be submitted to the Commission for formal approval. They are also subject to annual reporting requirements as well as periodic evaluation (see figure). There are a number of changes proposed in Pillar 2 after 2014, however, the key stages and key levels where an intervention through biodiversity proofing should be considered and carried out are to a large extent similar in the existing and the proposed programming cycles, with a few new programming elements being considered under the CAP proposals which increase the opportunity for biodiversity proofing. Figure A1.2 presents the schematic overview for the future policy framework and entry points for biodiversity proofing.

Figure A1.2: CAP future Policy Framework and entry points for biodiversity proofing



For Rural Development policy, the regulatory level is critical for specifying the structure of measures, their objectives, eligibility criteria, and mandatory technical safeguards. These are outlined to a considerable detail at the regulatory level unlike for Cohesion Fund under which they are determined at the programming and implementation stage. Also the environmental conditionality and a Common Monitoring and Evaluation Framework (CMEF), including a suite of indicators, are specified at high strategic level and enshrined in the regulatory framework of Rural Development policy, unlike for Cohesion policy. The regulatory level provides therefore the key set of entry points for biodiversity proofing for Rural Development.

A range of **thematic objectives** is set out at EU level in the Common Provisions Regulation. Environmental protection (alongside resource efficiency, climate change mitigation and adaptation, risk prevention etc) is included in the menu of thematic objectives. The thematic objectives will be translated into the thematic objectives of the national Common Strategic Frameworks (CSFs) and Partnership Contracts (PCs), and will influence the balance between the six Union rural development priorities (or three objectives) proposed for Pillar 2. Appropriate prioritisation of this objective in the CSF and PAs is very important.

Therefore, elaboration of CSF and PC is an important entry point for biodiversity proofing. **Common Strategic Frameworks** will determine key actions toward the achievement of the thematic objectives. The introduction of the CSF, which will replace the current Community Strategic Guidelines, and the development of Partnership Contracts is therefore an important entry point for considering the mix of modalities to achieve good biodiversity outcomes. The Commission Staff Working Document on the elements of the CSF states that 'it is essential that Member States ensure that all ministries and managing authorities responsible for the implementation of the CSF funds work closely together in the preparation, implementation, monitoring and evaluation of the Partnership Contract and programmes'. Ensuring this will already be an advance on the situation in the past and the implementation of this requirement can potentially affect the quality of parameters for the biodiversity proofing specified within the CSFs. These groups of experts across ministries should ensure that some of the key actions for EAFRD set out in the Commission Staff Working Document are integrated in the CSF. These actions include 'restoring, preserving and enhancing biodiversity, including in Natura 2000 areas and farming systems with a high nature value, and the state of European landscapes, by promoting: environmentally sound farming systems, including organic farming; establishing and/or maintaining wildlife zones in farm and/or forest areas; granting compensation to farmers and/or forest holders for economic disadvantages faced in Natura 2000 areas and designated wildlife corridors.'

Partnership Contracts (PC) will describe the approach taken by Member States in the prioritisation of the different thematic objectives under the different funding streams, including Pillar 2. To ensure that the ambition formulated for the CSF is properly followed up on, Member States will need some support and guidance on how to integrate biodiversity as a priority within their PCs. This guidance can help to translate the declared prioritisation of biodiversity into all elements of PCs, including a consolidated table of milestone and targets, , assessment of administrative capacity of authorities and beneficiaries, and summary of proposed actions and corresponding targets as mandatory components.

Rural development programmes: *The process of prioritising objectives of Pillar 2* at national/regional levels will involve weighing the priority of biodiversity vis-à-vis other environmental goals under the objective of environmental protection, and in relation to other five Pillar 2 objectives. This prioritisation will immediately inform the design of RDP measures, and is therefore a critical entry point for biodiversity proofing at Member State level. This process will be further informed by the outcomes of the evaluations of the rural development programmes of the current programming

period and by the regionally and locally specific indicators of problems in sustainable land management identified through environmental policies, as well as by existing targets relating to biodiversity, where these have been set out. The targets under the EU Biodiversity Strategy should play a particular role.

The *programming stage* is another entry point for considering the best ways to achieve good biodiversity outcomes. For the purpose of monitoring and evaluation, the national authorities will define the baseline levels of biodiversity by means of relevant indicators, as well as baseline levels of socio-economic situation and the current status of the environment. They will also determine the initial state of the parameters of economic, environmental and social sustainability that the programme intends to change, including biodiversity, and the targets to be achieved through actions. Relating to that, Member States will propose the output indicators for each individual measure they include in the programming documents, the result indicators for the whole area of environmental sustainability, and the impact indicators through which they quantify anticipated achievements of the whole national/regional programmes. As part of the programming process, Pillar 2 objectives will be translated into the budget breakdown. According to the proposed EAFRD Regulation, MSs are obliged to earmark 25 per cent of rural development funds for 'issues related to land management and the fight against climate change'. Indeed, ensuring a sufficient budget allocation for biodiversity measures will be particularly important, as well as providing a good analysis of the situation in terms of needs, pressures and opportunities as a basis for the allocation of financial resources. As noted, a range of provisions relevant to biodiversity are specified within the regulatory framework of Rural Development policy, unlike under the Cohesion Fund where they are the matter of the programming or project selection process. Therefore the room for the intervention through biodiversity proofing at programming stage at Member State/regional level has little comparison between the different funds. However, the programming stage is critical for putting in place pre-conditions for packages of measures that can support varied needs of farmers engaged in biodiversity management in extensive systems and High Nature Value farming.

Further entry points for the biodiversity proofing of rural Development policy exist at the *monitoring stage*, by utilising the biodiversity relevant indicators available within the Common Monitoring and Evaluation Framework and provided in programmes for informing policy choices. An appropriate implementation of these requirements by MS, for example in relation to the indicator for maintenance of High Nature Value farmland and other biodiversity relevant indicators, will be critical. The extension of monitoring and evaluation requirements from Pillar 2 to cover all elements of CAP support is a welcome improvement. Evaluation should take account of all positive effects on biodiversity, even if the primary objective of measures is not biodiversity.

1.4.2 The opportunities and threats related to CAP Pillar 2 in the context of funding biodiversity – a SWOT analysis

In the following section we analyse the strengths, weaknesses, threats and opportunities of a selection of tools that could be considered to be part of the best frame of actions to biodiversity proof the CAP. The tools discussed in the SWOT analysis comprise the main types analysed in this study – procedural, substantive and organisational. The selection includes tools from all three stages of the policy cycle – programming, monitoring and evaluation, and programme implementation (including the screening of applications for funding), although it cannot be comprehensive and does not assess all the tools available in each stage.

Relating to the programming stage, the tools selected for analysis are:

- including clear biodiversity objective in RDPs
- earmarking funds for biodiversity within programmes and designing schemes for biodiversity management
- designing technical safeguards, conditionalities and standards for measures with adverse effects
- designing information activities, training, advice and extension services relating to biodiversity management

Relating to the monitoring and evaluation the SWOT analysis focuses on:

- Defining values for biodiversity related indicators, monitoring and evaluation.
- Rewarding performance
- Strengthening focus of ex-ante evaluations on biodiversity

Relating to the programme implementation, the SWOT analysis addresses:

- introducing specific eligibility criteria for applications with potential positive and adverse effects

To take account of the strengths and weaknesses of all proofing tools available, a more detailed assessment also includes the relevant findings of studies focussed on the biodiversity impacts of the CAP instruments and the climate proofing of the CAP (IEEP et al 2012, Poláková et al, 2011, Keenelyside et al, 2011, Hart et al 2011).

Box A1.1: SWOT assessment of including clear biodiversity objectives in RDPs

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Environmental objectives supporting biodiversity provides the appropriate platform on which the other tools can be developed to achieve these. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Environmental objectives require administrative conditions and support, which are not necessarily applicable on all governance levels. • Environmental objectives are only applicable on a higher strategic level and therefore require the support of other tools. • To have a balanced set of schemes, biodiversity has to be targeted alongside water, soil and climate. Although synergies will be achieved in some situations, trade-offs are inevitable and the outcome may not provide the best outcome for the biodiversity objective.
<p>Threats:</p> <ul style="list-style-type: none"> • Difficult to change policy path-dependencies to achieve a more significant prioritisation of biodiversity focused objectives. • Biodiversity was in the past often seen as a constraint on competitiveness of farms and on economic growth, rather than an asset. • Water and soil are often seen by the agricultural sector as more critical for ensuring productivity than biodiversity. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Sets the platform for a more holistic approach to biodiversity proofing. • Positive unintended impacts of schemes which do not have biodiversity as primary objective may improve biodiversity outcomes in certain cases. • Opportunity for programming measures which have multiple benefits including biodiversity.

Box A1.2: SWOT assessment of earmarking funds for biodiversity within programmes and designing schemes for biodiversity management

Strengths vis-à-vis Biodiversity:

- Ensuring sufficient budget for biodiversity schemes is critical for the success of biodiversity management at landscape scale.
- The tool can help co-ordinating effects of measures focussed on maintaining and enhancing biodiversity and capital investment measures and thus help avoid conflicting outcomes in rural areas.
- Well-designed schemes, targeted to the biodiversity aspects and tailored to local conditions are the efficient use of money.
- Attractive and accessible schemes, with sufficient payment rates, are more likely to have a good uptake.
- Provisions for the right packages of measures, including biodiversity management, capital investments, support to producer groups, non-productive investments, diversification, training, advice, and extension services will ensure acceptable income support to farmers in high nature value agriculture having low profitability.
- Designing appropriate forestry measures and earmarking funds to these measures can provide support to biodiversity management in forest areas where no other public support is available.

Weaknesses vis-à-vis Biodiversity:

- Budget for biodiversity measures often receives lower priority than environmental priorities (water, soil) that more directly affect productivity. However, synergies deriving from such water and soil measures have to be taken into account.
- To be fully operational, some biodiversity schemes require complex design and allowing for improvements to be made on the lessons learnt after the introduction of the scheme.
- Design of schemes will be the more effective the more complete data series exist for relevant biodiversity aspects.

Threats:

- Insufficient institutional capacities provided for the design of effective schemes.
- Lack of adequately developed national biodiversity plans or strategies and insufficient data series to support effective scheme design in many Member States.
- Insufficient payment rates of biodiversity schemes.
- Insufficient leverage of stakeholders supporting prioritization of biodiversity measures.
- Insufficient leverage of stakeholders supporting the design of more demanding biodiversity schemes in intensive areas.
- Difficult to change policy path-dependencies to achieve having a more significant allocation of resources for biodiversity schemes.

Opportunities:

- A more effective design of biodiversity schemes and better overall funding would improve know-on effects on soil and water
- Design of packages of measures would enhance rural vitality in areas where agriculture has low profitability and this can have beneficial knock-on effects for example on avoiding outmigration.

Box A1.3: SWOT assessment of designing technical safeguards, conditionalities and standards for measures with adverse effects

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Technical safeguards, conditionalities and standards for measures with adverse effects could be set up, pr specified in detail in RDPs. They can support biodiversity no net loss when planning interventions. • Safeguards, conditionalities and standards effectively guide relevant actors at different governance levels. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • ‘No net loss’ conditionality may not be an optimal solution for lagging rural areas with large share of semi-natural habitats and high needs for farm modernization where farm development may come at certain cost to biodiversity and optimal balance between priorities should be sought. • ‘No net loss’ requires political commitment and is normally unpopular within Member States. • Appropriate specification of technical safeguards requires co-operation with environmental authorities.
<p>Threats:</p> <ul style="list-style-type: none"> • Distinguishing where the ‘no net loss’ conditionality is appropriate to use and where not requires expertise to recognize and prevent unjustified trade-offs between biodiversity and economic priorities. Such expertise may not be sufficient at national/regional authorities. • Design of technical safeguards (eg afforestation) may be done at too high level to be properly targeted and tailored to relevant situations; or delegated at local level where the strategic expertise with RDP funds may be insufficient. • Design of safeguards (eg irrigation) may be ineffective if environmental authorities are not involved. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Can be combined with other instruments, such as rewarding performance, to make the conditionality more appealing (more carrot less stick).

Box A1.4: SWOT assessment of designing information activities, training, advice and extension services relating to biodiversity management

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Focus on biodiversity in the design of these activities is critical for the successful implementation of schemes focused on biodiversity management. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool has to be balanced with tools for prioritization of other environmental media such as soil and water. • Does not work appropriately without a well-developed administrative support system. • Requires political will.
<p>Threats:</p> <ul style="list-style-type: none"> • The outcome of the activities depends on farmers’ attitudes and where long term adverse attitudes exist they may be difficult to change on short term. • Budget may be too limited. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • The programming approach is an opportunity to link these activities to concrete actions and demonstrate the purpose and potential of biodiversity management in practices.

Box A1.5: SWOT assessment of defining values for biodiversity related indicators, monitoring and evaluation

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Indicators can contribute to providing signals to evaluators and policy makers. • Indicators do not offer much if seen in isolation, in order to build a credible story there is always a need for an evaluation to assess the meaning of indicators and their inter-relations. • CMEF indicators are applicable at several crucial stages of the policy and project cycle and allow for comparison and interpretation based on the values that have been collected for the 2007-2013 period. • CMEF provides a uniform approach at all administrative levels (horizontally and vertically), regardless the degree of autonomy of different administrative units in Member States. • Indicators effectively support particularly relevant actors at different governance levels. • Indicators helps to mitigate otherwise potentially negative impacts 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • To be fully operational, some biodiversity indicators require complex data sets (eg High Nature value indicator) and more varied indicators are needed (eg for other taxa than birds) .
<p>Threats:</p> <ul style="list-style-type: none"> • Weak implementation of the monitoring and evaluation of the biodiversity relevant CMEF indicators in Member States can result in incomplete or unreliable data sets. • Difficult to change policy path-dependencies to achieve having a more significant allocation of resources for monitoring and evaluation of biodiversity indicators, in comparison, for example with socio-economic indicators. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • A more complete hierarchy of biodiversity indicators supported by a corresponding database would not only help the development of biodiversity proofing. • Building a system that would capture better the synergies of the different interventions under the CAP.

Box A1.6: SWOT analysis of rewarding performance

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Rewarding performance through reserve funds can contribute positively to halting the loss of biodiversity and can be designed to have a positive impact on biodiversity. • Tool is particularly applicable at one or several crucial stages of the policy and project cycle as it also requires an understanding on how the implementation meets the criteria that triggers the reward. • Tool helps to mitigate otherwise potentially negative impacts. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool requires very specific administrative conditions that are not applicable on all governance levels, hence geographic scope is limited.
<p>Threats:</p> <ul style="list-style-type: none"> • Requires political will and a transparent and well working administrative system. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Can support other instruments and can also act as an incentive to improve the quality of procedural instruments as an evidence base to achieve the reward.

Box A1.7: SWOT assessment of strengthening biodiversity related elements of ex-ante evaluations

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Ex-ante evaluations can set up the framework for the inclusion of biodiversity in Partnership Contracts and Operational Programmes. • Ex-ante evaluations can help identify and mitigate otherwise potentially negative impacts. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool can be complicated to use and prioritization of biodiversity can be overshadowed by economic and social needs (see threats).
<p>Threats:</p> <ul style="list-style-type: none"> • Biodiversity concerns are susceptible to unjustified trade-offs as ex-ante evaluations include a strong economic and social element, which is based on insufficient understanding of the value of biodiversity and ecosystem services. • For partnership contracts / operational programmes, ex-ante evaluations and SEAs are contracted to different consultancies and if appropriate coordination of the assessments is not taking place in-house, the potential for a holistic evaluation of the biodiversity impacts is difficult to achieve. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • To feed in the ex-ante evaluations findings into other procedural instruments (SEA and EIA) to create a holistic approach to biodiversity proofing and evaluations in general.

Box A1.8: SWOT assessment of strengthening EIA and SEA procedures

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • SEAs (for programmes) and EIAs (for projects) can help in mitigating negative impacts on biodiversity. • SEAs and EIAs can be applied at one or several crucial stages of the policy and project cycle. • Both tools effectively support particularly relevant actors at different governance levels. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • These tools require a commitment to work appropriately. If they are perceived as an administrative exercise the quality of the outcomes will suffer. • The assessment of biodiversity impacts under the EIA applies to minimum projects that are feasible under RDPs. • The rules applying to biodiversity assessment under EIA and SEA are general and ought to be revised (EIA is currently under revision but SEA unlikely to be revised before 2016).
<p>Threats:</p> <ul style="list-style-type: none"> • A move to highlight in SEAs and EIAs the assessment of economic and social issues can reduce the potential of the instrument to mitigate environmental impacts as the focus is on trade-offs. • When poorly implemented, SEA may slip into formal administrative exercise which does not appropriately take into account opinions of environmental authorities and/or stakeholders. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • To develop these instruments in parallel with other requirements (eligibility criteria for applications, monitoring) to improve outcomes for biodiversity and reduce administrative burden as these tools would have already collected required information. • For the Commission to develop guidance on how to undertake SEAs and EIAs, with improved consideration of biodiversity issues and adapted to the stages of the Rural Development Policy cycle. • In relation to the SEA, the opportunity to also assess the positive impacts that biodiversity can have on the economy through ecosystem services and move away from the traditional approach of only focusing on mitigation.

Box A1.9: SWOT analysis of introducing specific targeting criteria for applications with potential positive and adverse effects on biodiversity

Strengths vis-à-vis Biodiversity:

- Specific targeting criteria for funding land-based activities focused on biodiversity have a strong potential to make a positive impact.
- The tool can identify applications from High Nature Value farming systems which merit priority support via packages of measures.
- Eligibility criteria for investment activities can include mitigation or compensation of adverse effects on biodiversity and ecosystems, if legal provisions are in place.
- Through appropriate eligibility criteria, mandatory technical safeguards (eg for afforestation and irrigation) can be effectively enforced.

Weaknesses vis-à-vis Biodiversity:

- Tool has to be balanced with tools for prioritization of other environmental media such as soil and water.
- Does not work appropriately without a well-developed administrative support system.
- Requires political will.

Threats:

- Application of the tool is vulnerable to policy constraints and setting criteria for these can be difficult.
- Tool is vulnerable to incoherencies arising through the inefficient use of strategic or procedural instruments at the programming stage (eg fragmented approach to screening applications for funding on individual basis rather than considering the need for combining support via packages of measures).

Opportunities:

- Likely to have impacts beyond biodiversity as the eligibility criteria are very likely to support activities that are also friendly in terms of climate proofing.

Box A1.10: SWOT analysis of dedicated monitoring committees

Strengths vis-à-vis Biodiversity:

- Monitoring Committees can have a role to play in several stages of the Rural Development Policy cycle to improve the integration of biodiversity issues.
- Monitoring Committees can support relevant actors at different governance levels.
- Monitoring Committees enforce the strategic nature of Rural Development by inviting at the same table representatives of different sectors and backgrounds, including biodiversity.

Weaknesses vis-à-vis Biodiversity:

- Monitoring committees are only as good as their participants and the administrative structure and the procedures that support it.

Threats:

- Set-up of Monitoring Committees constituted of participants with a narrow focus on only economic growth.
- A lack of administrative capacity to enable the full potential of the committee to be achieved.

Opportunities:

- Monitoring Committees have the potential to ensure that biodiversity are appropriately incorporated in project applications and that the procedural requirements are met. It is important to ensure that all participants of the Monitoring Committee are aware of the opportunities that lie in biodiversity proofing and the instruments that can support it.

1.4.3 Conclusions for Best Frame of Action

Based on the detailed analysis of the proofing tools available in the CAP (predominantly in Pillar 2), an ideal frame of actions for biodiversity proofing the CAP expenditure is:

- Substantive:
 - Member States give a proportionally strong weight to the biodiversity priority in the Common Strategic Frameworks and Partnership Agreements compared to other economic and social objectives
 - Member States include clear biodiversity objective in RDPs, earmark funds for biodiversity related priorities within programmes, design effective schemes for biodiversity management, design effective technical safeguards, conditionalities and standards for measures with possible adverse effects on biodiversity and design information activities, training, advice and extension services relating to biodiversity management at a scale corresponding to the needs identified
 - Managing Authorities make provisions for the packages of measures serving the needs of High Nature Value farming systems
 - Managing Authorities identify the needs for additional biodiversity related indicators and include these in RDPs
- Procedural:
 - Managing Authorities ensure that all biodiversity related components of CMEF evaluation (including ex-ante, mid-term and ex-post) receive attention comparable to components linked to economic and social objectives
 - Managing Authorities strengthen linkages between programme evaluation (SEA) and screening procedures for applications for funding with the existing procedural tools with effect on biodiversity (EIA and Article 6 of Habitats Directive)
- Organisational:
 - Managing Authorities improve liaison with environmental authorities and stakeholders, in particular for the design of appropriate biodiversity measures and for identifying measures that are potential risk to biodiversity, and developing suitable safeguards for these
 - Member States improve institutional capacities relevant to biodiversity at all governance levels

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2 ANNEX 2: GENERAL INFORMATION ON COHESION POLICY IN THE CONTEXT OF BIODIVERSITY

2.1 Principles and priorities of the funding instrument

2.1.1 General description and key instruments

The main pieces of Cohesion Policy legislation for 2007-2013 are:

1. General EU Funds Regulation 1083/2006/EC lays down the general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund
2. Regulation 1081/2006/EC establishing the Social Fund
3. Regulation 1080/2006 establishing the European Regional Development Fund
4. Regulation 1084/2006 establishing the Cohesion Fund

Current funding instruments

The 2007-2013 Cohesion Policy cycle is covered by the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund.

The ERDF aims to improve the economic and social cohesion by addressing regional development, economic change, enhanced competitiveness and territorial cooperation throughout the EU. Funding priorities include research, innovation, environmental protection and risk prevention, while infrastructure investment retains an important role, especially in the least developed regions. The ESF sets out to improve employment and job opportunities as well as strengthening human capital. The Cohesion Fund is to strengthen economic and social cohesion in the poorest Member States, specifically in the fields of environmental protection and transport infrastructure.

These funds are allocated to Member States based on three objectives with the Convergence objective (ERDF, ESF and Cohesion Fund) covering regions with a GDP per capita lower than 75% and a budget of EUR €250 billion, the Regional Competitiveness and Employment Objective (ERDF and ESF) supports regions facing structural difficulties and has a budget of EUR €49 and The European Territorial Cooperation objective (only ERDF) is divided into three strands of cross border co-operation, transnational co-operation and inter-regional co-operation and has a budget of EUR €7.5 billion.

Structural and Cohesion Funds are the EU's main financial instruments of Cohesion Policy to reduce the gap between poor and rich regions. Between 2007 and 2013 the Structural Funds (including the Cohesion Fund) have a budget of EUR €347 billion, amounting to one-third of the EU's total budget.

If environmental integration is to be pursued as a way to ensure that EU funds deliver sustainable development, appropriate integration tools need to be applied and enforced during each stage of the programme/project cycle to improve Member State implementation.

Post-2013 funding instruments

1. Proposal (COM(2011)615) for a Regulation laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund covered by the Common Strategic Framework and laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund.
2. Proposal (COM(2011)614) for a Regulation on specific provisions concerning the European Regional Development Fund and the Investment for growth and jobs goal and repealing Regulation.

3. Proposal (COM(2011)607) for a Regulation on the European Social Fund.
4. Proposal (COM(2011)612) for a Regulation on the Cohesion Fund.
5. Proposal (COM(2011)611) for a Regulation on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal.

Under the next Cohesion Policy period 2014-2020, the Common Rules Regulation lays down provisions governing all five funds under shared management which fall under the Common Strategic Framework (CSF). These include; the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund, the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF).

The total budget for the 2014-2020 EU Cohesion Policy is EUR €336 billion and consists of the two objectives of Investment in growth and jobs and European territorial cooperation with majority of funds concentrated in poorer regions. These replace the current three objectives for convergence, competitiveness and employment, and territorial cooperation. Regions under the Investment in growth and jobs goal are differentiated on the basis of GDP per capita into less developed regions (GDP per capita being under 75%), transition regions (GDP per capita being between 75-90%) and more developed regions (GDP per capita being over 90%).

There will be three instruments to deal with incentives and conditionalities: the performance review, ex-ante conditionalities and macro-economic conditionalities. The aim of the performance reserve is to reward performance by setting out targets, milestones and indicators. The progress towards achieving these targets will be based on the performance reviews to be taken place in 2017 and 2019. The performance reserve, which has been frozen, will be allocated in 2019 and consists of five per cent per fund per region. It is up to Member States to propose to the Commission how to allocate these reserve funds. The ex-ante conditionalities are listed in the Annexes of the Proposal of the Common Provisions and these need to be in place before funds are distributed. The aim of macro-economic conditionalities is to ensure that the funds are targeted in the right way. Where there is an “establishment imbalance” then the Commission can ask member States to review the Partnership Agreements so these can be changed to support more urgent matters. If this is not done in an appropriate way by the MS, then the payments can be suspended.

The new programming structure for 2014-2020 Cohesion Policy will consist of A Common Strategic Framework, Partnership Agreements and Operational Programmes. The Common Strategic Framework (CSF) will be prepared in order to translate Europe 2020 objectives into investment priorities. The development and investment Partnership Agreements are to be negotiated between the Commission and Member States and these will set out investment priorities, their respective funding allocations, as well as agreed conditionalities and targets. The new Partnership Agreements will also provide the Commission with an opportunity to ensure that environmental objectives and priorities are given sufficient weight. Operational Programmes are retained from the previous funding period to set out concrete priority axes and sub-priorities in conjunction with the Partnership Agreement.

2.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

2.2.1 Potential current impacts

Cohesion Policy spending has both positive and negative impacts on biodiversity, depending on the concrete project spending. For the 2007-2013 period, the Commission states that EUR 104 out of 344 billion will go to environment related spending. The majority of Cohesion Policy spending of relevance to the environment is devoted to water and wastewater treatment, with little amounts of money spent on natural environment. Direct natural environment spending amounts to EUR 2.7 billion for the 2007-2013 period. Spending rates differ on a national level. In the absence of an overall evaluation, numerous project evaluations show negative impacts of infrastructure and industry projects. For example, the European Environmental Agency (EEA, 2009) examined effects of implementing Structural and Cohesion Funds in Italy, Spain and Austria. The EEA study reviews negative impacts of Cohesion Policy on biodiversity, such as the Egnatia Highway in the Pindos Mountains in Greece or the Via Baltica in Poland, as well as major water projects, such as dams in Spain, Portugal and Czech Republic. A case study of the 'The Jerez – Los Barrios Motorway' in Spain shows that a project for motorway construction was approved by the European Commission despite the fact that almost 40 km of the motorway was planned directly through Los Alcornocales Natural Park, the most important cork oak forest of the Iberian Peninsula and a Natura 2000 site. New analysis by CEE Bankwatch Network underlines the continued investment into projects with high detrimental environmental impacts (CEE Bankwatch Network 2012). See also CEF – Transport section.

2.2.2 Potential future impacts

It is not possible to envisage how the proposal will evolve during the on-going political negotiations between the Council and the European Parliament but overall it tries to address several of the problems identified under the current Cohesion Policy. The Proposal has a strong focus on the shift towards a low-carbon economy in all sectors. For instance, more developed and transition regions have to earmark 20 per cent of their national ERDF allocations to energy efficiency and renewable energy. Less developed regions have to allocate 50 per cent of their ERDF to measures promoting research, innovation, SMEs and low carbon actions, out of which at least 6 per cent should target energy efficiency and renewable energy. Overall, it is likely that more funds in the developed regions will be shifted away from basic infrastructure projects whereas in the less developed regions this is not necessarily the case. This might create a situation where in the developed regions there is increasing potential to invest in biodiversity/ecosystem services whereas in the developing regions the focus would need to be more on mitigating the negative impacts on biodiversity. Commission proposals reinforce a system of conditionalities and compliance with EU legislation including preparation of national plans on energy efficiency, renewables, risk prevention, waste management and wastewater treatment, sustainable transport and railway development on the one hand and compliance with EU nature protection legislation (including birds and habitat Directives)

In the proposed Common Provisions Regulation, biodiversity and green infrastructure are not included as one of the eleven new thematic objectives but are included as priority actions for the ERDF and the Cohesion Fund under the thematic objective for "protecting the environment and promoting resource efficiency", which means that they can be financed but is unlikely to receive a high share of the funding allocations. Also, there is no earmarking for biodiversity measures, like there is for low carbon measures. Hence the new proposals for Cohesion Policy provide some useful steps into the right direction, including biodiversity as an investment action. However, in terms of overall allocations, Cohesion Policy remains geared toward growth and infrastructure, with potential

detrimental impacts for biodiversity. Enhanced funding for renewable energies need also to be underpinned by a sound environmental assessment process to avoid negative trade-offs.

2.3 The opportunities and threats related to Cohesion Policy in the context of funding biodiversity – a SWOT analysis

In the following section we analyse the strengths, weaknesses, threats and opportunities for a selection of tools that could be considered to be part of the best frame of actions to biodiversity proof Cohesion Policy. The tools discussed in the SWOT analysis comprise the main types analysed in this study, although it cannot be comprehensive and does not assess all the tools available in each stage.

Environmental objectives for biodiversity are important in setting up appropriate platform for biodiversity proofing in the Partnership Agreements and Operational Programmes. It is a way of vertically integrating biodiversity concerns in Partnership Agreements and Operational Programmes. Horizontally integrating biodiversity principles and objectives is critical for biodiversity proofing efforts as its purpose is to set implementation principles and to ensure that investments (e.g. infrastructure) do not go against these principles and objectives. The SWOT of environmental objectives is shown in Box A2.1.

Box A2.1: SWOT for environmental objectives

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Environmental objectives supporting biodiversity provides the appropriate platform on which the other tools can be developed to achieve these. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Environmental objectives require administrative conditions and support that necessarily are not applicable on all governance levels • Environmental objectives are only applicable on a higher strategic level and therefore requires the support of other tools, which are potentially missing and therefore the environmental objectives are not achieved in practice.
<p>Threats:</p> <ul style="list-style-type: none"> • Difficult to change policy path-dependencies to achieve the introduction of biodiversity focused environmental objectives. • Environmental objectives focused on climate change can make it more difficult to justify the set-up of biodiversity focused environmental objectives in circumstances where there is only a limited possibility/commitment to support environmental objectives more broadly. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Sets the platform for a more holistic approach to biodiversity proofing • To realise the synergies and co-benefits to achieve multiple environmental objectives, for instance through support to ecosystem-based mitigation and adaptation strategies to climate change (eg protection of forests' carbon storage, protecting / restoring natural ecosystems to mitigate flooding / droughts / fires).

Setting **environmental indicators** early in the programming process is an important pre-condition that monitoring and reporting will take place during the implementation and evaluation stages of the policy cycle and will be consistent with already pre-established objectives, targets and conditionality. This can be done in the scope of performance frameworks which need to include objectives, targets, milestones and indicators in the Operational Programmes.

Systematically measuring biodiversity impacts through the use of a given set of indicators in these delivery mechanisms would result in increasing the opportunities for a better consideration of biodiversity pressures and impacts. It is important that these opportunities are not missed and biodiversity indicators will be better used during the ex-ante stages of the policy process in order to increase a region's/Member State's awareness of its natural assets and the impacts of their proposed programmes and projects. The SWOT for environmental indicators is shown in A2.2.

Box A2.2: SWOT for environmental indicators

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Indicators can contribute to halting the loss of biodiversity and having positive impacts on biodiversity • Indicators are applicable at one or several crucial stages of the policy and project cycle • Indicators effectively support relevant actors at different governance levels • Indicators help to mitigate otherwise potentially negative impacts 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • To be fully operational indicators require very specific administrative conditions. • Indicators on a higher level need to correspond to more detailed indicators on lower administrative levels.
<p>Threats:</p> <ul style="list-style-type: none"> • To work in an optimal way indicators require a uniform approach between administrative levels (horizontally and vertically), which can be difficult to achieve where regions have a high autonomy. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • A well developed indicator hierarchy supported by a corresponding database would not only help the development of biodiversity proofing but would also reduce the administrative burden in conducting monitoring through the availability of uniform data based on past experiences. It would also help in the evaluation of Cohesion Policy outputs and outcomes.

Environmental conditionalities can be put in place in Partnership Agreements and Operational Programmes, for instance through requirements that take into consideration possible implications of Cohesion Policy funding on the Birds and Habitats Directives. The SWOT for environmental conditionalities is shown in Box A2.3.

Box A2.3: SWOT for environmental conditionalities

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Conditionalities could be set up in Partnership Agreements and Operational Programmes, for instance to support biodiversity no net loss when planning interventions. • Conditionalities effectively guides particularly relevant actors at different governance levels 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool requires political commitment and is normally unpopular within Member States when introduced by the Commission.
<p>Threats:</p> <ul style="list-style-type: none"> • High potential for political opposition 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Can be combined with other instruments, such as rewarding performance, to make the conditionality more appealing (more carrot less stick)

A certain amount of Cohesion Policy funding can be placed into national **reserve funds** for rewarding performance. The reserve fund in this sense acts as a performance-based financial incentive scheme to inspire Member States and regions to improve the implementation of programmes and projects. The SWOT for reserve funds is shown in Box A2.4.

Box A2.4: SWOT for reserve funds.

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Rewarding performance through reserve funds can contribute positively to halting the loss of biodiversity and can be designed to have a positive impact on biodiversity • Tool is particularly applicable at one or several crucial stages of the policy and project cycle as it also requires an understanding on how the implementation meets the criteria that triggers the reward. • Tool helps to mitigate otherwise potentially negative impacts 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool requires very specific administrative conditions that are not applicable on all governance levels, hence geographic scope is limited
<p>Threats:</p> <ul style="list-style-type: none"> • Requires political will and a transparent and well working administrative system 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Can support other instruments and can also act as an incentive to improve the quality of procedural instruments as an evidence base to achieve the reward.

Partnership Agreements and Operational Programmes are subjected to the requirements an **ex-ante evaluation**. Overall, the ex-ante evaluation examines consistency of the programme strategy with funding priorities and the regional situation. The SWOT for ex-ante evaluations is shown in Box A2.5.

Box A2.5: SWOT for ex-ante evaluations

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Ex-ante evaluations can set up the framework for the inclusion of biodiversity in Partnership Agreements and Operational Programmes. • Ex-ante evaluations can help in identifying and mitigating potentially negative impacts 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool can be complicated to use and biodiversity impacts can be overshadowed by economic and social needs (see threats)
<p>Threats:</p> <ul style="list-style-type: none"> • Biodiversity concerns are susceptible to unjustified trade-offs as ex-ante evaluations include a strong economical and social element, which could be based on insufficient understanding of the value of biodiversity and ecosystem services. • For Partnership Agreements/Operational Programmes, ex-ante evaluations and SEAs can be contracted to different consultancies and if appropriate coordination of the assessments is not taking place in-house within the contracting authorities, then the potential for a holistic evaluation of the biodiversity impacts are difficult to achieve. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • A better co-ordination between ex-ante evaluations and other procedural instruments, such as SEA and EIA, to create a holistic approach to biodiversity proofing and evaluations in general.

Partnership Agreements and Operational Programmes are subjected to the requirements of the SEA Directive. **Environmental Impact Assessment (EIA)** will apply in accordance with the EU Directive to all projects that can be expected to have a significant impact on the environment. Both SEA and EIA are important tools towards improved consideration of biodiversity in decision-making. The SWOT for SEA and EIA is shown in Box A2.6.

Box A2.6: for SEA and EIA

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • SEAs (for programmes) and EIAs (for projects) can help to mitigate negative impacts on biodiversity. • SEAs and EIAs can be applied one or several crucial stages of the policy and project cycle • Both tools effectively supports particularly relevant actors at different governance levels • The EIA Proposal COM (2012) 628 has improved requirements to consider biodiversity and ecosystem services. It also requires a better co-ordination with Appropriate Assessments. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • These tools require commitment to work appropriately. If they are perceived as an administrative exercise the quality of the output will suffer.
<p>Threats:</p> <ul style="list-style-type: none"> • SEAs can potentially be overshadowed by economic and social aims. Especially in relation to ex-ante evaluations it is important that SEA is given appropriate consideration. • EIAs and SEAs are procedural tools and if not conducted appropriately and to sufficient quality will not contribute to improved decision-making. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • To develop these instruments in parallel with other requirements (project selection criteria, monitoring, and indicators) to improve outcomes for biodiversity and reduce administrative burden as these tools would have already collected required information. • For the Commission to develop guidance on how to undertake SEAs and EIAs, with improved consideration of biodiversity issues and adapted to the stages of the Cohesion Policy cycle. • For EIA and SEA to also assess the positive impacts that biodiversity can have on the economy through ecosystem services and move away from the traditional approach of only focusing on mitigation.

The use of **selection criteria in the project application process** is important, as these could be used to reject projects that do not adequately address the environment. If the project does not sufficiently address or take account of the underlying environmental principles, such as those for biodiversity, the onus should be on the project to justify why it has chosen this approach. The SWOT for project selection criteria is shown in Box A2.7.

BOX A2.7: SWOT for project selection criteria.

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Project selection criteria for biodiversity friendly projects has a positive impact on biodiversity 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Tool is only applicable at certain scale • Does not work appropriately without a well-developed administrative support system. • Requires political will.
<p>Threats:</p> <ul style="list-style-type: none"> • Application of the tool is vulnerable to policy constraints and setting criteria for these can be difficult. 	<p>Opportunities:</p> <ul style="list-style-type: none"> • It is likely that climate change impacts become more prominent as a project selection criterion. Hence there is potential for a number of projects (linked to ecosystem services) to not only satisfy biodiversity selection criteria but also climate change selection criteria.

The Member States have to designate, for each Operational Programme, a national, regional or local public authority or body as **Managing Authority**. The Managing Authority bears the main responsibility for the effective and efficient implementation of the Funds and thus fulfils a substantial number of functions related to programme management and monitoring, financial management and controls as well as project selection. In order to review the implementation of the Operational Programmes and progress towards achieving its objectives Member States have to set up a **Monitoring Committee**, which is responsible for reviewing. The monitoring committee has to be composed of representatives of the managing authority and intermediate bodies and partners. The Commission participates in the work of the monitoring committee in an advisory capacity. The SWOT for Managing Authority and Monitoring Committee is shown in Box A2.8.

Box A2.8: SWOT for Managing Authority and Monitoring Committee.

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Managing Authorities and Monitoring Committees can have a role to play in several stages the Cohesion Policy cycle to improve the integration of biodiversity issues. • Managing Authorities and Monitoring Committees can support relevant actors at different governance levels 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Managing Authorities and Monitoring committees are only as good as their participants and the administrative structure and the procedures that support it.
<p>Threats:</p> <ul style="list-style-type: none"> • Set-up of Managing Authorities and Monitoring Committees can constitute of participants with a narrow focus on only economic growth. • A lack of administrative capacity to enable the full potential of the committee to be achieved 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Managing Authorities and Monitoring Committees have the potential to ensure that biodiversity are appropriately incorporated in project applications and that the procedural requirements are met. It is important to ensure that all participants of Managing Authorities and Monitoring Committee are aware of the opportunities that lie in biodiversity proofing and the instruments that can support it.

2.4 Stipulation of safeguards in place

There are a number of stages in the Cohesion Policy cycle where the impact on biodiversity ought to be considered and addressed. The appropriate use of Strategic Environmental Assessment (programming stage) and Environmental Impact Assessment (project stage) in Cohesion Policy are key instruments in this respect. For instance the study by EEA (2009) found that a key reason for the negative impacts of transport projects on biodiversity were a consequence of the inappropriate application of EIA for projects or SEA for transport corridors.

There is also a case for adapting the SEA and EIA Directives themselves in order to provide a framework for determining the likely biodiversity impacts of plans, programmes and projects and hence improve policy coherence. The issue is particularly relevant with regard to sectoral programmes and major projects in the energy and transport domains and further methodological guidance linked to EU Funds programmes would be helpful to managing authorities.

There is a need to move towards a better functioning monitoring and evaluation system and results oriented approach to Cohesion Policy as stated in the fifth report on Cohesion Policy (European Commission 2010). In this respect the use of environmental indicators during the programming (when environmental indicators are designed and geared to concrete objectives/targets) and during monitoring (when they are applied for the purpose of measuring performance) is essential. Environmental indicators could therefore be introduced more formally into the Cohesion Policy cycle in view of measuring environmental performance and require their application in annual implementation and strategic reports and evaluations.

SEA could also be used in a more holistic, comprehensive and co-ordinated manner, as the SEA can contribute to the development of indicators, project selection criteria, EIAs/other project assessments as well as contributing to the ex-post evaluations of the OPs, through the mandatory SEA monitoring. In addition the SEA can already be started as part of the ex-ante evaluations of the Partnership Agreements, as a safety net for the adequate incorporation of environmental impacts and benefits, which can then be further developed in the SEA of OPs.

While managing authorities assume the legal responsibility for ensuring compliance with the *acquis*, the Commission has to take this information into account when appraising projects. In order to assist with the assessment of compliance with the *acquis* of major water and waste projects, the Commission has developed checklists¹. Similar compliance checklists to those used for assessing the compliance of major waste and water projects could be extended to other major projects. 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 will Community policies and legislation (Hjerp et al 2011a).

2.5 Challenges to intervention

The lack of robust regulatory frameworks, biodiversity-conscious programming of expenditure programmes and the effective implementation of existing can be seen as some of the key reasons behind on-going biodiversity loss. Therefore, ensuring that the existing regulations are appropriately implemented and/or more specifically used to target the conservation of biodiversity, broader ecosystems and their services (e.g. EIA and SEA), is foreseen as an immediate priority for the future.

Furthermore, establishment of systems to monitor the interrelations between the status of and interrelationship between ecological and socio-economic systems (eg establishing EU / national

¹ European Commission, DG Environment, Checklist Water and Waste Major projects, 20/11/09, http://ec.europa.eu/regional_policy/sources/docoffic/working/doc/checklist_water_waste201109.xls

ecosystem accounts) would help to identify benefits related to well-functioning ecosystems (eg green infrastructure) and how these would be appropriately integrated into existing policies, e.g. Operational Programmes within the Cohesion Policy. However, this requires the incorporation of biodiversity and ecosystem service indicators that would inform decisions within all stages of the Cohesion Policy cycle and being interlinked.

Finally, an improved integration of biodiversity into the implementation of Cohesion Policy and/or national policies requires further information, awareness-raising and capacity building, both among the stakeholders and administrative bodies that contribute to the design and implementation of Cohesion Policy. These types of capacity building activities are also eligible for dedicated support from the Cohesion Policy funds.

In addition, a key challenge relates to administrative capacities and skills. In many Member States authorities do not have sufficient personnel trained in both administering Cohesion funds and environmental assessment tools. Lack of resources for co-financing means that absorption of relevant environmental funding is not always happening in a full manner. Moreover, another core governance problem is that the authorities in charge of protecting the environment and the authorities in charge of allocating resource use are different. This is most prominent in the case of water, where water abstraction rates and rights are often handled by other authorities than those charged with preserving the water environment, with potentially detrimental environmental impacts.

2.6 References

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3 ANNEX 3: GENERAL INFORMATION ON THE CONNECTING EUROPE FACILITY – ENERGY IN THE CONTEXT OF BIODIVERSITY

3.1 Principles and priorities of the funding instruments

3.1.1 General description and key instruments

Up until 2014 funding for energy infrastructure is specified within:

Decision no 1364/2006/EC of the European Parliament and Council (6 September 2006) laying down guidelines for trans-European energy networks (TEN-E) and repealing Decision No 96/391/EC and Decision No 1229/2003/EC.

At present the TEN-E primarily funds feasibility studies intended to promote and support the expansion of energy networks. Calls are published annually for proposals, providing on average funding of approximately €25 million per annum (European Commission, 2012). A budget of €155 million was allocated to this stream in the 2007-2013 budgeting period (European Commission, 2011a). Studies under the TEN-E are eligible for a grant of up to 50% of eligible costs, whereas projects in the field of energy would only receive 10%.

As of 2009 investments were also made, on a one off basis, to projects related to both electricity and gas infrastructure under the European Energy Programme for Recovery (EEPR). Established by Regulation (EC) No 663/2009², the EEPR was a response to the global financial crisis, this programme co-funded a selected portfolio of energy projects. By the end of 2010 approx. €360 million had been spent on electricity and gas infrastructure projects. An additional €143 million was made available for offshore wind projects and €193 million for carbon capture and storage projects (European Commission, 2011b). This funding was explicitly made available for the period 2009 and 2010. While not the focus of this analysis it provides useful context for the development of more active energy infrastructure development in the post 2013 period.

For the post 2013 period, i.e. 2014 to 2020, a proposal for funding energy infrastructure has been adopted by the European Commission under the auspices of the proposed Connecting Europe Facility funding regime (COM(2011)665):

Proposal for a Regulation of European Parliament and the Council on guidelines for trans-European energy infrastructure repealing Decision No 1394/2006/EC – 19.10.2011, COM(2011)658.

The eventual approval of the TEN-E regulation (COM(2011)658) could mark a significant change in the approach to the funding of energy infrastructure by the EU. Existing legislative proposals aim to open up additional EU funds to actually develop new infrastructure, primarily by co-financing priority projects through grants, project bonds or guarantees. It also proposes approaches to the streamlining of permitting for priority projects. Under current proposals for the CEF; €9.1 billion is earmarked for energy infrastructure projects; this would be the first time the EU would be co-financing the construction of large energy infrastructure from its regular budget (European Commission, 2011c).

² Regulation (EC) No 663/2009 of the European Parliament and of the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy, OJ L200/31, 31.7.2009 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:200:0031:0031:EN:PDF>

3.1.2 Current funding instruments

The current TEN-E guidelines (Decision No 1364/2006/EC) were adopted with the intention of creating a more open and competitive internal energy market aiding the implementation of Directives 2003/54/EC and 2003/55/EC regarding the need for common rules for the internal markets for electricity and gas respectively. It also responded to the need, subsequent to the accession of the EU 10, to extend the scope of Europe's energy networks. The Decision defines the nature and scope of Community action to establish trans-European energy networks specifying guidelines that cover the 'objectives, priorities and broad lines of action' by the Community in this field.

Amongst other things, the TEN-E funds feasibility studies were aimed at opening up priority energy networks in Europe. In 2012 the call for proposals stated that just over €21 million would be made available under the various funding streams. This would be focused on: promoting the diversification of energy sources and supply routes; reducing bottlenecks; encouraging the development of renewable energy sources; increasing underground storage capacity for natural gas; increasing capacities related to liquefied natural gas; encouraging the construction of high pressure gas pipelines to diversify natural gas supply in EU regions; and improving the flexibility of the gas network (European Commission, 2011d).

The TEN-E regulation is very much focused on the goal of securing a single market for energy in the EU and facilitating this through more open networks. Decision 1364/2006/EC sets out priorities for funding in the areas of electricity and gas networks focusing on the interoperability of networks, the opening up of energy networks for isolated regions and the diversification of energy supply, addressing specific bottlenecks in the system. Through TEN-E, the Community aimed to identify projects in the common interest, and create a more favourable context for the development of distribution networks.

3.1.3 Post-2013 funding instruments

In 2010 the European Commission adopted a Communication - Energy infrastructure priorities for 2020 and beyond - A Blueprint for an integrated European energy network (COM(2010)677, 17.11.2010). This was aimed at building energy infrastructure that could ensure not only the completion of the single market, but also the delivery of the 2020 goals of 20% reduction in greenhouse gas emissions, 20% of final energy consumption from renewable resources and energy efficiency gains of 20%. The delivery of this wider remit was deemed to 'require a step change in the way we plan, construct and operate our energy infrastructures and networks'. This led to the significant shift in approach to the funding of energy infrastructures under the Connecting Europe Facility and the proposed Regulation on guidelines for trans-European energy infrastructure (COM(2011)658) i.e. the expansion in funding to €9.1 billion in the 2014 to 2020 period and the emphasis on the more proactive promotion of energy infrastructure including utilising EU funds to co-finance construction and the streamlining of permitting for priority projects. The previous TEN-E approach, both in terms of scale of resources and operations, was deemed to have proven inadequate in light of the necessary 'paradigm shift to a low carbon energy system and hence the major evolution and investments needed in the energy infrastructures' (European Commission, 2011e). Post 2013 the fund would be managed centrally by an Executive Agency – the Agency for the Cooperation of Energy Regulators.

The proposed Regulation (COM(2011)658) identifies 12 trans-European priority corridors or areas covering electricity and gas networks as well as oil and CO₂ transport infrastructure. Based on these priority corridors Regional Groups would be brought together to identify Projects of Community Interest (PoCIs) PoCI development would be supported under the Proposals by: streamlining permit

granting for PoCIs and increasing public participation and acceptance for the implementation of such projects; facilitating the regulatory treatment of PoCIs by balancing benefits and risks across borders; and ensuring implementation of projects by providing necessary market based and direct EU financial support. Support would be focused around specific priority corridors/areas for energy infrastructure and in order to qualify as a PoCI would necessarily involve at least two Member States or have significant cross border impacts if located in the territory of only one Member State.

The Regional Groups would be responsible for the initial identification of the PoCIs. These 'Groups' would be composed of representatives of the Member States, national regulatory authorities, transmission system operators, project promoters, representatives of the Agency and the Commission. The group would then submit its list of proposed PoCIs to the Agency for gas and electricity related activities and to the Commission in relation to oil and carbon dioxide related infrastructure. In relation to the former, the Agency would then issue an opinion on the proposed lists of PoCIs considering their appropriateness in line with the criteria for selection of PoCIs set out in Article 4 of the proposed Regulation. The Commission would then adopt a Community wide list of PoCIs which would then need to be integrated into national infrastructure plans and regional investment plans. The Agency and Regional groups would be required to assess the implementation of relevant PoCIs with project promoters required to report annually on progress regarding implementation. Not later than 2017, the Commission would be required to issue a report on the implementation of PoCIs.

3.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

3.2.1 Potential current impact

Measure: Decision no 1364/2006/EC – guidelines for trans-European energy networks

Activities: The Decision sets out priorities for support under the TEN-E framework, with specific calls for proposals set out on a yearly basis. The focus is on supporting the coordination of the single market for electricity, more specifically by fostering networks for gas and electricity supply. The programme supports feasibility studies aimed at addressing bottlenecks that prevent progress, that increase capacity in specific areas or that develops storage facilities. To date, relatively limited funding has been available with the goal of facilitating the development of infrastructure, rather than funding the actual construction of infrastructure from EU budgets.

Impact: To date the direct impact of activities funded by the TEN-E programme on biodiversity is anticipated to have been limited. There has been no formal assessment of collective impacts. The current TEN-E programme has not directly support the construction of infrastructure to date, but has instead identified the mechanisms through which this might be achieved through feasibility studies. Moreover, the level of EU funding has been relatively limited in comparison to other streams. The current TEN-E Decision also specifically requires that developments and projects should 'comply with community law and international conventions on the environment'. The current Decision specifically states that, even as they attempt to speed up procedures for the completion of projects in the common interest, Member States 'should not prejudice the results of environmental impact assessments for projects, plans or programmes'. There are potentially significant biodiversity impacts associated with the expansion of energy infrastructure, but these are not specific to the TEN-E or directly a consequence of the type of funding currently provided for feasibility studies. Arguably if TEN-E sped up or increased the likelihood of infrastructure projects going ahead then it could contribute to such impacts. However, given the relatively heavy weighting of environmental

considerations in the review phase for project financing (see below re gap analysis) this should be considered as part of funded studies.

3.2.2 Potential future impact

Measure: Proposal for a Regulation on guidelines for trans-European energy infrastructure - COM(2011)658

Activities: As stated above, Proposal COM(2011)658 represent a substantial departure from the status quo in terms of the funding of energy infrastructure. Under the proposal the EU would now be responsible for co-financing the construction of projects in the common interest (PoCIs) and funding would be more significant than in the previous financing period.

The proposed Regulation proposes activities focused around priority corridors/areas for infrastructure development and then moves on to state the types of activities that would be funded. The proposed priority corridors/areas are as follows:

- priority corridors for electricity – North sea offshore grid, north-south electricity interconnections in Western Europe, north-south electricity interconnections in Central and Eastern Europe and the Baltic energy market interconnection plan;
- priority gas corridors – North-South gas interconnections in Western Europe, North-South gas interconnections in Central Eastern and South Eastern Europe, Southern gas corridor and Baltic energy market interconnection plan for gas;
- priority oil supply connections in Central Eastern Europe;
- smart grid deployment across all Member States;
- the development of electricity highways across all Member States; and
- the development of a cross border carbon dioxide network across all Member States.

In the electricity sector, infrastructure such as: high voltage overhead transmission lines; any physical equipment designed to allow the transport of electricity on high or extra high voltage levels; electricity storage facilities; monitoring or control equipment/installations; equipment/installations aimed at intelligent monitoring or management of electricity generation; transmission, distribution and consumption; would all be supported. For gas the types of infrastructure to be funded would include: transmission pipelines, underground storage, facilities for liquefied or compressed natural gas, and equipment/installations for the safe, secure and efficient operation of the system. Oil infrastructure would include: pipelines, pumping stations and storage facilities, protection, monitoring or control equipment. Finally for carbon dioxide infrastructure PoCIs could include pipelines, facilities for liquefaction and storage of carbon dioxide ahead of transport, and equipment/installations for the proper, secure and efficient operation of the system.

The PoCIs for a given priority corridor or area would be defined by regional committees made up of representatives from the relevant countries and regions. The PoCIs to be funded are not currently specified and would only be subsequent to the adoption of the Regulation. The first list of PoCIs is required to be adopted by 31 July 2013 based on the needs of each priority corridor by the regional groups.

Impact: The full nature of impacts will only become clear once the full list of PoCIs becomes available, providing detail of the specific areas, habitats and species likely to be affected by developments under the Regulation. It is, however, probable that the types of infrastructure projects proposed under the funding stream could have substantial impacts on biodiversity, particularly the development of extensive pipeline/powerline systems which can lead to habitat

fragmentation. Given the extensive areas the proposed activities cover the impacts could impact numerous habitats across Europe. The impact assessment associated with the proposal states that 'as regards the measures related to the Habitats Directive, the impact on the local flora and fauna of the regime of common European interest is expected to be relevant for only a very small subset of projects of common interest identified as possibly in conflict with Natura2000 areas, which are, however, crucial for the achievement of energy and climate policy objectives'. However, at this stage it is difficult to be more specific regarding the types of habitat to be impacted. Moreover, arguably the proposed funding regime is seeking to support the delivery of existing policy priorities and objectives; therefore, while it may accelerate development the delivery of existing commitments would require infrastructure development.

Importantly, when considering the impacts of the proposals, it should be noted that once selected, PoCIs will be subject to specific rules aimed at accelerating permit granting procedures and enhancing public participation. The proposed legislation states that PoCIs should be afforded the highest national significance possible and be treated as such in terms of permit granting. In addition, PoCIs should be given preferential treatment when it comes to the allocation of resources in the permitting processes and that environmental assessment procedures should be streamlined, without prejudicing obligations under EU law. To this end, the Commission will adopt guidance as to how to balance streamlining with 'adequate measures' and ensuring the coherent application of environmental assessment procedures under EU law for PoCIs. The proposal states that PoCIs could be considered to be in the 'overriding public interest' under Article 6.4 of the habitats Directive (92/43/EC) and Article 4(7) of the water framework Directive (2000/60/EC). Once the Habitats Directive is applied, this could mean that in the absence of alternatives (this would not be an alternative to the PoCI as this would already have been deemed a priority given PoCI status, but perhaps alternative routes for pipelines for example) the PoCI would be carried out despite potential impacts on a Natura site, but that the Member States involved would have to carry out all compensatory measures necessary to ensure the coherence of Natura 2000 is protected. In the case of the water framework Directive this would mean the Member State would not be in breach of the Directive were it to 'fail to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration of the status of a water body'. This is of particular importance when considering the development of hydro power, as this clause has presented a specific challenge for competent authorities in the permitting of such developments.

Under the permitting requirements of the proposed Regulation, each Member State would have to designate one national competent authority responsible for facilitating and coordinating the permit granting process for PoCIs. The competent authority would also need to publish a manual specifying the procedures required to grant permits, and in order to facilitate public participation. Additionally, project proponents would be subject to public consultation within three months of submission to the permit granting process and at least one consultation should have been completed prior to the application to the competent authority. In total the permitting process would be limited in length to a maximum of three years.

The impact assessment of the proposal for 2014 to 2020 states that the streamlining of permitting and public participation is required in order to expedite the construction of more energy infrastructure. Here we should emphasise the need to maintain the quality of environmental impact assessments in spite of this goal. The extent of impacts on biodiversity will therefore depend on how the process is streamlined and the quality of impact assessments and permitting under the process. In terms of identifying potential PoCIs in the context of the Habitats Directive, the accompanying impact assessment identified 20 potential projects as possibly in conflict with Natura 2000 areas. However, this is an assessment based on significant uncertainties and no detailed assessment of impacts has been completed at this stage.

3.3 Stipulation of safeguards in place

3.3.1 Gap analysis

What potential tools are in place to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

Within the current system under the proposed TEN-E regulation Article 6, paragraph 5 states that Member States should 'comply with community law and international conventions on the environment' even as they attempt to speed up procedures for the completion of projects in the common interest. It is specifically stated that the Decision should not prejudice the results of environmental impact assessments for projects, plans or programmes using both EIA and SEA. Within the 2012 call under TEN-E, applications will be judged partly based on 'environmental consequences'. These consequences are reflected in the expected impact of the project on nature, emissions, noise, and land use and in the measures to reduce or compensate any negative impacts. Within the weightings applied to the consideration of different criteria for proposals, consideration of environmental consequences is given one of the higher weights 15/100 with only the maturity of the project receiving a higher points weighting.

New proposals post 2013

The proposed Regulation states that its adoption should under no circumstances compromise on the high standards for the protection of the environment and public participation. Despite streamlining efforts for permitting, requirements for environmental impact assessment and appropriate requirements for compensation and mitigation are stated. Moreover, a key criterion for defining a PoCI is that it displays environmental viability, alongside economic and social viability. The exact definition and application process for environmental viability and the weighting it will be given by the different regional groups defining PoCIs is, however, as yet unclear. This would therefore, represent a significant issue to be resolved in order to secure effective consideration of the environment and specifically biodiversity under the programme.

There are specific gaps in terms of information needed in order to assess the full impacts of the proposals. Firstly the PoCIs have yet to be defined. More importantly, from a tools perspective key guidance on the streamlining of environmental assessment for PoCIs is yet to be developed and the relevant competent authorities per Member State defined. The nature of these decisions would likely significantly impact on the way in which biodiversity considerations are taken into account within the processes. A further gap is that there is no clarity within the proposals as to whether the PoCIs, once agreed, would be classified as a plan or programme and therefore collectively subject to SEA requirements. In theory the groups of PoCIs should be classified as plans for development, but this is not specified and the relationship with SEA is not explicit within the proposed Regulation. There is nothing in the SEA Directive³ that would suggest that a report setting out the location of PoCIs qualifies for assessment. The collective impacts associated with the development of the PoCIs are likely to be significantly different from those experienced by the individual projects. The limitations of project specific EIAs have been highlighted repeatedly in relation to for example pipeline or electricity transmission lines.

³ DIRECTIVE 2001/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, OJ L197, 21.7.2001

3.4 Challenges to intervention

The challenges in this area relate primarily to questions regarding the post 2013 period, given the expansion in the level of funding and intensity of development under the proposed Regulation on trans-European energy networks – 2014 to 2020. In this context a key challenge is the lack of clarity over the nature of the PoCIs, their coverage, extent and habitats upon which they might impact. There is the potential for PoCIs to have significant impacts on biodiversity, particularly those projects such as pipelines and power lines that might impact on sensitive habitats and/or act as barriers, fragmenting multiple habitats. Previous assessments of energy interconnections have also demonstrated a concentration of impacts for example around coastal areas and in coastal ecosystems. A clear risk factor is that not all the information is currently available in order to make a full assessment of the impacts on biodiversity of the activities proposed between 2014 and 2020. Nor does it appear that there will be a process to again collectively assess impact of the PoCIs under SEA rules for example. Without this there is a gap in terms of understanding the collective impact of the development of EU funding energy infrastructure projects. It will be important that this gap is filled with some form of strategic assessment conducted to understand the cumulative impact of the proposed projects, as well as their individual impacts. The lack of clarity over the collective assessment of impacts of PoCIs on biodiversity and the environment is compounded by the failure to include a review of impacts within the mid-term evaluation process at present. Under the proposed Regulation the Commission is required to report on the implementation of PoCIs by 2017. This review currently focuses on spending, assessing delays in development and their cause, length of permitting processes and sources of public opposition to PoCIs. Collective evaluation of the impacts of the projects at various stages of development has not yet been proposed. This seems to be a missed opportunity in relation to biodiversity proofing actions. Including a specific step related to biodiversity impacts at this stage would help orientate spending and understand the consequences of longer term EU funding activities. Although it should be noted that this should be additional to the development of some form of collective review/SEA process as specified above given that projects will already be underway and damaging activities potentially already undertaken.

A key political challenge, in the post 2013 period, will be ensuring the delivery of responsible development PoCIs given potential pressure towards development of such infrastructure to deliver other EU priorities for example the 2020 GHG mitigation and renewable energy targets. Depending on the nature of the competent authorities selected to oversee the development of PoCIs, there may be a lack of political will to take action that may be seen to be detrimental to delivering binding targets related to climate change. Within the documentation at present there is no mention of the impact that extensive energy infrastructure development may have on the resilience of the natural environment and biodiversity in terms of ability to adapt to climate change. This, combined with potential climate impacts associated with land use change, will be important considerations should the importance of biodiversity impacts be questioned.

At present it is stated in the impact assessment that, so long as the appropriate assessment clause remains intact in relation to Natura 2000 sites, the impacts on biodiversity of developments should be limited. It is vital that this remain the case during the political decision making process to approve the funding regime. Moreover, it should be clarified how the impact upon biodiversity outside Natura 2000 sites will be effectively assessed, in light of EU commitments to no-net-loss of biodiversity and halting biodiversity loss. A further critical stage will be the Commission's guidance on what is deemed acceptable environmental assessments under EU law to secure the way forward for PoCI permitting. The quality of EIAs and importantly any requirements for compensation or mitigation to protect biodiversity will be important in determining overall impact and the acceptability of PoCIs development from a biodiversity proofing perspective.

3.5 Best frame of action

3.5.1 Stages, levels and timeframes for intervention

Broadly speaking, opportunities for intervention should be based on the identification of potential impacts on biodiversity from the construction and use of energy infrastructure. This is particularly key given the potential conflict between biodiversity and the EU's energy policy objectives. The best frame of action for intervention should consider two distinct governance levels: intervention associated with higher level project selection criteria and the determination of overall governance structures, and that associated with actual project implementation and evaluation. The former set of biodiversity proofing entry points and the associated action items may relate more to decision makers, while the latter more to project developers. The potential for higher level programmatic intervention is outlined in Figure A3.1, and more specific project level intervention in Figure A3.2.

Figure A3.1: Entry points for biodiversity proofing in CEF for energy at the programmatic level

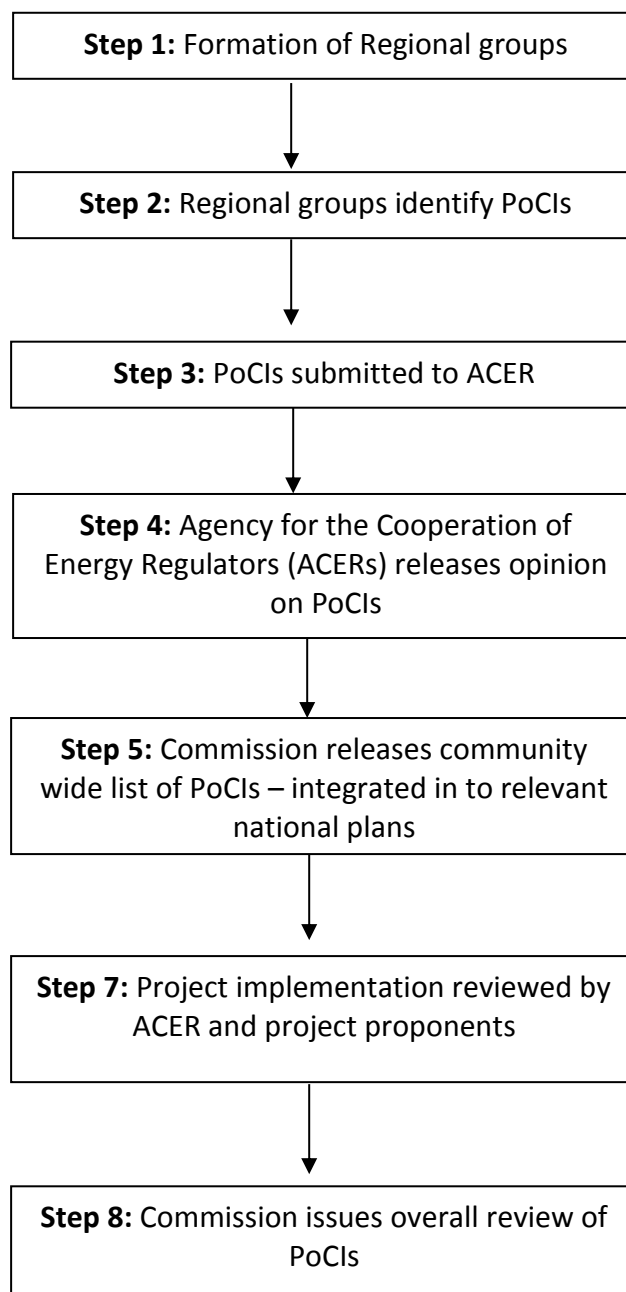
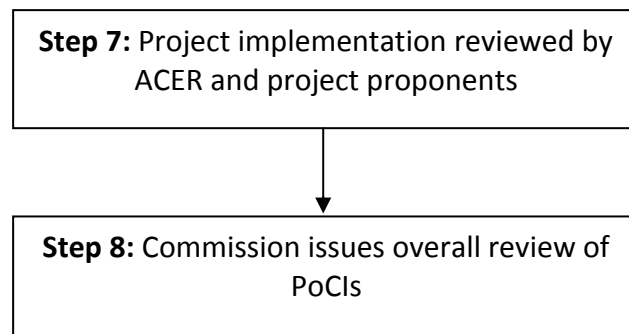


Figure A3.2: Entry points for biodiversity proofing in CEF for energy at the project level



More detail regarding the nature of these interventions is outlined in Part II. The two Regulations on the TEN-E Guidelines and on the Connecting Europe Facility will set the **strategic policy framework** for the use of the Connecting Europe Facility funds (for energy). The two Regulations need to be in place by the end of 2013 at the latest, as they will apply from 2014, but ideally sooner than this. These are:

- Proposal for a Regulation on guidelines for trans-European energy infrastructure - COM(2011)658
- Proposal for a Regulation establishing the Connecting Europe Facility (COM(2011) 665/3)

From the discussion in the previous section, the types of tools that could be used to biodiversity proof TEN-E expenditure, and thus be considered to be part of the “Best Frame of Action”, are listed in Table A3.1.

Table A3.1: Tools that should be part of the “Best Frame of Action” to biodiversity-proof CEF-Energy

Substantive:

- Retention of strong biodiversity requirements in the final versions of the **Regulations** on the revised TEN-E Guidelines and the CEF, which are currently being finalised by the Council and the Parliament. (Note that the public consultation related to the TEN-E Regulation and the proposed amendments to the CEF lead by DG ENER, ended October 4, 2012.) The need to integrate concepts such as “environmental viability” is evaluated in Box A4.1 below.
- Regulation should include more detailed monitoring and reporting requirements; member states could report biodiversity impacts on energy infrastructure on behalf of its project developers.
- **Biodiversity requirements** – priorities, objectives and criteria – to be integrated in to project selection criteria and in to the overall governance structure.
- The need for project applicants to demonstrate **compliance with EU environmental law**, supported by the relevant authorities in Member States, as part of the PoCI selection process. This is evaluated in Box A4.2 below.

Procedural:

- Assistance with **project preparation**, particularly in relation to biodiversity.
- Ensuring that biodiversity is represented as part of the overall project approval process, and that the appropriate concepts are considered by the ACER, and by the regional groups selecting projects.

Organisational:

- **Evaluation of project proposals** by DG Environment and external experts in relation to the potential impacts on biodiversity and measures taken to avoid, or if not mitigate and, at worst, compensate for these.
- Need for projects to **demonstrate compliance** with the EU environmental *acquis*.
- Assistance with **project preparation**.
- **Evaluation by DG Environment and external experts** of project proposals.
- Ex-ante and ex-post **programme evaluations** of the impacts of the TEN-E.

3.6 The opportunities and threats related to energy infrastructure in the context of funding biodiversity – a SWOT analysis

This section provides an overview of the TEN-E funding opportunities, and potential points for intervention as part of existing tools for biodiversity proofing. The strengths, weaknesses, opportunities and threats associated with this intervention are assessed.

The main existing tools that are used to biodiversity proof CEF - E expenditure are:

- Project selection requirements – criteria determining the viability of PoCIs and specifically the environmental viability, although this term has yet to be applied in the context of implemented projects (Box A3.1)
- The need for project applicants to demonstrate compliance with EU environmental law, which is supported by the Member States’ relevant authorities (Box A3.2).

The proposed Regulation states that a key criterion for defining a PoCI is that it displays environmental viability, along side economic and social viability. The exact definition of environmental viability and the weighting it will be given by the different regional groups defining PoCIs remains unclear. This would therefore, represent a significant issue to be resolved in order to secure effective consideration of the environment and specifically biodiversity under the TEN-E programme. There is a particular opportunity to integrate this consideration into the selection of regional groups which have yet to be identified. Member states leading for regional groups, in addition to the actual composition of these regional groups, remains unknown. The extent to which environmental viability would be prioritised over other considerations will become clearer with the solidification of the TEN-E governance structure as it relates to the identification of PoCIs.

Box A3.1: SWOT assessment of criteria determining the environmental viability of the PoCIs

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Environmental viability is clearly stated as key to determining the appropriateness of projects to be completed under the CEF-E. Logically, biodiversity considerations would be an important element in relation to this 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • While environmental viability is stated as a criteria for determining PoCIs this is only one of several considerations • The nature of what is considered to be an environmentally viable project has yet to be defined
<p>Threats:</p> <ul style="list-style-type: none"> • If there remains a lack of clarify over what is deemed environmental viability key issues related to biodiversity may be missed • Lack of clarity in terms of prioritizing environmental versus economic or social viability may lead to biodiversity considerations being overlooked • The uncertainty over representation from the different regional groups may lead to different effectiveness of environmental/biodiversity considerations across the range of PoCIs 	<p>Opportunities:</p> <ul style="list-style-type: none"> • There is a potential opportunity as part of the PoCI selection process, for setting out specific considerations as to what would be deemed environmentally viable from a biodiversity perspective. • The mixed representation on the regional groups determining PoCIs offers the opportunity to consider biodiversity from a number of angles, however, the effectiveness of this would depend on the representatives participating in the process, and specific member state mandates

The guidance for streamlining the process for environmental assessment of PoCIs is to be further developed. Setting out the precise details of such a streamlined process would consider appropriate compliance with EU laws. Each Member State would be required under the proposal to set out a competent authority to deal with project development and hence related environmental assessment issues. However, given that the CEF-E is still under development it is not clear whether the competent authorities will be put forward to deal with the PoCI process (ie the environmental regulator) versus a centralised planning authority or energy regulator. In the event that the PoCI process is managed by centralised planner authorities or energy regulators, there is a risk that biodiversity considerations may be overlooked.

As part of the Proposed TEN-E Regulation appropriate assessment requirements associated with the habitats Directive and EIA requirements would still apply to PoCIs. In cases where

PoCIs are implemented on Natura 2000 sites, the Impact Assessment associated with the Proposed Regulation considers the impact to be limited as long as the appropriate assessment is carried out. However, there is no explicit reference to the completion of an SEA type analysis for the collective impacts of a combination of PoCIs. This is important in determining compliance with the SEA Directive and understanding the cumulative impacts of the PoCIs given their location throughout member states, and across boundaries (this is particularly true for energy infrastructure projects which have the potential to impact different elements of the natural environment). The latter is likely to be of significant importance from a biodiversity perspective.

Box A3.2: SWOT assessment on the consideration of environmental assessment requirements of EU law within the PoCI approval process

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • The proposal states that environmental assessment within EU laws, specifically EIA and habitats Directive requirements should be complied with under the PoCI process. • Having a single competent authority responsible for developmental and environmental assessment issues should lead to the development of expertise in this field to ensure a quality process that is not overly bureaucratic 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • The Impact Assessment associated with the proposal was not able to fully assess impacts on biodiversity due to the uncertain nature of PoCI development • There is no provision at present for the consideration of cumulative impacts of PoCI development on biodiversity • The IA only considered impact on Natura 2000 sites rather than wider biodiversity footprints of PoCIs. This is a particularly important issues when considering cumulative impacts, particularly given that energy infrastructure has the potential to impact different elements of the natural environment
<p>Threats:</p> <ul style="list-style-type: none"> • The lack of clarity over the coverage of guidance means that the rigor of environmental assessment processes could be undermined for PoCIs • The lack of consideration of cumulative impacts associated with PoCIs represents a significant threat in terms of biodiversity. The threat posed by a specific PoCI may be limited but combined with activities across Europe could be significant in terms of impacts on specific species or habitats particularly in the broader environment, rather than specifically Natura 2000 sites 	<p>Opportunities:</p> <ul style="list-style-type: none"> • The fact that the CEF and TEN-E Guidelines are only at the proposal stage means that there is an opportunity to include more effective references to the review of the cumulative impacts of PoCIs in relation to the environment and biodiversity in the final Regulation. • The development of guidance offers further opportunity to consider how best to conduct an SEA style assessment of cumulative impacts in the context of PoCI development • The need to integrate biodiversity in to PoCI development with respect to either an appointed centralised authority, energy regulatory or even competent authority. The determination of the governance structure offers an opportunity to incorporate the issue

3.7 Conclusions for best frame of action

On the basis of the analysis of the previous section, an ideal frame of actions for biodiversity proofing the expenditure under the TEN-E/CEF is listed in Table A3.2

Table A3.2: Best Frame of Action for biodiversity-proofing under the TEN-E/CEF

Substantive:	Considerations and limiting factors
<ul style="list-style-type: none"> • Council and Parliament ensure that a strong statement with respect to biodiversity within the Regulations on the TEN-E Guidelines and the CEF. Specific monitoring and reporting requirements for biodiversity should be included. 	<ul style="list-style-type: none"> • As this process is on-going, and there will be other considerations at play, it remains to be seen whether the relevant articles will be strengthened (or weakened) compared to those proposed by the Commission, or by stakeholders contributing to the public consultation process lead by DG ENER which ended October 4.
<ul style="list-style-type: none"> • Project selection criteria should consider biodiversity. 	<ul style="list-style-type: none"> • This is likely to prove challenging given the diverse range of stakeholder interests as part of the overall approval process.
<ul style="list-style-type: none"> • Project applicants undertake the required environmental assessments in a way that protects biodiversity. 	<ul style="list-style-type: none"> • This depends on the legislation itself being sufficiently strong, and for Member States to have implemented and to enforce the legislation sufficiently strongly.
Procedural:	
<ul style="list-style-type: none"> • Integration of biodiversity into the project selection process, and as part of the representation of governing bodies. 	<ul style="list-style-type: none"> • This is likely to prove challenging given the diverse range of stakeholder interests as part of the overall approval process.
<ul style="list-style-type: none"> • Assistance could be provided to projects to ensure that they are developed in a way that effectively protects biodiversity and that avoids, mitigates or compensates negative environmental impacts. 	<ul style="list-style-type: none"> • Projects might be identified, or targeted, on the basis of an assessment of their potential risk to biodiversity (e.g. on the basis of the ex-ante evaluation).
<ul style="list-style-type: none"> • The potential of adverse biodiversity impacts should be assessed in the ex-ante evaluation of the TEN programme (for both transport and energy). 	<ul style="list-style-type: none"> • The ex-ante evaluation should inform project assistance, evaluation and monitoring. The actual impacts should be assessed (as far as is possible in a meaningful manner) in mid-term and ex-post programme evaluations.
Organisational:	
<ul style="list-style-type: none"> • DG Environment could contribute to the evaluation of projects that have been identified as having the greatest potential for adverse impacts on biodiversity irrespective of their budget. This could be targeted at core network corridors or projects identified in the ex-ante evaluation as being at risk of significantly affecting biodiversity. 	<ul style="list-style-type: none"> • The wider use of biodiversity experts and stakeholders at various stages of the policy cycle, including evaluation, would help to increase capacity.
<ul style="list-style-type: none"> • The burden of proof that funded projects do not cause damage to biodiversity, or have introduced appropriate mitigation or compensatory measures, should be placed on project promoters. 	<ul style="list-style-type: none"> • This will depend largely on any new definition of environmental viability.

Stakeholders are involved in national monitoring networks in order to monitor and report any apparent breaches of the respective legislation to the Commission. Again, this could be undertaken in a targeted manner, as noted above with respect to project assistance and individual project evaluation.

3.8 References

European Commission (2011a) Proposal for a Regulation of European Parliament and the Council on guidelines for trans-European energy infrastructure repealing Decision No 1394/2006/EC COM(2011)658

European Commission (2011b) Report from the Commission to the Council and the European Parliament on the implementation of the European Energy Programme for Recovery, COM(2011)217, see: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0217:FIN:EN:PDF>

European Commission (2011c) The Commission's energy infrastructure package, Press Release MEMO/11/710, 19/10/2011, see: <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/11/710&format=HTML&aged=0&language=EN&guiLanguage=en>

European Commission (2011d) Call for proposals concerning projects of common interest in the field of trans-European energy networks Call TEN Energy 2012, see: http://ec.europa.eu/energy/infrastructure/grants/doc/2012/2012_ten_e_call.pdf

European Commission (2011e) Commission Staff Working Paper - Impact assessment, Accompanying the document on a proposal for a Regulation of the European Parliament and of the Council on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC, SEC(2011) 1233

European Commission (2012) Website on regarding Energy Infrastructure http://ec.europa.eu/energy/infrastructure/index_en.htm

4 ANNEX 4: GENERAL INFORMATION ON THE CONNECTING EUROPE FACILITY – TRANSPORT IN THE CONTEXT OF BIODIVERSITY

4.1 Principles and priorities of the funding instruments

4.1.1 General description and key instruments

Currently, the main piece of legislation that sets the framework for the trans-European transport (TEN-T) network is: “Decision 661/2010/EU on Union guidelines for the development of the trans-European transport network”.

For the forthcoming 2014-2020 period, it is proposed that these guidelines are replaced by those set out in: “Proposal for a Regulation on Union guidelines for the development of the trans-European transport network (COM(2011) 650/2)”.

The current guidelines set out the objectives and priorities for the TEN-T, including a set of “projects of common interest” that should contribute to the development of the network. These are effectively a general reference framework to “encourage” Member States, and the EU where appropriate, to take forward the projects of common interest, as well as to facilitate the involvement of the private sector. The proposed guidelines would establish a framework for the development of the TEN-T network within which projects of common interest and of mutual interest are identified. They also set out proposed requirements to be respected by those managing the infrastructure in the network, priorities for the development of the network, and measures for the implementation of the TEN-T. The proposed Guidelines explicitly identify a core transport network, supported by a comprehensive transport network. This should enable the better prioritisation of projects of European priority, and would also be relevant for the prioritisation of projects to be financed by €10 billion earmarked from the Cohesion Fund (see below). An important change is that the proposed guidelines would take the form of a Regulation, rather than a Decision, hence they are stronger as they would be directly binding on those involved.

4.1.2 Current funding instruments

The current funding measure for the TEN-T network is: “Regulation (EC) No 680/2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks”.

The current TEN-T budget is €8,013 billion and it is managed centrally. The Commission (DG MOVE) sets the policy framework, while the TEN-T Executive Agency (TEN-TEA), which is also part of the Commission, is responsible for the day-to-day management of the budget. The TEN-TEA issues regular calls for funding to which applicants, which can be central government departments, relevant agencies, etc, apply for resources to co-finance studies or works linked to the TEN-T.

Due to a funding gap in the current programming period the TEN-T network has not been developed as quickly as had been hoped. Attempts have been made, which have not been too successful to date, to encourage and promote private sector involvement in the financing of the TEN-T, notably through the Loan Guarantee Instrument for Trans-European Transport Network Projects (LGTT), which was launched in 2008. This has a budget of €1 billion, half of which comes from the EIB with the remainder coming from the TEN-T budget. In 2012-13, EU project bonds will be applied in a pilot phase. These are funded from the LGTT budget and aim to broaden the range of private investors that might be interested in investing in the TEN-T (van Essen *et al*, 2012).

4.1.3 Post-2013 funding instruments

For the forthcoming 2014-2020 period, it is proposed that the current funding Regulation is replaced by the: “Proposal for a Regulation establishing the Connecting Europe Facility (COM(2011) 665/3)”.

The Connecting Europe Facility (CEF) would effectively replace the existing TEN-T budget. Under the proposal for the CEF, the management structure would remain similar to the existing framework, but a larger budget would be managed centrally. The new proposal would allocate €31.7 to transport, which includes the €10 billion from the Cohesion Fund that has been earmarked for transport. The proposed CEF is designed to fund projects on the core network that have the highest European added-value. The proposal to manage a larger budget centrally should improve the implementation of cross-border projects.

The current Regulation and the proposed Regulation define the “conditions, methods and procedures” for the granting of financial aid from the TEN-T budget and CEF, respectively, including the amount of funds in each budget. The CEF, working together with the proposed TEN-T Guidelines, aims to accelerate the development and completion of the TEN-T network with a focus on completing missing links and cross-border sections. It is proposed that the LGTT and EU project bonds are merged from 2014, in order to further stimulate the involvement of the private sector in financing the TEN-T. Calls for projects to be funded by the CEF would be launched centrally, so proposals would effectively compete against each other. Consequently, the funding would go to projects that are better developed, which should contribute to improved project preparation and improve the implementation of projects on the ground (van Essen *et al*, 2012).

4.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

4.2.1 Potential current impact

Measures: The TEN-T budget can be used to fund infrastructure, but the budget also funds many studies.

Activities: Infrastructure for all modes of transport – road, railways, inland water ports and ports, sea ports or airports – can be funded by the TEN-T budget. To date, around 40% of TEN-T projects have focused on rail⁴.

Impact: Neither the ex-ante nor the mid-term evaluations of the current TEN-T programme (Ecorys, 2007; SDG, 2011) considered, even in a qualitative manner, the potential or on-going impacts on any aspect of biodiversity of the development of the TEN-T network. However, work undertaken by NGOs has identified transport projects that have potentially adverse impacts on biodiversity, including some that pass through or near Natura 2000 sites (CEE Bankwatch Network, 2012). Other analysis has suggested that at least 8% of the Birds Directive’s Special Protection Areas and 4.4% of the Habitats Directive’s Sites of Community Interest are likely to be affected by the existing list of TEN-T priority projects (RSPB *et al*, 2008). Generally, the potential impacts on biodiversity and ecosystem services arise from the fact that the provision of infrastructure takes land which could be of environmental importance. This applies both to rural areas, where land might have an economic value (in terms of its relevance to agriculture or tourism) or a conservation or ecological value, and to urban areas where the availability of open or green spaces can contribute to a good quality of life. Infrastructure also adversely affects wildlife through its provision, use and proximity to areas of

⁴ http://tentea.ec.europa.eu/download/publications/agency_in_numbers_0611_final.pdf

conservation importance. Again, this applies to infrastructure for all modes of transport, although the type of impact will clearly vary between different modes. Factors such as the speed of travel and frequency of use of the infrastructure also influence the scale of the potential effect on biodiversity and wildlife.

4.2.2 Potential future impact

Measures: The CEF would focus on core, multi-modal core network corridors, particularly links of European added value, while the €10 billion from the Cohesion Funds would primarily fund the development of transport infrastructure in the new Member States.

Activities: As currently, but the focus will be on the core network corridors.

Impact: As above, it would be dependent on the location, design and level of use of the infrastructure. However, the fact that the proposed TEN-T guidelines and CEF are designed to speed up the rate of development of the TEN-T network clearly means that the potential for actual damage to biodiversity in the next programming period is real, unless action is taken to ensure that investments are biodiversity-proofed as thoroughly as possible.

4.3 Stipulation of safeguards in place

What **potential tools are in place** to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

Currently, there is no explicit mention of biodiversity in Decision 661/2010 and in Regulation 680/2007. However, Article 8 of Decision 661/2010 explicitly states that the environment must be taken account when projects are planned and carried out by carrying out an EIA (pursuant with Directive 85/337) and “by applying” the Habitats and Birds Directives. Additionally, Member States must carry out an environmental assessment of the plans and programmes “leading to such projects” in line with the SEA Directive. Other articles of the Decision explicitly state that the TEN-T network must have regard to the environment (Article 2(2)(a)) and that one of the priorities shall be the integration of environmental concerns into the design and implementation of the TEN-T (Article 5(b)). The Regulation explicitly states that *inter alia* environmental consequences shall be taken into account when deciding whether Community financial aid should be granted to a project (Article 5(4)(e)) and that the projects financed under the Regulation should be compatible with Community policies relating to *inter alia* the protection of the environment (Article 12).

The proposed Regulation on the future guidelines (COM(2011) 650/2) strengthens the wording in relation to the environment. For example, one of the objectives of the TEN-T is that it shall enable transport that *contributes to inter alia* environmental protection (Article 4(1)(b)). The proposed Article 7(4) would require that “all necessary measures” are taken to ensure that projects are compliant with Union legislation, including that on the environment. Furthermore, one of the nine priorities included in Article 10 states that when developing the network, particular consideration should be given to *inter alia* “improving or maintaining the quality of the infrastructure in terms of ... environmental performance”. Article 60 also states that actions under the Regulation shall be compatible with Union policies including *inter alia* the protection of the environment. Similarly, the article on environmental protection (Article 42) states that Member States (or other project promoters) shall undertake environmental assessments of plans and projects in line with the EIA, Habitats, Birds, SEA and Water Framework Directives “to avoid or, when not possible, mitigate or compensate or negative impacts on the environment, such as landscape fragmentation ... and to effectively protect biodiversity”.

The Impact Assessment of the proposed revision of the TEN-T Guidelines demonstrates, however, that the TEN-T network is already in compliance with the SEA Directive⁵. This has been achieved on the basis of submissions received from Member States. Each country has had to either:

- i) confirm that it is not obliged to carry out an SEA on the plans and programmes that contain the comprehensive TEN-T network on their territory, e.g. as these plans pre-date the requirement for an SEA;
- ii) if an SEA has been undertaken, provide a summary of the procedure, including alternatives considered, consultations and results; or
- iii) if an SEA is on-going or yet to be undertaken, provide an explanation of how the application of SEA will be ensured.

The relevant documentation has been submitted to the Commission by every Member State and has been evaluated in cooperation with DG Environment. Hence, projects that deliver part of the TEN-T network will already be in compliance with the SEA Directive.

The proposed CEF Regulation (COM(2011) 665/3) states that the Facility shall “contribute to smart, sustainable and inclusive growth by developing modern and high performing trans-European networks”. For transport, the CEF shall support “projects of common interest” and aim to *inter alia* ensure “sustainable and efficient transport in the long run”, noting that this objective should be measured by the length of the conventional and high speed rail network⁶. The reference to “sustainable ... growth” echoes the Europe 2020 strategy, which states that sustainable growth means building a resource efficient, sustainable and competitive economy that will help the EU “prosper in a low carbon, resource-constrained world while preventing environmental degradation, biodiversity loss and unsustainable use of resources”. In this context, the Commission will work to establish a vision of the changes required to achieve an economy that “will allow the EU to achieve its emissions reduction and biodiversity targets”⁷. Hence, the CEF should contribute to the development of an economy that enables the EU *inter alia* to meet its biodiversity targets.

The projects to be funded by the earmarked €10 billion of the Cohesion Fund will be subject to the proposed *ex-ante* conditionalities of the Cohesion Policy proposals, which will potentially improve the consideration of the environment in infrastructure development (see Cohesion Policy in Annex 2). The preamble to the proposed TEN-T Guidelines Regulation states that Member States “should take into account” these conditionalities when developing the TEN-T⁸. For example, if a Member State hopes to receive funds under the sustainable transport thematic objective, it would have to have a comprehensive national transport plan in place that takes account of mobility, sustainability and greenhouse gas reductions, as well as prioritising investments in the core TEN-T network. This transport plan would also have to have been subject to an SEA⁹.

As noted above, the TEN T Executive Agency issues regular calls for proposals for funding from the TEN-T budget. In the Guide for applicants accompanying the 2011 call, environmental considerations were included under both the **eligibility and award criteria**, as follows:

⁵ See Annex IV of European Commission (2011) Impact Assessment accompanying the Proposal for a Regulation on Union Guidelines for the development of the trans-European transport network, Commission Staff Working Paper, SEC(2011) 1212/2, 19.12.2011 (revised version; original from 19.10.2011 replaced), Brussels.

⁶ See respectively, Articles 3(a) and 4(1)(a)(ii) of COM(2011) 665/3

⁷ European Commission (2010) Europe 2020: A Strategy for smart, sustainable and inclusive growth, Communication from the Commission, COM(2010) 2020, 3.3.2010, Brussels; quotes are from page 12 and the box on page 14.

⁸ See recital 30 of COM(2011) 650/2

⁹ See Annex IV of COM (2011) 615

- One of the “General conditions for the eligibility of projects” was that the granting of financial aid is conditional on compliance with relevant Union law. The EIA, SEA, Habitats and Birds Directives were all explicitly mentioned in this respect. “All construction activities and studies implying physical interventions” had to demonstrate their compatibility with EU policy on the environment. On the application form, applicants had to list the environmental and nature conservation bodies that have been consulted and include summaries of any EIA, SEA and assessments under Article 6(3) of the Habitats Directive.
- One of the four award criteria was “impact”, which included the impact on the environment. Of particular relevance in this respect, was whether the action to be funded had, in the case of possible negative environmental effects, “foreseen adequate measures of prevention, monitoring and mitigation” (TEN-TEA, 2011).

Once all the applications have been evaluated, a list of proposals recommended for funding is drawn up. DG Environment is consulted on this list as part of an inter-service consultation. In addition to the call-specific applicants guide discussed above, there is also currently a general “Guide to TEN-T and key environmental legislation” (European Commission, 2007). This provides a “short outline” of the SEA, EIA, Habitats, Birds and Water Framework Directives. The guidance refers to Article 8 of the current TEN-T Guidelines (see above) and provides an overview of the mechanisms that should be used in applying the Directives to the TEN-T. This essentially lists the steps required by the respective Directives in relation to applying their provisions. As noted above, the application forms require applicants to provide summaries of these assessments.

4.4 Best Frame of Action

4.4.1 Stages, levels and timeframes for intervention

An overview of the stages of the programme and project cycle with respect to the TEN-T/CEF is provided in Figure A4.1 and Figure A4.2. The main strategic elements that will inform the way in which TEN-T projects are funded under the Connecting Europe Facility are the:

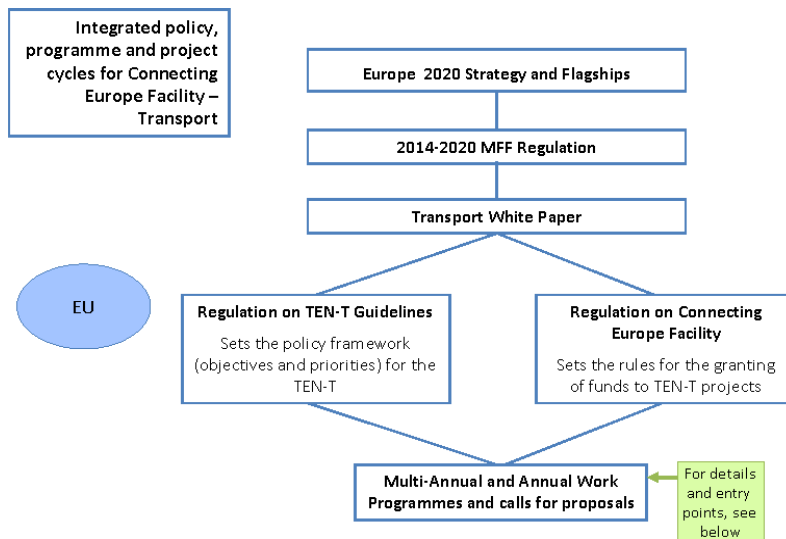
- Proposal for a Regulation on Union guidelines for the development of the trans-European transport network (COM(2011) 650/2); and
- Proposal for a Regulation establishing the Connecting Europe Facility (COM(2011) 665/3)

DG MOVE is assisted by the TEN-T Executive Agency (TEN-TEA), which has responsibility for the day-to-management of the TEN-T budget and for delivering the respective Work Programmes (see below for more detail on these). The work of the TEN-TEA needs to be consistent with the respective Work Programmes, so many of the key entry points are external to the Agency, i.e. where other actors are involved, including the agreement on the respective Work Programmes.

Key stages for the intervention are:

- The on-going discussions on the final versions of the **relevant Regulations** that are currently being discussed by the Council and the Parliament.
- The annual (and multi-annual) drafting by the Commission of the relevant **Work Programmes**, including eligibility and selection criteria, the potential engagement with a wider group of stakeholders on the drafting of these Programmes, and the approval of these by the Member States.
- Need for projects to **demonstrate compliance** with the EU environmental *acquis*.
- Assistance with **project preparation**.
- **Evaluation by DG Environment and external experts** of project proposals.
- Inclusion of more detailed **monitoring requirements** for project promoters.
- Ex-ante and ex-post **programme evaluations** of the impacts of the TEN-T.

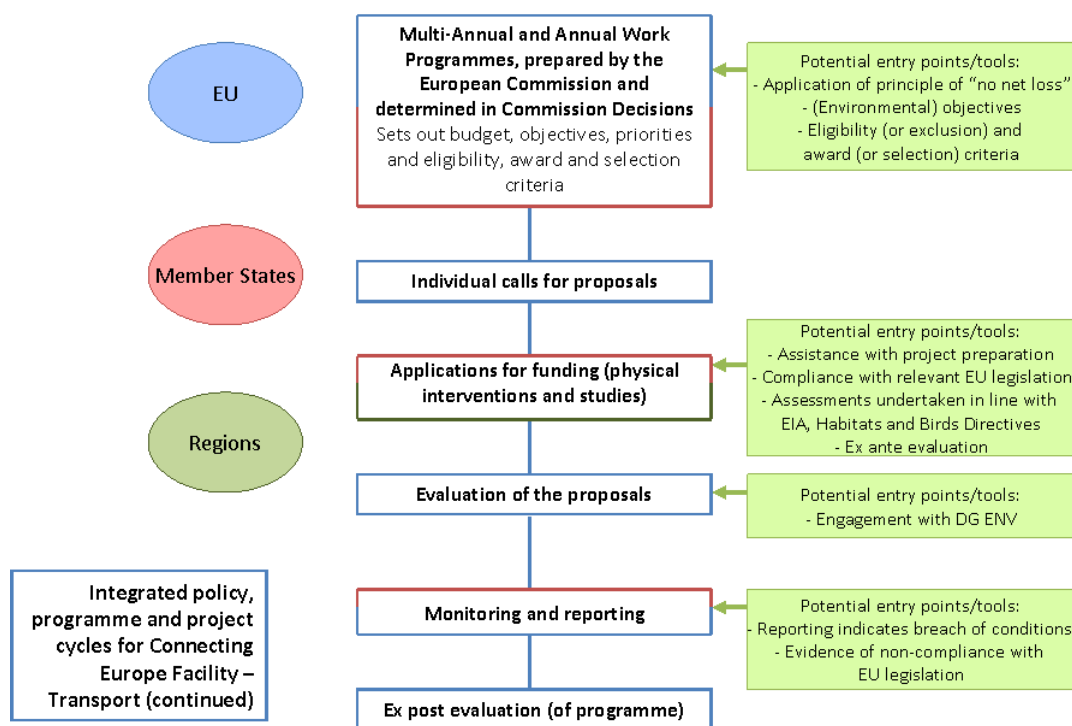
Figure A4.1: Governance of CEF for transport



The two Regulations on the TEN-T Guidelines and on the Connecting Europe Facility will set the **strategic policy framework** for the use of the Connecting Europe Facility funds (for transport). The two Regulations need to be in place by the end of 2013 at the latest, as they will apply from 2014, but ideally sooner than this (see Figure A4.1).

DG MOVE, with the assistance of the TEN-TEA, will be responsible for developing annual and multi-annual **Work Programmes** in line with the Regulations. Drafts of each Work Programme will be discussed with the Member States in the TEN-T Financial Assistance Committee; Member States have to approve each Work Programme on the basis of a qualified majority vote. Once approved, the Work Programme will be adopted by a Commission Decision. From the perspective of biodiversity considerations, the Commission could propose to include relevant provisions in a particular Work Programme, but in order for these to be included in the eventual Work Programme they would have to be approved by Member States (see Figure A4.2).

Figure A4.2: Entry points for biodiversity proofing in CEF for transport



Each Work Programme guides the work of the TEN-TEA for the respective time period. The TEN-TEA publishes **calls for proposals** on its website that aim to deliver, and have to be fully consistent with, the respective Work Programme. Generally one call a year is issued under any multi-annual or annual programme. There is no flexibility to include conditions not contained in the Work Programme. Hence, it is the **detail of the Work Programme that is important** in determining how biodiversity considerations are treated in each call.

Subsequent **applications for funding** have to be consistent with the call and demonstrate that all of the relevant conditions have been met. In this respect, proposals have to be compliant with *inter alia* EU environmental law, including the EIA, Habitats, Birds and Water Framework Directives, and to present the findings of the respective assessments. The TEN-TEA provides technical support to project promoters; under the CEF, it will be possible to assist applicants with the preparation of projects, including the necessary compliance with EU environmental legislation.

The **evaluation of the proposals** passes through a number of stages, including an evaluation by external experts, as well as an internal evaluation within the Commission that checks *inter alia* the eligibility of proposals including their compliance with EU environmental legislation. DG MOVE also consults other DGs, as well as the European Parliament and Member States via the TEN-T Financial Assistance Committee. All project proposals are shared with DG Environment prior to the external evaluation.

Once the projects to be funded have been selected, the Commission negotiates with the project’s promoter on the details of the funding, including the milestones that need to be met. These details are then included in a Commission Decision for each project selected. Project promoters are required to **report** on their progress with respect to meeting the milestones contained within the respective Decision. The implementation of the respective projects is the responsibility of the project promoter and the Commission does not have the capacity to **monitor** the implementation of each project. In order to monitor projects, the Commission is reliant on the information passed on to

it. However, if a breach of EU environmental legislation is brought to the Commission’s attention, which would in any case be a breach of the project’s eligibility requirements, the Commission would investigate.

No systematic **evaluation** of each project is undertaken, as the Commission does not have the capacity to do this. Evaluations are undertaken at the programme level and at the level of the TEN-TEA. Spot checks are undertaken on selected projects.

From the discussion in the previous section, the main tools, by type of tool, that could be used to biodiversity proof TEN-T expenditure, and thus be considered to be part of the “Best Frame of Action”, are listed in Table A4.1.

Table A4.1: Tools that should be part of the “Best Frame of Action” to biodiversity-proof CEF-Transport

Tools that should be part of the “Best Frame of Action” to biodiversity-proof CEF-Transport
Substantive:
<ul style="list-style-type: none"> Retention of strong biodiversity requirements in the final versions of the Regulations on the revised TEN-T Guidelines and the CEF, which are currently being finalised by the Council and the Parliament. A summary SWOT of this tool is provided in Box A4.1 below.
<ul style="list-style-type: none"> Biodiversity requirements – priorities, objectives and criteria – to be included in the respective Work Programmes, including an engagement with biodiversity stakeholders. These can be proposed by the Commission, but would need to be agreed in comitology by Member States (by qualified majority; see Box A4.2 below).
<ul style="list-style-type: none"> The need for project applicants to demonstrate compliance with EU environmental law, which is supported by the Member States’ relevant authorities (see Box A4.3).
Procedural:
<ul style="list-style-type: none"> Assistance with project preparation, particularly in relation to biodiversity (Box A4.4.).
<ul style="list-style-type: none"> Evaluations of the programme from the perspective of their (potential and actual) impacts on biodiversity (Box A4.5.).
Organisational:
<ul style="list-style-type: none"> Evaluation of project proposals by DG Environment and external experts in relation to the potential impacts on biodiversity and measures taken to avoid, or if not mitigate and, at worst, compensate for these (Box A4.6.).
<ul style="list-style-type: none"> Inclusion of detailed monitoring requirements in relation <i>inter alia</i> to biodiversity on project promoters (Box A4.7.).

4.4.2 The opportunities and threats related to transport infrastructure in the context of funding biodiversity – a SWOT analysis

In the following we analyse the strengths, weaknesses, threats and opportunities for the seven main types of tool that could be considered to be part of the best frame of actions to biodiversity proof the future CEF in the context of transport.

The wording within the **Regulations** in relation to the environment in general, and to biodiversity in particular, is fundamentally important. These are still under development, so their eventual references to biodiversity are not yet certain. However, the proposed CEF Regulation states that the fund should contribute to sustainable growth, which echoes the Europe 2020 strategy that defines sustainable growth in terms of growth that delivers an economy that *inter alia* enables the EU to meet its biodiversity targets. The reference to “sustainable growth” in the draft CEF proposal is not supported by any further definition, such as the one contained in the Europe 2020 strategy, which

explicitly links sustainable growth to the protection of biodiversity. If such a reference were included in the final CEF Regulation, then the link between sustainable growth and biodiversity protection would be clearer.

In the proposed Regulation on the future TEN-T Guidelines, there are references to the need to protect the environment and to improve the environmental performance of transport, which go beyond current requirements. Additionally, the draft Regulation states that project promoters (including Member States) should undertake environmental assessments “to avoid, or when not possible, mitigate or compensate”, adverse environmental impacts “to effectively protect biodiversity”¹⁰. Retaining such wording in the Regulation is crucial for influencing the objectives, priorities and award criteria and selection criteria of the TEN-T programme.

Box A4.1: SWOT assessment of including strong biodiversity references in the final Regulations

Strengths vis-à-vis Biodiversity: Important that biodiversity is mentioned as high up as possible in policy framework	Weaknesses vis-à-vis Biodiversity: References will not be that specific, so will need subsequent interpretation
Threats: References to biodiversity could be diluted, or even removed altogether, in the course of discussions in the Council and Parliament	Opportunities: References could still be strengthened, if institutions are convinced of importance of biodiversity

Before any calls for projects can be issued, and therefore before any projects can be funded, the respective **Work Programmes** need to be developed. The inclusion of requirements in relation to biodiversity in a Work Programme would need to be initiated by the Commission (DG MOVE, with assistance from the TEN-TEA), but could only become part of the approved Work Programme with the support of Member States. The Commission could include an overarching biodiversity principle, such as that of “no net loss”, and/or set eligibility and/or award criteria based on a project’s impacts on biodiversity. For example, one of the four award criteria used in the 2011 call for proposals was “impact”, which includes impact on the environment. Additionally, there is stronger wording in the proposed Regulation on the future TEN-T Guidelines in relation to the environment and biodiversity (see above). These statements could be translated into relatively strong requirements with respect to biodiversity in the respective Work Programmes.

The Commission can initiate the inclusion of additional requirements for biodiversity in a draft Work Programme, but these could only become a part of the approved Work Programme with the support of (a qualified majority of) Member States in the TEN-T Financial Assistance Committee. Therefore, the Commission would have to make a strong case to Member States in order to ensure that such requirements are maintained in the approved Programme. If such requirements were included in a Work Programme, a challenge would be to operationalise these in a way that could be undertaken in a clear and consistent manner across all of the Member States. In this respect, including biodiversity requirements that are not otherwise a legal requirement – particularly a principle of no net loss – could prove to be a challenge, although work to better define these principles is ongoing.

An opportunity might be to test the application of the principle of no net loss – or other relevant biodiversity requirements – under a particular annual call or priority. Additionally, given that in many Member States baseline information on biodiversity is not available, a particular call could fund studies that fill these biodiversity knowledge gaps, thus ensuring that the future development of TEN-T infrastructure does not adversely impact on biodiversity. However, as with the inclusion of

¹⁰ Article 52 of COM(2011) 650/2

any other biodiversity-related requirements in the Work Programme, whether this is possible will depend on the final wording of the Regulations and the wording, as approved by Member States, of any relevant Work Programme.

Finally, a means of ensuring that Work Programmes take more account of biodiversity might be to include a wider group of stakeholders in the process of approving the Work Programmes. As noted above, approval of each Work Programme currently has to be given by Member States in the TEN-T Financial Assistance Committee. If other actors, including those with biodiversity expertise, were also involved in the approval of the respective Work Programmes, it might be possible to increase the priority given to biodiversity to ensure that the TEN-T avoids, or at least mitigates, or at worst compensates, for any adverse impact on biodiversity.

Box A4.2: SWOT assessment of including requirements in Work Programmes

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Work Programme is an important entry point in influencing projects • Any biodiversity requirements included would apply to all projects subsequently funded under the Work Programme • Ensures that requirements would be consistent across projects • Increases attention paid to biodiversity • Wider engagement in development of each Work Programme should ensure that wider range of objectives is met. 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Some Member States might see additional biodiversity requirements as a barrier to accessing EU funds • Would need to determine how applicants should comply with additional biodiversity requirements • Difficult to ensure consistent application; potential for disputes
<p>Threats:</p> <ul style="list-style-type: none"> • Member States need to agree to inclusion of biodiversity-specific requirements in Work Programmes • Would rely to some extent on capacities and understanding of the requirements in the respective Member States 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Inclusion of such requirements in one Work Programme would set a precedent • Inclusion of biodiversity requirements would contribute to awareness raising and capacity building • Could use a particular Work Programme to test the principle of including biodiversity considerations

When preparing their project applications, the onus is on the project applicants to demonstrate **compliance with EU environmental legislation**. This is clearly both a strength and a weakness, as whilst the applicant has the best knowledge of their project, they are attempting to gain the financial support and so wish to give a positive assessment. The authorities in the respective Member State play an important role, as the applicant needs their support for the application and in some cases confirmation that there will be no adverse impact. This relies on these authorities having sufficient resources to perform this role. It also relies indirectly on the Commission – particularly DG Environment – ensuring that the Member States have properly implemented and are properly enforcing the respective environmental legislation. In this respect, it is important to address the weaknesses of the respective pieces of EU environmental legislation, such as the EIA Directive and Article 6 of the Habitats Directive, as this will bring benefits to the way in which the TEN-T projects are implemented.

Box A4.3: SWOT assessment of the need to demonstrate compliance with EU legislation

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Legally consistent and therefore relatively easy to enforce • Relies on those with the best knowledge of the project 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Relies on applicants' presentation of the results of the respective assessments • Assumes that relevant national authorities have capacity to review the applications sufficiently prior to completing respective declarations • Relies on Member States' implementation of the relevant Directives
<p>Threats:</p> <ul style="list-style-type: none"> • Existing issues with capacity and expertise applies to Member States' implementation and enforcement of respective EU environmental legislation 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Identify weaknesses of existing legislation and propose actions to amend these

The TEN-TEA provides technical support and guidance to project promoters for specific calls, which includes, for example, compliance with EU legislation; under the CEF it will be possible to **assist applicants with the preparation of projects**. Such assistance with project preparation is already available under Cohesion Policy: Joint Assistance to Support Projects in the European Regions (JASPERS) provides targeted specialist technical support to assist with the preparation of projects in the EU-12 (van Essen *et al*, 2012). Hence, the projects funded by the €10 billion of Cohesion Funds that will be earmarked for the TEN-T (and managed by the TEN-TEA) would be eligible for such support.

Hence, there appears to be a greater opportunity in the 2014-2020 period to support applicants with the preparation of their project applications whether under the CEF or through JASPERS. However, while such support could include compliance with EU environmental legislation, the focus of such assistance is more likely to be on increasing the absorption of funds, i.e. making sure that the funds are used, rather than on improving their environmental performance. An additional challenge in this respect is that the approach is self-selecting in that project promoters will seek support, rather than support being given to all projects, which it is clearly not possible to do. Hence, an approach would have to be focused on encouraging those applicants who would benefit most from such support in relation to biodiversity to seek it. This could be undertaken at the European level, e.g. Commission events and targeted publicity, and at the national level, e.g. from the biodiversity perspective ensuring that relevant national actors are aware of the potential support. The important element for the Commission in this respect would be to ensure that as many of the projects that would benefit from assistance (from the perspective of compliance with EU environmental legislation) with the development of their respective applications receive such assistance. Evaluating the potential and actual impact on biodiversity as part of the ex-ante and ex-post programme evaluations (see below) could help to identify those core network corridors in which projects could put biodiversity most at risk, and thus target assistance with project development with respect to biodiversity.

Box A4.4: SWOT assessment of assistance with project preparation.

Strengths vis-à-vis Biodiversity: <ul style="list-style-type: none">• Would lead to biodiversity considerations being taken account of early in the process.	Weaknesses vis-à-vis Biodiversity: <ul style="list-style-type: none">• Biodiversity is only one of several environmental (and wider) issues on which project applicants might benefit from, or seek, support.• Approach is self-selecting as projects need to seek support.• Ultimate impact on biodiversity is still linked to proper implementation, so does not guarantee biodiversity-proofed investment.
Threats: <ul style="list-style-type: none">• Support is likely to be targeted at increasing absorption of funds.	Opportunities: <ul style="list-style-type: none">• Will increase the awareness of the potential biodiversity impacts.

Evaluations of the programme as a whole are undertaken, as is one of the TEN-TEA itself, but recent evaluations of the TEN-T programme, such as Ecorys (2007) and SDG (2011), did not even consider biodiversity in a qualitative manner. This is clearly a missed opportunity to identify, and therefore potentially avoid, the impact of a significant expenditure programme (i.e. the CEF/TEN-T) on an important environmental issue for which the EU is missing its targets, and on which there is clearly the potential for a significant impact. However, the stronger wording on environment and biodiversity in the draft Regulation on the TEN-T Guidelines suggests that the Commission should require that these impacts be evaluated as part of any evaluation of the Programme.

Clearly with an evaluation of any programme (ex-ante, mid-term or ex-post) it is not possible to access comprehensively the impact on a specific environmental issue. However, the ex-ante evaluation should identify potential core network corridors and projects for which there are risks of significant adverse impacts on biodiversity (and other environmental areas). This would help to identify projects that could be targeted for assistance in their development (see above) and for individual evaluation and monitoring (see below). Mid-term and ex-post evaluations should then focus on the impact in the corridors and projects for which a risk of significant damage to biodiversity had been identified, which should also include engagement with relevant (biodiversity) stakeholders to ensure that impacts have been identified. Including biodiversity impacts in this way in the programme evaluations would also act as an important information and awareness raising tool.

Box A4.5: SWOT assessment of evaluation of the programmes.

Strengths vis-à-vis Biodiversity: <ul style="list-style-type: none">• Gives an important message to applicants that avoiding adverse biodiversity impacts is important.• Identifies potential projects that would benefit from assistance with respect to avoiding, mitigating, or at worst, compensating for any adverse biodiversity impacts (see above)• Identifies any projects that would benefit from targeted evaluation and monitoring (see below)	Weaknesses vis-à-vis Biodiversity: <ul style="list-style-type: none">• Does not directly affect the treatment of biodiversity in particular projects• Potentially requires more resources and would require more information
Threats: <ul style="list-style-type: none">• Would not necessarily be considered as important by some actors• Could be considered as a potential barrier by others, so could be resisted	Opportunities: <ul style="list-style-type: none">• Would increase awareness of the issues

Under the current programme, DG Environment is consulted on every TEN-T co-financed project and external experts are used to evaluate the proposals. The extent to which DG Environment can engage with the **evaluation of proposals** is dependent on their resources, as well as on their knowledge of the situation in the respective Member State. The latter applies with respect to both the knowledge of the implementation of relevant environmental legislation, and local knowledge about the area in which the project is taking place. Particularly with respect to the latter, it is not likely that DG Environment would have sufficient knowledge to know whether there might be particular issues in relation to a specific proposed project. In order to address this, the development of more dedicated resources to the monitoring of projects on the ground might be considered (see below). An alternative, or even complementary, approach might be the development of a more targeted approach to the engagement of DG Environment in the evaluation of individual project proposals. For example, if the ex-ante evaluation of the programme (or a separate report for DG Environment) were to identify the TEN-T developments that potentially have an adverse impact on biodiversity (or the environment more generally; see above), relevant projects could be subject to more in depth evaluation by DG Environment. Alternatively, external experts with knowledge of the potential biodiversity impacts of transport infrastructure could be used as part of the evaluation of relevant project proposals. If biodiversity requirements were included as part of the respective Work Programmes, as proposed above, then the use of such experts as part of the evaluation would be even more important in order to assess whether the appropriate mitigation measures have been taken where it was not possible to avoid biodiversity impacts, or, as a last result, the compensatory measures taken.

Box A4.6: SWOT assessment of engagement with DG Environment at the evaluation stage

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Brings biodiversity expertise to the evaluation of the applications for funding • Would help to target limited resources 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Lack of awareness in DG Environment of local knowledge to be able to undertake proper evaluation
<p>Threats:</p> <ul style="list-style-type: none"> • DG Environment has other calls on its limited resources 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Potential to develop more dedicated resources to ensuring that EU environmental legislation is properly implemented and enforced

Once it has received assurances from Member States that projects have been developed and will be implemented in accordance with EU law, the Commission does not currently undertake any further **monitoring of projects**, as long as their reporting against the milestones set out within the respective project Decision is satisfactory. The Commission currently relies on national actors to inform it of any issues that need to be investigated. However, given that each of the potential TEN-T projects will mobilise a significant amount of financing (much of which might come from the private sector if the revised policy framework works as is hoped), there is a strong argument that some of these resources should be dedicated to ensuring that the TEN-T infrastructure being constructed does not increase the risk that the EU fails to meet its biodiversity targets. If the burden of proof that damage to biodiversity had been avoided, or if not mitigated or at worst compensated, lay with project promoters, the monitoring of potential biodiversity impacts would be integrated into the project from the start. Indeed, if an EIA has been undertaken properly and if this EIA identified potential impacts on biodiversity, appropriate ex-post monitoring should be put in place as a matter of course. Hence, there should be no additional requirements on project promoters beyond that which should be undertaken anyway in the event of there being a potential risk to biodiversity. It would be a case being explicit and of making sure that this monitoring happens.

Such increased monitoring requirements for projects need not be applied to all TEN-T projects. For example, the identification of those corridors and potential projects that risk damaging biodiversity, as proposed above to be undertaken as part of the ex-ante assessment, could also be used to identify the projects that should be subject to stricter monitoring requirements from the perspective of biodiversity (see above).

Box A4.7: SWOT assessment of monitoring projects on the basis of information provided by national actors

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Relies on those closely involved with the project's implementation, or those who are affected by a project's implementation, i.e. those with the best knowledge of the project on the ground 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Relies on those who have a stake in the successful implementation of a project to report weaknesses or failures
<p>Threats:</p> <ul style="list-style-type: none"> • Such monitoring may not be undertaken, or reported, properly 	<p>Opportunities:</p> <ul style="list-style-type: none"> • An explicit identification of the need for monitoring biodiversity impacts on specific projects would increase the profile, and awareness, of the project's biodiversity impacts, which could stimulate interest in the results of the monitoring by third parties.

4.4.3 Conclusions for Best Frame of Action

On the basis of the analysis of the previous section, an ideal frame of actions for biodiversity proofing the expenditure under the TEN-T/CEF is listed in Table A4.2.

Table A4.2 Best Frame of Action for biodiversity-proofing under the TEN-T/CEF

Best Frame of Action for biodiversity-proofing under the TEN-T/CEF	Considerations and limiting factors
Substantive:	
Council and Parliament ensure that a strong statement with respect to biodiversity within the Regulations on the TEN-T Guidelines and the CEF.	As this process is on-going, and there will be other considerations at play, it remains to be seen whether the relevant articles will be strengthened (or weakened) compared to those proposed by the Commission.
DG MOVE and Member States agree to include biodiversity-related requirements in the respective Work Programmes.	As noted above, this is likely to prove challenging for requirements that are not legally binding, but a strong case could be made by the Commission based on the wording of the Regulations and wider EU biodiversity targets.
Project applicants undertake the required environmental assessments in a way that protects biodiversity.	As noted above, this depends on the legislation itself being sufficiently strong, and for Member States to have implemented and to enforce the legislation sufficiently strongly.
Procedural:	
Assistance (under the CEF and JASPERS) could be provided to projects to ensure that they are developed in a way that, in the words of the draft TEN-T Regulation, effectively protects biodiversity and that avoids, mitigates or compensates negative environmental impacts.	Projects might be identified, or targeted, on the basis of an assessment of their potential risk to biodiversity (e.g. on the basis of the ex-ante evaluation).
As the draft TEN-T Guidelines contain stronger provisions with respect to biodiversity, the potential of adverse biodiversity impacts should be assessed in the ex-ante evaluation of the programme.	The ex-ante evaluation should inform project assistance, evaluation and monitoring. The actual impacts should be assessed (as far as is possible in a meaningful manner) in mid-term and ex-post programme evaluations.
Organisational:	
DG Environment contributes to the evaluation of projects that have been identified as having the greatest potential for adverse impacts on biodiversity irrespective of their budget. This could be targeted at those core network corridors or projects that were identified in the ex-ante evaluation as being at risk of significantly affecting biodiversity.	The wider use of biodiversity experts and stakeholders at various stages of the policy cycle, including evaluation, would help to increase capacity.
The burden of proof that funded projects do not cause damage to biodiversity, or have introduced appropriate mitigation or compensatory measures, should be placed on project promoters.	

4.5 References

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5 ANNEX 5: GENERAL INFORMATION ON MARITIME AND FISHERIES POLICY IN THE CONTEXT OF BIODIVERSITY

5.1 Principles and priorities of the funding instrument

5.1.1 General description and key instruments

The current main framework for managing the fisheries sector is provided by the Common Fisheries Policy (CFP) which covers most aspects of the fish production chain, from capture/farming through to landing, processing and marketing. It is structured into four 'pillars': conservation policy, structural policy, market policy and external policy. The objective of the CFP is to 'ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions' (Article 2, Regulation (EC) No 2371/2002). The EU has genuine core competencies in the field of Fisheries Policy since it is a Common Policy.

5.1.2 Current funding instruments

The European Fisheries Fund (EFF) supports the CFP setting the framework for the provision of public financial aid to the fisheries sector over the 2007–2013 period. It is established by Regulation (EC) No 1198/2006. The measures include restructuring support to the fishing industry, the processing and marketing of fish products, training activities and fisheries management initiatives. Since the EFF is a key implementing instrument of the CFP, it aims to contribute to attaining the objectives of the CFP, that is, to 'ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions' (Article 2, Regulation (EC) No 2371/2002).

The EFF is structured into five axes (note programmed funds):

1. Measures for the adaptation of the Community fishing fleet (k€1,215,945 28%)
 2. Aquaculture, inland fishing, processing and marketing of fishery and aquaculture products (k€1,237,354 29%)
 3. Measures of common interest (k€1,133,285, 26%)
 4. Sustainable development of fisheries areas (k€572,607, 13%)
 5. Technical Assistance (k€145,595, 3%)
- (Total funds programmed across all five Axes: k€4,304,787)

Governance

Funding is allocated using multi-annual programmes:

- National Strategic Plan (NSP): As their names suggest, NSPs are national plans that present an overall strategic vision with regard to the medium-term development policy of the fisheries and aquaculture sector in the Member States. They are developed by the Member States and should contain a summary description of all aspects of the CFP, set out the priorities, objectives, estimated public funding and deadlines for implementation. Among several areas to be covered, the management of fishing effort and capacity is an area that should receive particular attention. Member States are required to organize a consultation on the NSP and they are to be 'the subject of a dialogue between the Member State and the Commission'.
- National Operational Programme (OP): OPs set the framework for expenditure. Each Member State should submit to the Commission an OP, setting out the priorities, objectives and indicators, and the principal measures to be funded in order to meet the priorities. Once again, these are to be produced in close consultation with the partners. An ex-ante evaluation is to be undertaken for each OP, to ensure it is consistent with the national plan and to determine impacts. Within two months of being submitted, the Commission is to evaluate the OPs, although there is no explicit basis on which the Commission can reject an OP.

Each year the Member State managing authorities must send the Commission an annual report. The Commission summarizes these reports in its own annual report which it sends to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions. The Member States must also send a final report on the implementation of the Operational Programme before 31 March 2017.

5.1.3 Post-2013 funding instruments

The European Maritime and Fisheries Fund (EMFF) (COM (2011)804), proposed by the Commission on 2 December 2011, will replace the existing EFF and a number of other instruments, and establish a financial framework for the CFP and the Integrated Maritime Policy (IMP) for the period 2014 to 2020. The EMFF aims to contribute to the achievement of the strategic objectives of the CFP and the IMP. It aims to promote sustainable and competitive fisheries and aquaculture; foster the development and implementation of the IMP, in a complementary manner to cohesion policy and to the CFP; promote balanced and inclusive territorial development of fisheries areas (including aquaculture and inland fisheries); and contribute to the implementation of the CFP.

The proposed EMFF budget amounts to €6.5 billion for the seven year period, to which €916 million will be added to finance external fisheries agreements and the compulsory contributions to regional fisheries management organisations. Of the €6.5 billion, €1 billion will be earmarked for the IMP, which leaves fisheries with a marginally greater budget at fixed value than what is available under the EFF (€4.3 billion).

The proposed EMFF is structured into four pillars:

- **Smart, Green Fisheries:** to foster the transition to sustainable fishing (towards maximum sustainable yield), which is more selective, produces fewer discards, and does less damage to marine ecosystems; and to provide support for innovation and added value, to help the industry remain competitive with third countries.
- **Smart, Green Aquaculture:** to achieve economically viable, competitive and green aquaculture, capable of facing global competition and providing EU consumers with healthy and high nutrition value products.
- **Sustainable and Inclusive Territorial Development:** to reverse the decline of many coastal and inland communities dependent on fishing, through adding more value to fishing and fishing related activities and through diversification to other sectors of the maritime economy.
- **Integrated Maritime Policy:** to support those cross cutting priorities which generate savings and growth but which Member States will not take forward themselves (e.g. marine knowledge, maritime spatial planning, integrated coastal zone management and integrated coastal surveillance, protection of the marine environment, and adaptation of coastal areas to climate change).

The EMFF proposal removes the support for scrapping vessels that was in the current EFF and which failed to reduce overcapacity in the period 2007-2012. The proposed EMFF provides support for Member States to implement systems of transferable fishing concessions (a measure under the CFP designed to bring fishing capacity in line with resources). It also introduces greater conditionality, so that financial assistance under the EMFF will be made conditional upon the compliance of Member States and operators with the objectives and rules of the CFP especially control obligations, the IUU Regulation and data collection obligations.

With respect to aquaculture, the EMFF aims to provide support for aquaculture providing environmental services, the conversion of conventional farms to organic aquaculture, and the promotion of aquaculture with a 'high level of environmental protection' (Article 52, COM(2011)804). The latter refers to investments aimed at improving water quality and water

efficiency, increasing energy efficiency, pond restoration (or 'de-silting'), and investments 'limiting the negative impact of aquaculture enterprises on nature or biodiversity'. At the same time, it will provide support for increasing the potential of aquaculture sites, encouraging new aquaculture farmers to set up enterprises, investments in new forms of aquaculture, namely off-shore and non-food aquaculture, and innovation, meaning developing and introducing improved products, processes and management systems, as well as introducing new knowledge to farms to reduce their impact on the environment.

5.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

5.2.1 Potential current impact

According to the European Commission, the CFP has failed to achieve its objectives of environmental, economic and social sustainability, despite progress since 2002 (European Commission, 2012). Some part of this failure can be attributed to CFP funding, because of problems linked to the design and delivery mechanism and by their lack of effectiveness in terms of content (SEC(2011) 1416 final; European Court of Auditors, 2011).

Measures and activities: EFF measures which are relevant to the biodiversity target can be sorted into two pools. There are those that are environmentally beneficial, principally the measures under Axis 4 of the fund and those under Axis 3 intended to protect and develop aquatic flora and fauna, and also certain measures to increase energy efficiency and gear selectivity. And there are those measures that have social or economic objectives and may inadvertently cause negative impacts on the natural environment. Although such measures are not intended to harm biodiversity, because of unintended consequences and loopholes in their design they may create perverse incentives, and either fail to reduce the capacity of the fleet or increase it, and thereby maintain fishing effort at unsustainable levels. For example, despite €1.7 billion spent on vessel decommissioning since 1994, actual fishing capacity has not decreased in most EU fleets (SEC(2011) 1416 final). Overcapacity is a key driver for overfishing and for low economic profitability. Equally, certain modernisation investments into the industry (catching, processing and aquaculture included) have been implemented without taking sufficient account of the balance between the size of EU fleet and the fishing opportunities and in some cases have resulted in modernisations which have increased the capacity to fish (European Court of Auditors, 2011). Likewise fuel tax exemptions and support for fuel costs have made a contribution by reducing costs, artificially increasing profits and thereby maintaining capacity at levels disproportionate to the available resources (notwithstanding the climate change impacts of fuel subsidies).

Impact: The impact of overexploitation of fisheries resources is well documented. In the North East Atlantic in 2011, 63 per cent of fish stocks were classified as overfished, and in the Mediterranean 87 per cent were overexploited (COM(2011)298 final). Scientists agree that continued unsustainable exploitation rates will result in the removal of many species from the marine ecosystem, starting with the larger fish species (termed 'fishing down the marine food web' see Pauly et al 1998, Pauly and Watson 2005).

5.2.2 Potential future impacts

Measures

Impacts: In terms of over exploitation of natural resources from capture fisheries, the EMFF does reduce the funds available for environmentally harmful activities, therefore it is expected that the capacity of the EU fleet will decrease, and be more in balance with the available resources. Whether this will lead to a significant decrease in fishing effort and activity is not clear, as the balance between capacity and resources is also dependent upon measures adopted under the new CFP. The impact assessment for the EMFF proposal estimates that the fund could help to reduce discards by 40 to 70 per cent (SEC(2011) 1416 final). It also expects the fund to bring about small to medium improvements in terms of scientific advice and data coverage and quality. Most of the impact, however, would come from the strongest conditionality covering the ex EFF part, data collection and control. The aquaculture measures are designed to promote new forms of aquaculture and business establishment and increase the potential of aquaculture sites. It should be expected that aquaculture production will increase, and although some of these farms may be more environmentally conscious, the question is whether these mitigation measures will be sufficient to achieve the environmental targets. Aquaculture can have a large and varied number of impacts on the marine environment, including sedimentation, chemical inputs, pathogen transmission, inter-breeding with wild organisms, introduction of alien species, and importantly, upstream or indirect ecosystem pressures. The extent to which these impacts will arise from the expansion of EU aquaculture will depend on so many factors that it is very difficult to estimate.

5.3 Stipulation of safeguards in place

What **potential tools are in place** to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

Under the EFF.....

- assistance supposed to be consistent with community policies (Art. 6)
- operations funded under the EFF shall not increase fishing effort (Art. 6.5)
- eg, Art. 25: Investments on board fishing vessels may concern improvements of safety on board, working conditions, hygiene, product quality, energy efficiency and selectivity, provided that it does not increase the ability of the vessels to catch fish. No aid shall be granted for the construction of fishing vessels nor for the increase of fishholds.
- Art. 28. Intervention in aquaculture production: MS shall ensure that adequate mechanisms exist to avoid counterproductive effects, particularly the risk of creating surplus production capacity or adversely affecting the policy for conservation of fishing resources.
- Stakeholder participation: MS should establish broad and effective involvement of all appropriate bodies, taking into account need to promote sustainable development through integration of environmental protection and enhancement; shall involve all partners in the different stages of programming (preparation, implementation, monitoring and evaluation of operational programmes); shall organise consultation on NSP; Ops shall be drawn up with close consultation with regional, local, economic and social partners in the fisheries sector as well as all other appropriate bodies (note: environmental organisations not explicitly mentioned, 'other appropriate bodies' is open to interpretation').
- MS submit a proposal for an OP to the Commission: Commission shall appraise proposed OP to determine if it meets the objectives, guiding principles (eg consistency with principles of the CFP,

especially balancing capacity with resources; enhancement of a harmonious, balanced and sustainable development of economic activities, jobs and human resources, as well as protection and the improvement of the environment; promotion of the operations contributing to the Gothenburg strategy and particularly those enhancing the environmental dimension in the fisheries sector). If the OP fails on these grounds the Commission may adapt it accordingly.

- OP covers 7 year period but can be revised for significant changes or difficulties
- Payment is suspended if national management and control systems fail

The basis on which the Commission can reject an OP is not really clear. Although the regulation contains many safeguards, they are insufficiently articulated and open to interpretation. For example, improvements to vessels may be funded provided they do not 'increase the ability to catch fish' – fishing ability or capacity is not defined.

Participative processes

Whilst some MS have strong regular representation from different stakeholder groups such as NGOs, Women's organisations and Environmental organisations through the Monitoring Committee, a number of MS are either lacking representatives from these types of stakeholder groups or these groups are under-represented in terms of the composition of the Monitoring Committee.

Under the upcoming EMFF there will be (in contrast to the EFF):

- Increased conditionality (in line with the Multi-annual Financial Framework Communication (COM(2011)500 – Part I)): Financial assistance under the EMFF will be made conditional upon the compliance of Member States and operators with the objectives and rules of the CFP especially control obligations, the IUU Regulation and data collection obligations. Ex-ante conditionality will apply to aquaculture requiring Member States to prepare multiannual strategic plans. Also conditionality of effective implementation and application of Union environmental legislation is ensured through implementation and application of the EIA and Sea Directives.
- Modernisation restrictions
 - Support shall not contribute to the replacement or modernisation of main or ancillary engines. Support shall only be granted to owners of fishing vessels and not more than once during the programming period for the same fishing vessel'.
 - Limiting impact of fishing on marine environment:
- support shall only be granted when the gear or other equipment has demonstrably better size-selection or lower impact on non-target species than the standard gear or other equipment permitted
 - Innovation linked to the conservation of marine biological resources:
 - Operations financed under this Article must be carried out in collaboration with a scientific or technical body recognised by the national law of each Member State which shall validate the results of such operations;
 - Operations consisting of testing new fishing gear or techniques shall be carried out within the limits of the fishing opportunities allocated to the Member State.
- Innovation in aquaculture: Operations financed under this Article must be carried out in collaboration with a scientific or technical body recognised by the national law of each Member State which shall validate the results of such operations.

5.4 Challenges to intervention

Which **tools are missing** and what are **challenges** to their introduction such as degree of political difficulty in changing political path-dependencies, institutional arrangements, closed actors networks or dealing with insufficient administrative capacities?

- The limited participation of certain stakeholder groups in EFF implementation (including environmental organisations) in some MS could potentially be due to difficulties in involving these groups due to their limited capacities.
- Administrative delays borne by Member States in implementing the EFF. Programming proved to be a lengthy process for many MS, as the majority experienced delays in having their OP and Management and Control System approved (Ernst & Young, 2011). Reasons for this were varied, however the most common included,
 - Limited previous experience with EU programmes (12 new MS since 2004)
 - Limited resources within Administration whose dual role working on FIFG as well as EFF meant that less attention was given to EFF at the beginning of the funding period.
 - Difficulty in reaching consensus on how funds would be allocated across priorities, intermediate authorities, etc, and consolidating plans due to decentralised nature of fisheries management. The nature of decentralised administrations has impacted the generation of benefits associated with moving to one single operational programme.
 - Absence of an effective coordinating body to drive the programming process amongst the intermediate authorities (e.g. UK, Belgium).
 - For smaller MS, it was noted that the administrative effort required in the programming phase may outweigh the benefit, suggesting the principle of proportionality should apply and that smaller MS should be afforded greater flexibility through a simplified programming process so that it does not consume a disproportionate amount of administrative effort (Ernst & Young, 2011).
- Proposed legislation aims to reduce administrative costs for MS, and aims to streamline the programming processes to assist potential beneficiaries in accessing funds.

Under the EFF monitoring systems are fed with heterogeneous indicators: each MS has set up its own results and impact indicators which make it impossible to aggregate data and draw meaningful comparisons on indicators across MS, and indicators are focused on operational level and financial absorption (Ernst & Young, 2011). Monitoring has become more difficult in countries like the UK and Germany since the shift from several FIFG programmes to one single national EFF programme as the central Managing Authority experiences problems in collecting data from the regional level.

The financial crisis reduced the available co-financing opportunities in the EFF, and it is feared it will have an impact on the final achievement rates if projects are abandoned. Fiscal constraints are likely to continue to be an important factor going into the post 2013 funding period.

5.5 SWOT analysis

In the following section we analyse the strengths, weaknesses, threats and opportunities performed for the following biodiversity proofing tools or instruments:

- Requirements
- Project selection criteria
- Conditionality
- Monitoring (indicators)

- Annual reporting
- Ex-post evaluation

The expansion of requirements for biodiversity in the EMFF regulation could include such additions as a sustainable reference level at which fish stocks should be exploited (eg maximum sustainable yield (MSY) by 2015), the inclusion of the principle of “no net loss”, or the inclusion of an objective specifically related to habitat restoration. Any such change would have to be proposed by the Commission and subsequently be agreed in comitology by a qualified majority of Member States. Once any such biodiversity requirement was to be included in the EMFF text, it would then need to be implemented consistently across all Member States. These steps present significant barriers to the inclusion of any biodiversity requirements which are not already legally required. The current negotiations over the EMFF proposal regarding maximum sustainable yield (in which Member States are quibbling over the date by which MSY should be met) are a perfect example of the difficulties which may be encountered.

Box A5.1 SWOT assessment of including requirements in Operational Programmes

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • The inclusion of biodiversity requirements shows clearly the importance of biodiversity alongside society and economy, and increases attention and pressure to deliver a positive outcome • When introduced to the EMFF Regulation, requirements are applicable all EU27 equally and should be consistently applied across projects • The EMFF text is a keystone entry point for biodiversity proofing, as any biodiversity proofing requirements would be required throughout the programming and implementation cycle, over the 7 year period 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Application of requirements might be disputed, interpreted differently, and difficult to verify, leading to societal and economic needs being given greater priority over biodiversity needs, particularly when there is no prioritization • Often lack timeframe for implementation, enabling short term needs to prioritize long term visions
<p>Threats:</p> <ul style="list-style-type: none"> • Member States need to agree to the inclusion of biodiversity requirements under comitology • Particularly vulnerable to watering down in the political negotiation process, high potential for political conflict, particularly when short term economic and social considerations are jeopardized 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Requirements in one programme cycle (one regulation) typically remain in the next work programme or are built upon • International commitments have provided pressure to increase biodiversity requirements in the past, and are likely to be a major driving force in the future

Project selection criteria and the project selection procedure are to be defined by Member States in their respective OPs for approval by the Commission. Member State Monitoring Committees are to be consulted and provide an opinion on the criteria and they may be revised according to programming needs. The project selection process is a crucial point in the implementation of the Regulation, and if the criteria are not well designed they may be opportunities for biodiversity harmful projects to be financed. This occurred during the previous funding period when some applicants were eligible for public assistance to support the decommissioning of fishing vessels. To avoid the decommissioning of vessels which were already out of service (or “deadweight”) the selection criteria required eligible vessels to have been fishing for at least 90 days in each of the two years before the application date or must have been fishing for at least 120 days in the year before

the application date. However, the European Court of Auditors (2011) audited ten decommissioning projects in Spain, of which two vessels were inactive: one had suffered a severe fire and was out of action although it did meet the eligibility criteria, the other simply did not meet the criteria.

Box A5.2 SWOT assessment of project selection criteria

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Can be very effective at preventing harm to biodiversity, if properly designed • Transparent and clear, open to civil society organisations to supervise (act as watchdog) 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Very technically specific, harder for governmental authorities to design without detailed consultation and cooperation with potential recipients • May be viewed as barrier or burden by potential beneficiaries and reduce applications for funding • Defined by Member States, which may create a uneven playing field between potential recipients in different countries
<p>Threats:</p> <ul style="list-style-type: none"> • Have been observed to be poorly designed in the past, leading to ineffective and sometimes harmful measures. Must be carefully designed and open to adjustment if loopholes are observed 	<p>Opportunities:</p> <ul style="list-style-type: none"> •

Making funds conditional on compliance with EU legislation and performance can be a powerful means of increasing implementation of biodiversity measures. Placing the onus on project applicants to demonstrate compliance can be considered a strength as the burden of proof lies with the person undertaking the project. This is administratively and technically more simple since the project applicant will be most familiar with the project. It may also be a weakness since there may be conflict of interest since the applicant is attempting to gain financial support. This highlights the importance of the Member State authorities to verify claims, and resources available to them to do so. Furthermore, it relies on Member States to have properly implemented and enforced the respective environmental legislation. Any strengths and weaknesses related to the environmental legislation will therefore affect the implementation of the EMFF.

Box A5.3 SWOT assessment of Conditionality with EU legislation and performance

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Legally consistent and therefore relatively easy to enforce • Relies on Member States' implementation of relevant Directives and Regulations, which should be ensured elsewhere • Relies on those with the best knowledge of the project to implement 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • It is based on the assumption that assurances of compliance with EU legislation by project applicants are correct • Strength in limiting or mitigating harmful effects, but not much potential for encouraging positive actions • Assumes the relevant authorities have the capacity to review the applications sufficiently • Weaknesses of existing legislation would be repeated in relation to EMFF projects
<p>Threats:</p> <ul style="list-style-type: none"> • If Member States have not implemented or enforced EU environmental legislation properly then the impact of these conditions could be reduced 	<p>Opportunities:</p> <ul style="list-style-type: none"> • Addressing the weaknesses of the existing EU legislation would have wider benefits

Monitoring of projects is the responsibility of Member States, and more specifically their Monitoring Committees, although under the proposed EMFF the Commission shall define, by means of implementing acts, the set of indicators specific to Union priorities. Nevertheless, as long as Member State reporting against the agreed milestones is satisfactory, the Commission will not undertake any further monitoring of projects, relying on the national Monitoring Committees to inform it of any outstanding issues.

Box A5.4 SWOT assessment of monitoring (using common indicators) of the OPs

<p>Strengths vis-à-vis Biodiversity :</p> <ul style="list-style-type: none"> • Crucial for measuring effect of measures on biodiversity, whether positive or negative • Common indicators across Member States, allowing for analysis of EU trends, comparing Member State progress 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Relies on those who have a stake in the successful implementation of a project to report weaknesses or failures • Sometimes slow to detect change and slow to result in change - there is no direct mechanism by which negative trends in indicators would lead to swift changes in measures
<p>Threats:</p> <ul style="list-style-type: none"> • Gaps in scientific knowledge and development of methodologies, especially relating to ecosystem indicators • Lack of resources to monitor projects 	<p>Opportunities:</p>

Member State managing authorities are required to submit to the Commission an **annual implementation report** on the implementation of the OP, which has to be considered and approved by Member State Monitoring Committees before submission. Annual reports are a valuable means of keeping track of biodiversity concerns, and are done frequently enough for problems to be identified and acted upon.

Box A5.5 SWOT assessment of annual reporting

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Can be very effective at highlighting effectiveness and implementation of projects • Provide information in a regular, frequent and relatively timely manner, increasing the opportunities for feeding into the review process and enabling change • Scope: applicable across all Member States • Tool may be applied to other funding instruments 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Can be viewed as a formality and not taken seriously, or done rigorously enough
<p>Threats:</p> <ul style="list-style-type: none"> • Comparability across Member states may be threatened if there isn't a common template or common requirements on Member States for information included in annual reports 	<p>Opportunities:</p> <ul style="list-style-type: none"> •

All Member States will be required to submit an **ex-post evaluation report** to assess the operational programme at the end of the programming period. Compared to annual reporting and interim evaluations, ex-post evaluations are seriously restricted in their ability to contribute to policy changes in a timely manner as they occur so late in the programming cycle.

Box A5.6 SWOT assessment of ex-post evaluations

<p>Strengths vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Can usefully provide some lessons for the future • Applicable across all MS • Tool may be applied to other funding instruments 	<p>Weaknesses vis-à-vis Biodiversity:</p> <ul style="list-style-type: none"> • Could be viewed as a formality and not taken seriously, or done rigorously • Scale: applicable only at the very end of the programming cycle (2023), so does not provide any insights or recommendations for improvement during programme cycle. Indeed, it comes too late in the political process to provide insights for the proposal for the following programming period (2020 – 2017) • Very limited in its ability to make swift changes to policy
<p>Threats:</p> <ul style="list-style-type: none"> • 	<p>Opportunities:</p> <ul style="list-style-type: none"> •

5.6 References

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6 ANNEX 6: GENERAL INFORMATION ON EU FUNDING FOR RESEARCH AND INNOVATION

6.1 Principles and priorities of the funding instruments

6.1.1 General description and key instruments

EU policy recognises that research and innovation are an essential element of the functioning of industrialised countries. This is emphasised by the Amsterdam Treaty which devotes a chapter to research and technological development (RTD) as an essential contributor to the competitiveness of the EU and the wellbeing of its citizens. Given the high cost, complexity and critical mass required to deliver essential research and innovation programmes, EU intervention is seen as vital – delivering economies of scale, promoting co-ordination and networking, and overcoming problems of fragmentation.

Central to research and innovation policy has been a series of RTD framework programmes, with the current programme (FP7) covering the 2007 to 2013 budgeting period. FP7 is supplemented by the work of other initiatives and organisations such as the Competitiveness Improvement Programme (CIP), the European Institute of Innovation and Technology (EIT) and the work of the Joint Research Centre (JRC) and European Research Council (ERC).

The importance of research and innovation for the EU's economy has been increasingly emphasised in recent years and they are now at the top of the EU's agenda for growth and jobs, and account for a rising share of the EU budget. The EU has highlighted the importance of research and innovation in delivering economic growth and employment, as well as tackling key environmental and social issues such as climate change and the ageing population. It is recognised that our future standard of living depends on our ability to drive innovation in products, services, businesses and social processes. The EU has therefore placed innovation at the heart of the Europe 2020 Strategy. Central to this is the Innovation Union, an EU 2020 flagship initiative aiming to secure Europe's global competitiveness.

Horizon 2020, the new framework programme for research and innovation, will be the financial instrument implementing the Innovation Union. Running from 2014 to 2020 with an €80 billion budget, the EU's new programme for research and innovation is part of the drive to create new growth and jobs in Europe. Compared to research and innovation funding in the current budget period, Horizon 2020 will provide major simplification through a single set of rules. It will combine all research and innovation funding currently provided through the Framework Programmes for Research and Technical Development, the innovation related activities of the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT).

6.1.2 Current Funding instruments

Current funding for research and innovation in the 2007 to 2013 period comprises:

- The Seventh Framework Programme for Research and Technological Development (FP7) (Decision No 1982/2006/EC). This is the EU's main instrument for funding research in Europe, with a budget of €53.7 billion over 7 years, and aims to respond to Europe's employment needs, competitiveness and quality of life. At the core of FP7 is the Cooperation programme, which fosters collaborative research across Europe and partner countries, according to key themes (health; food, agriculture and fisheries, and biotechnology; information and communications technologies; nanosciences, nanotechnologies, materials and new production technologies; energy; environment (including climate change); transport (including aeronautics); socio-economic sciences and

the humanities; space and security). There is also an Ideas Programme (pure investigative research at the forefront of science and technology, implemented by the European Research Council), a People Programme (boosting European research careers), a Capacities Programme (building the capacity of the knowledge economy) and a programme of Nuclear Research.

- The Competitiveness and Innovation Framework Programme (CIP) (Decision 1639/2006/EC) targets small and medium-sized enterprises (SMEs), with a budget of €3.6 billion for 2007-2013. The CIP is composed of three programmes which have their own specific objectives: the Entrepreneurship and Innovation Programme (EIP); the ICT Policy Support Programme (ICT-PSP); and the Intelligent Energy Europe Programme (IEE). It supports innovation activities (including eco-innovation, but not research), provides better access to finance, and delivers business support services in the regions. It encourages better take-up of information and communication technologies (ICT) and helps to develop the information society. It also promotes the increased use of renewable energies and energy efficiency.
- The European Institute of Innovation and Technology (EIT) (established by Regulation 294/2008/EC) has a budget of €309 million for the 2008 – 2013 period and aims to increase European sustainable growth and competitiveness by reinforcing the innovation capacity of the EU, including through the creation of Knowledge and Innovation Communities linking the higher education, research and business sectors.

FP7 funds the work of:

- The Joint Research Centre (JRC) – a Directorate General of the European Commission providing research and scientific advice to support the policy work of the other DGs. JRC is a network of seven research institutes across the EU. JRC's work covers seven thematic areas, which include the sustainable management of natural resources and the development of a low carbon society. This includes current work on aquatic and terrestrial ecosystems assessment and monitoring and ecological water quality. JRC has a staff of around 2750 and an annual budget of around €330 million for direct support to EU institutions from FP7. It earns up to a further 15% through contracts.
- The European Research Council (ERC) which supports 'frontier research', encouraging the very best, truly creative scientists, scholars and engineers to go beyond established frontiers of knowledge and the boundaries of disciplines. The ERC's investigator-driven, bottom-up approach allows researchers to identify new opportunities and directions in any field of research, rather than being led by priorities set by politicians. ERC has a budget of €7.5 billion in the 2007 to 2013 period, accounting for 15% of the FP7 budget.

The majority of the FP7 budget is spent on grants to research actors all over Europe and beyond, in order to co-finance research, technological development and demonstration projects. Grants are determined on the basis of calls for proposals and a peer review process, which are highly competitive. In order to complement national research programmes, activities funded from FP7 must have a "European added value". One key aspect of the European added value is the transnationality of many actions: research projects are carried out by consortia which include participants from different European (and other) countries; fellowships in FP7 require mobility over national borders. Indeed, many research challenges (e.g. fusion research), are so complex that they can only be addressed at European level. In all EU Member States, in the countries associated with FP7 and in several other countries, National Contact Points ("NCPs") have been set up to give personalized help and advice to researchers and organisations intending to participate.

Participation in FP7 is open to a wide range of organisations and individuals, which include, but are not limited to:

- research groups at universities or research institutes
- companies intending to innovate
- small or medium-sized enterprises (SMEs)
- SME associations or groupings
- public or governmental administration (local, regional or national)
- early-stage researchers (postgraduate students)
- experienced researchers
- institutions running research infrastructures of trans-national interest
- organisations and researchers from third countries
- international organisations
- civil society organisations.

As a general principle, FP7 is open to participation from any country in the world. The procedures for participation and funding possibilities vary for different groups of countries. EU Member States enjoy the broadest rights and access to funding.

Plans for implementing the Specific Programmes are announced by the European Commission in annual 'Work Programmes'. These work programmes include the schedule of 'Calls for Proposals', to be published during the year. Each Call usually covers specific research areas. All Calls are announced in the EU's Official Journal. The annual work programmes and the full texts of the Calls are published on the FP7 section of CORDIS, the web site dedicated to EU-supported research. Proposals may be submitted at any time after a Call opens, until the deadline. A Guide for Applicants is published on CORDIS with each Call. A web-based electronic online tool called EPSS ('Electronic Proposal Submission Service') is the obligatory channel for submission of proposals. After the deadline for the Call, all the proposals submitted are evaluated by a panel of independent evaluators, who are recognized specialists in the relevant fields. The panel will check the proposals against a published set of criteria to see if the quality of research proposed is worthy of funding. The key criteria used for this evaluation are explained in the Guide for Applicants. For successful proposals, the European Commission enters into financial and scientific/technical negotiations with the consortium on the details of the project, and a grant agreement between each participant and the Commission is drawn up.

The Competitiveness Improvement Programme (CIP) is managed by different Commission departments. Within the EIP programme, the financial instruments are managed by DG Economy and Finance (DG ECFIN) and the European Investment Fund (EIF). The Enterprise Europe Network is under the responsibility of DG Enterprise and Industry (DG ENTR) and managed by the Executive Agency for Competitiveness and Innovation (EACI). Eco-innovation pilot projects are under the responsibility of DG Environment (DG ENV) and managed by the EACI. All other EIP initiatives are managed by DG ENTR. The ICT-PSP programme is managed by DG Media and Information Society (DG INFSO), while the IEE Programme is managed by DG Transport and Energy (DG TREN) and the EACI.

The EIT is a body of the European Union established in March 2008. Its mission is to increase European sustainable growth and competitiveness by reinforcing the innovation capacity of the EU, by developing a new generation of innovators and entrepreneurs. To do so, the EIT has created integrated structures (Knowledge and Innovation Communities), which link the higher education, research and business sectors to one another thereby boosting innovation and entrepreneurship. The KICs focus on priority topics with high societal impact, which are currently: Climate change mitigation (Climate-KIC), Information and Communication Technologies (EIT ICT Labs), and Sustainable Energies (KIC InnoEnergy). EIT operations are conducted in Budapest, Hungary.

Knowledge and Innovation communities gather hundreds of partners in 17 co-location centres in Europe. The EIT is governed by a Governing Board consisting of 22 Members representing a balance of leading individuals active in the education, research and business sectors (including KIC partners). The Governing Board is in charge of setting the overall strategy and direction of the EIT. The EIT does not act as a grant giver and does not directly contribute finance to specific projects, but acts as an 'innovation impact investor' via its KICs. Thus, the allocation from the EU budget is used to provide financial support to the KICs and to develop EIT activities and outcomes, with the aim of acting as a catalyst for innovation.

FP7 also funds actions designed to enhance the structure the European Research Area, reducing the fragmentation resulting from the coexistence of several national and regional public research programmes by favouring actions supported together by several Member States and the Commission (such as joint calls, joint programmes, etc.). These actions include:

- ERA-NETs – which seek to develop and strengthen the coordination of national and regional research programmes;
- Article 185 Initiatives – in which the EU participates in programmes implemented jointly by several Member States; and
- Joint Technology Initiatives (JTIs) - long-term public private partnerships involving industry, the research community and public authorities, established at European level to pursue common research objectives. JTIs support large-scale multinational research activities in areas of major interest to European industrial competitiveness and issues of high societal relevance.

6.1.3 Post-2013 funding instruments

Proposals for Horizon 2020 - The Framework Programme for Research and Innovation – are set out in a Communication (COM(2011) 808 final) and proposal for a Regulation (COM (2011) 809 final). Three priorities are proposed: “Excellent Science”;; “Industrial Leadership”; and “Societal Challenges”. Under these three priorities the proposed support for research and innovation under Horizon 2020 will:

- Strengthen the EU’s position in science with a dedicated budget of €24 598 million. This will provide a boost to top-level research in Europe, including an increase in funding of 77% for the European Research Council (ERC).
- Strengthen industrial leadership in innovation, with a budget of €17 938 million. This includes major investment in key technologies, greater access to capital and support for SMEs.
- Provide €31 748 million to help address major concerns such as climate change, developing sustainable transport and mobility, making renewable energy more affordable, ensuring food safety and security, or coping with the challenge of an ageing population.

Horizon 2020 will be complemented by further measures to complete and further develop the European Research Area by 2014. These measures will aim at breaking down barriers to create a genuine single market for knowledge, research and innovation. The Horizon 2020 Framework Programme represents a new and comprehensive approach to the EU's research and innovation funding policies. The Rules for Participation and Dissemination are designed to implement this new approach in a way that means that researchers and businesses can benefit from it to the fullest extent. The new provisions aim to ensure that three key objectives of the new Framework Programme – integration of support to innovation, coherence of the rules and simplification for the benefit of participants – will be realised.

A single set of rules will be applicable to the whole innovation chain, ranging from frontier research over technological development to “close to market” applications. Important new features are the

possibility to award grants to single beneficiaries as well as to allow top-up funding to on-going actions for innovation related activities. Furthermore, the Rules foresee new funding schemes such as precompetitive procurement and procurement for innovative solutions which are specifically targeted at innovation. Moreover, specific provisions on minimum conditions and IPR should facilitate the participation of SMEs. Finally, the Rules provide for the EU's loan and equity based financial instruments, which will allow tailor-made financial support for innovative enterprises and may be combined with Horizon 2020 grants. The rules will not only establish common rules for the formerly separated research (FP) and innovation (CIP) programmes but they will also apply to other Horizon 2020 funding bodies such as the Joint Technology Initiatives and the European Institute of Technology.

Horizon 2020 has been constructed from the outset around a simplification of architecture, rules and procedures and control strategy, to attract the top researchers and the most innovative enterprises. Receiving EU research and innovation funding is a highly competitive process. Reacting to calls for proposals, consortia of industry, academia and other players, submit project ideas that are evaluated by panels of independent experts. The Commission enters into grant negotiations with the selected proposals (success rate about one in five) and, once all administrative and technical details are fixed, grant agreements are signed. Consortia receive pre-financing at the project start and further payments following the acceptance of interim and final reports. Grants are co-financed by the EU and the participants. For research and development projects the share of the EU contribution can be up to 100% of the direct costs and a flat rate of 20% for overhead. For closer-to-market projects the EU contribution covers up to 70% of the costs.

Simplification in Horizon 2020 has three overarching goals to:

- reduce the administrative costs of participants;
- speed up all processes of proposal and grant management and
- decrease the financial error rate.

Structural simplification is provided through:

- a simpler programme architecture centred on three strategic objectives, making it easier for participants to identify where funding opportunities exist; and
- a single set of participation rules, on issues such as eligibility, evaluation or Intellectual Property Rights, applying to all components of Horizon 2020, with deviations only possible when justified by specific needs.

Simpler funding rules will take into account stakeholders' preference for a reimbursement of actual costs. A revised control strategy will achieve a new balance between trust and control and between risk taking and risk avoidance.

In parallel, the Commission will continue to streamline, harmonise and accelerate procedures and processes linked to programme and project implementation. The programme committees will be involved in discussions on strategic planning and on ensuring links to nationally funded activities. Moreover, the Commission will build on progress made in increasing the quality, efficiency and consistency of implementation via a single user-friendly IT platform providing a one-stop shop for participants (e-Horizon 2020) and through further steps towards externalising EU research and innovation funding.

Through all of these elements, the Commission deems it possible to reduce the time to grant (defined as the administrative period between submission of a proposal and signature of the grant agreement) by 100 days on average for Horizon 2020 as compared to the current situation. This means a reduction of around one third.

The Communication on Innovation Union published in October 2010 lists over 30 action points designed to promote the Innovation Union. These include European Innovation Partnerships, a new way of bringing together public and private actors at EU, national and regional level to tackle the big challenges we face such as climate change, energy and food security, health and an ageing population. These challenges also represent opportunities for new business and the Partnerships will aim to give the EU a first-mover advantage in these markets. The first Partnership deals with active and healthy ageing and aims to add an average of two years of healthy life for everyone in Europe. The Innovation Union also introduces the strategic use of public procurement budgets to finance innovation, a comprehensive Innovation Scoreboard based on 25 indicators and a European knowledge market for patents and licensing. It includes measures to reinforce successful existing initiatives like the Risk Sharing Finance Facility, which has so far levered 15 times the combined Commission and European Investment Bank contribution of over a billion euro.

The key documents relating to the establishment and implementation of Horizon 2020 are:

- A Communication from the Commission “Horizon 2020 - The Framework Programme for Research and Innovation” which sets out the overall context, objectives and priorities of Horizon 2020;
- A Proposal for a Regulation establishing Horizon 2020, which provides the legislative framework for establishing the programme;
- A Proposal for a Regulation laying down the rules for the participation and dissemination in Horizon 2020, which establishes a single set of rules for EU research and innovation funding; and
- A Proposal for a Council Decision establishing the Specific Programme Implementing Horizon 2020, which sets out a single programme setting out specific objectives for EU support for R&I and rules for implementation.

The programme will be implemented through Work Programmes, established for each of the three themes, “Excellent Science”, “Industrial Leadership” and “Societal Challenges” which will set out the objectives pursued, the expected results, the method of implementation and their total amount. They will also contain a description of the actions to be financed, an indication of the amount allocated to each action, an indicative implementation timetable, as well as a multi-annual approach and strategic orientations for the following years of implementation. They shall include for grants the priorities, the essential evaluation criteria and the maximum rate of co-financing. They shall allow for bottom-up approaches that address the objectives in innovative ways.

The timetable for Horizon 2020 is as follows:

- From 30/11/11: Parliament and Council negotiations on the basis of the Commission proposals
- Ongoing: Parliament and Council negotiations on EU budget 2014-20 (including overall budget for Horizon 2020)
- Mid 2012: Final calls under 7th Framework Programme for Research to bridge gap towards Horizon 2020
- By end 2013: Adoption of legislative acts by Parliament and Council on Horizon 2020
- 1/1/2014: Horizon 2020 starts; launch of first calls

6.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

6.2.1 Potential current impact

There is little evidence of the impact of EU research and innovation funding on biodiversity. However, this funding has the potential to generate both positive and negative impacts. These could include:

- Direct, site based impacts. R&D activities potentially impact positively or negatively on biodiversity at the local scale, through for example, development of research facilities and through the direct impact on the natural environment of projects in key sectors such as agriculture, fisheries and renewable energy.
- Longer term impacts resulting from research and innovation outcomes. Research and innovation funding aims to develop and disseminate knowledge designed to influence the future of Europe's economy, society and environment. The results of these activities potentially encourage the development of industries that could impact negatively on biodiversity (such as some renewable energy technologies). However, research and innovation activity also aims to support the development of knowledge and solutions that help to address biodiversity loss and inform the sustainable development of sectors that impact on biodiversity.

The Commission's Research and innovation webpages¹¹ highlight the role of EU research and innovation programmes in funding biodiversity related research, stating that: "European research is directed towards assessing and forecasting changes in biodiversity and understanding the dynamics of ecosystems, particularly marine ecosystems. The relationships between the environment, the society and the economy are analysed in order to identify – and mitigate – potentially harmful effects on the environment and on human health and society. Risk assessments based on European research allow us to better manage, conserve and rehabilitate our ecosystems in a sustainable manner for future generations."

Key biodiversity-related projects have included:

- ALARM - developed and tested methods for assessing large-scale environmental risks to help minimise negative direct and indirect human impacts. Research focused on the assessment and forecast of changes in biodiversity and in the structure, functions and dynamics of ecosystems.
- ALTER-NET - set out to create a European long-term interdisciplinary facility for research on the relationship between ecosystems, biodiversity and society. It provided research support for policy assessment and development on the conservation and sustainable use of biodiversity in the EU.
- BIOSCORE - devising a tool for linking pressures from policy sectors to the state of biodiversity. This tool will be used for assessing impacts and the effectiveness of biodiversity conservation policies and forecasting future impacts.
- COCONUT - project aims to improve understanding on how biodiversity is affected by historic and current land use changes. Based on the results, policy options and decision tools will be developed for main EU policy areas mitigating future biodiversity loss.
- EDIT - overall objective is to integrate European taxonomic effort within the ERA and to build a world leading capacity. EDIT will create a European virtual centre of excellence, which will increase both the scientific basis and capacity for biodiversity conservation.

¹¹ http://ec.europa.eu/research/environment/index_en.cfm?pg=bio

- EUMON - worked to provide a framework that standardises and coordinates existing monitoring programmes by comparing and integrating existing methods and monitoring schemes of species and habitats of community interests.
- MACIS -reviewing and analysing the existing projections of climate change impacts on biodiversity. It is assessing the available options to prevent and minimise negative impacts up to 2050 and reviewing the state of the art on methods to assess the probable future impacts on biodiversity.
- RUBICODE - translated biodiversity threats into a tangible factor for decision-making by examining what biodiversity does for us. Its aim was to increase the understanding of the need for adequate conservation policies, which are essential to halting biodiversity loss.

EU research and innovation policy has also helped to fund research aiming to reduce the impacts of key sectors on biodiversity. According to a survey of FP5, FP6 and FP7 project coordinators in the area of "Food, Agriculture and Fisheries, and Biotechnology" research, 49% of all projects produced positive environmental impacts, which include reducing the impact of agriculture and forestry on biodiversity¹².

Levels of funding

Table A6.1 gives the budget for FP7 for the 2007 to 2013 period, based on the Decision of the European Parliament and Council of 18 December 2006. The figures show that the environment, including climate change, was allocated less than 4% of the overall budget. Other themes such as food, agriculture and fisheries and biotechnology; nanosciences; energy and transport all received higher budgetary allocations. As noted, research and innovation funding for these sectors has the potential to reduce their impact on biodiversity, but potentially also stimulate sectoral developments that impact negatively on biodiversity.

Table A6.1: Budget Breakdown of FP7 for 2007 to 2013 period

Themes		EUR (million)
COOPERATION	Health	6100
	Food, Agriculture and Fisheries, Biotechnology	1935
	Information and Communications Technologies	9050
	Nanosciences, Nanotechnologies, Materials and New Production Technologies	3475
	Energy	2350
	Environment (including Climate Change)	1890
	Transport (including Aeronautics)	4160
	Socio-economic sciences and humanities	623
	Security and Space	2830
Total COOPERATION		32413
IDEAS	European Research Council	7510
PEOPLE	Marie Curie Actions	4750
CAPACITIES	Total	4097
Non-Nuclear Actions of JRC		1751
TOTAL EC		50521
Euratom – nuclear research and training		2751

DG Research commissioned an ex-post impact assessment of the FP6 sub-priority "Global Change and Ecosystems" in 2008. The purpose was to identify the degree of achievement of the objectives of the sub-priority and the impacts of the activities carried out. The study found that EU

¹² COMMISSION STAFF WORKING PAPER - IMPACT ASSESSMENT Accompanying the Communication from the Commission 'Horizon 2020 - The Framework Programme for Research and Innovation'

environmental research is leading in several environmental research areas, has high policy relevance and contributes to the development of tools for environmental policy.¹³ In terms of scientific impacts related to biodiversity and ecosystems, the assessment found that large projects have a significant impact since they allow for the assessment of biodiversity and ecosystems at a larger scale. It found that the research funded was policy relevant and helped to inform the biodiversity action plan and CBD.

An Interim Evaluation of the Seventh Framework Programme, undertaken in 2010, made no mention of biodiversity. The evaluation focused largely on the process aspects of FP7, and therefore gave no indication of the environmental impacts of FP7 funded activities (European Commission, 2010).

DG Research and Innovation has developed a series of web pages on sustainable development. These focus entirely on the contribution that EU funded research and innovation programmes make in informing sustainable development policies and practice, rather than the direct environmental and other impacts of research projects themselves. The Commission has developed a web based monitoring tool (FP7-4-SD.eu) to examine these positive contributions¹⁴ and has funded a publication “Gearing European research towards sustainability.”¹⁵ The latter recommended that more needs to be done to promote sustainable practices among researchers and research institutions, but gave little information other than highlighting the energy intensity of many research activities.

Research and Innovation Policy funds projects in a number of sectors with potential to impact negatively on biodiversity, including transport (air, rail, road, water and multimodal); agriculture, fisheries and forestry; biotechnology; energy and industrial technologies. Research has the potential to reduce biodiversity impacts in these areas, but could possibly encourage the development of technologies that impact negatively on biodiversity. For example in the transport sector the EU is funding research to improve the treatment of marine oil spills, and is also funding a large number of projects concerning vehicle and aircraft technologies that could indirectly affect demand for transport infrastructure. In the energy sector a wide range of renewables technology projects have been supported, including biomass, wind and marine energy technologies with potential adverse impacts on biodiversity. Nanotechnology has a range of potential benefits and threats to the environment, though there is limited evidence of its potential impacts on biodiversity. A paper by Defra (2009) observed that the early focus of FP7 was on the opportunities for industry, with little attention on wider impacts, except to some extent human health.

The above examples relate to the possible indirect effects of research and innovation activity on biodiversity by influencing the potential development of technologies and industries that potentially affect biodiversity. It is also likely that some of the projects funded have direct impacts on biodiversity. For example, the EU funded research and innovation projects in the fields of wind and tidal energy, agriculture, forestry and fisheries may have direct biodiversity impacts at the project sites. However, no specific evidence of EU funding causing negative effects on biodiversity has been found.

¹³ DG Research (2009) Ex-post Impact Assessment FP6 sub-priority “Global Change & Ecosystems”. http://ec.europa.eu/research/environment/pdf/880final_report_assesment.pdf

¹⁴ European Commission (2011) “Monitoring the FP7 contribution to the EU’s SD objectives – facts & figures (update 2011)”. FP7-4-SD.eu policy brief No. 4 from April 2011. https://www.fp7-4-sd.eu/tpl/static/FP7-4-SD_policy_brief04.pdf

¹⁵ European Commission (2009) Gearing European research towards sustainability. http://ec.europa.eu/research/sd/index_en.cfm?pg=publications

6.2.2 Potential future impact

Sustainable development will be an overarching objective of Horizon 2020. The dedicated funding for climate action and resource efficiency will be complemented through the other specific objectives of Horizon 2020 with the result that at least 60 % of the total Horizon 2020 budget will be related to sustainable development, the vast majority of this expenditure contributing to mutually reinforcing climate and environmental objectives. The proposal for a regulation establishing Horizon 2020 states that *research and innovation will interface with a wide spectrum of Union policies and related targets, including ...the Union's 2020 biodiversity strategy*, and highlights its role in addressing the EU's environmental challenges, including the loss of biodiversity and degradation of ecosystems. An indicative breakdown of the Horizon 2020 budget is given in the proposal for a regulation establishing Horizon 2020 (Table A6.2).

Table A6.2: Horizon 2020 – Indicative Budget for 2014 to 2020 Period

		EUR million
I Excellent Science	1. European Research Council	15008
	2. Future and Emerging Technologies	3505
	3. Marie Curie actions on skills, training and career development	6503
	4. European research infrastructures	2802
	Total	27818
II Industrial Leadership	1. Leadership in enabling and industrial technologies	15580
	2. Access to risk finance	4000
	3. Innovation in SMEs	700
Total	20280	
III Societal Challenges	1. Health, demographic change and wellbeing	9077
	2. Food security, sustainable agriculture, marine and maritime research, bio-economy	4694
	3. Secure, clean and efficient energy	6537
	4. Smart, green and integrated transport	7690
	5. Climate action, resource efficiency and raw materials	3573
	6. Inclusive, innovative and secure societies	4317
Total	35888	
European Institute of innovation and Technology (EIT)		1542+1652
Non-nuclear actions of the JRC		2212
TOTAL		87740

Biodiversity projects will be funded through the climate action, resource efficiency and raw materials theme, with an overall budget of €3.6 billion, or just over 4% of the Horizon 2020 budget. Among the priorities under this theme is “Sustainably managing natural resources and ecosystems” which includes research to “further our understanding of the functioning of ecosystems, their interactions with social systems and their role in sustaining the economy and human well-being” as well as to “Provide knowledge and tools for effective decision making and public engagement” with regard to ecosystems. However, given other priorities under this theme (with regard to climate change, raw materials, eco-innovation, global environmental observation and information systems), it is unclear how much funding biodiversity projects will receive. The increasing focus on sustainable development under other themes also provides some encouragement. Overall, while there is potential that opportunities for research and innovation activities that benefit biodiversity may be enhanced in the next programming period, there is some uncertainty. Furthermore, other priorities highlighted in Horizon 2020, such as food security, clean energy and transport growth have the potential to impact negatively on biodiversity, suggesting a continuing need to identify and address possible negative impacts within these other themes.

6.3 Stipulation of safeguards in place

What **potential tools are in place** to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

Under FP7, financial support for research is made available chiefly through calls for proposals, which are issued for each specific programme. Each new call is announced in the EU Official Journal and then published on CORDIS. Each call is supported by an Information Package including a Guide for Applicants. Further details of the applications process, and various general guidance documents, are provided on the CORDIS website¹⁶. The New Practical Guide to EU Funding Opportunities for Research and Innovation provides guidance for funding through FP7, CIP and Cohesion Policy (European Commission, 2011). There does not appear to be any specific requirement for applicants to submit information regarding the environmental impacts of projects, and environmental aspects do not appear to form part of the selection criteria, except to the extent that these represent core aims of the project.

Activities in FP7 are required to respect fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union. Ethical principles include the need to protect the physical and moral integrity of individuals, their privacy and dignity and the welfare of animals. For this reason, the European Commission is required to carry out an ethical review of proposals when appropriate¹⁷. The applicant needs to address the ethical aspects of the objectives, methodology and the implications of the proposed research in the dedicated ethics section of his/her proposal and, if relevant, include a timetable regarding the prior authorisation of his/her research.

Under the Horizon 2020 proposals the aim is to simplify and streamline the application procedures for research and innovation funding, rather than adding additional requirements for applicants. However, the stated emphasis of Horizon 2020 on sustainable development, both in directly funding sustainable development research and innovation activities, and in providing the knowledge required to support sustainable development in key sectors, offers encouragement that the programme will offer benefits and opportunities rather than threats to biodiversity. The wording of the sectoral themes (“sustainable agriculture”, “clean energy”, “green transport”) gives further encouragement, as does the stated intention that Horizon 2020 should contribute to the delivery of key EU policies including the Biodiversity Strategy. Nevertheless, the potential for research and innovation projects to harm biodiversity either directly or indirectly still remains.

¹⁶ http://cordis.europa.eu/fp7/home_en.html

¹⁷ http://cordis.europa.eu/fp7/ethics_en.html

Box A6.1: Tools available for Best Frame of Action

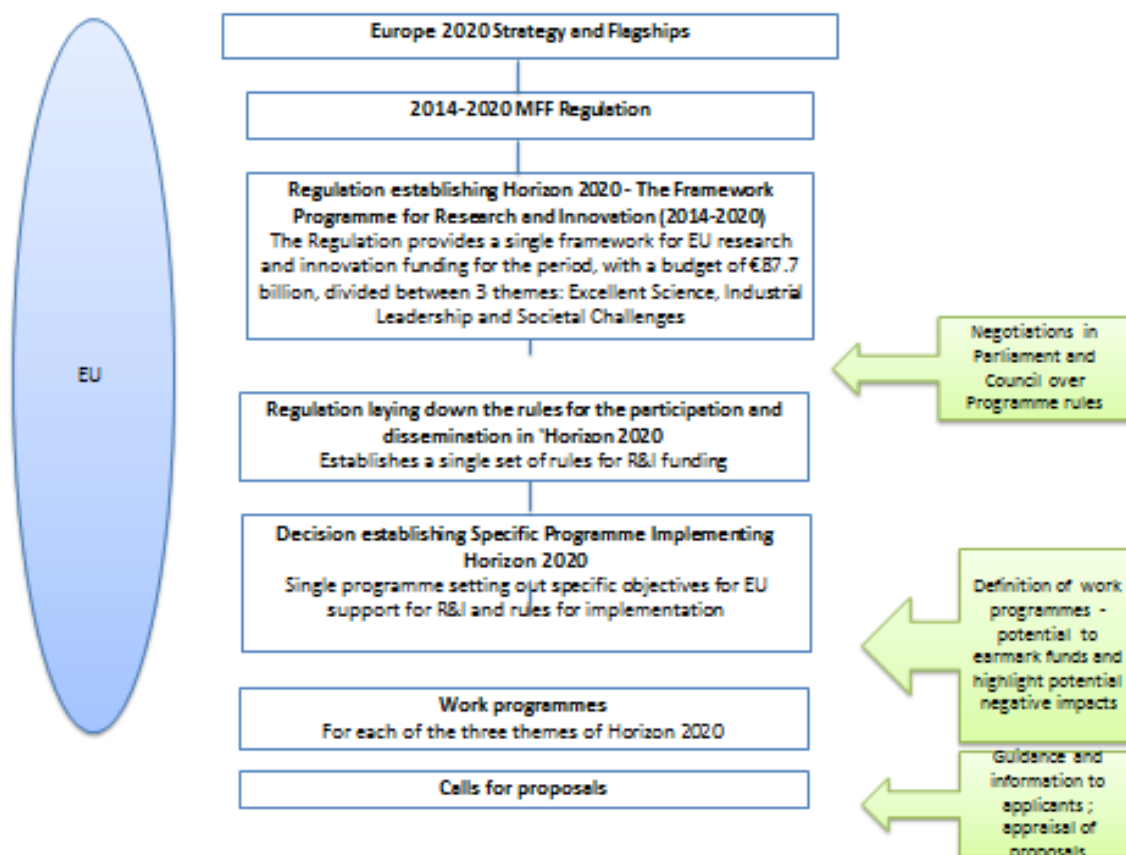
Tool	Extent to which biodiversity is covered
<p>Substantive instruments Setting of objectives and priorities, and allocation of funding Specific objectives are set out in the Proposal for a COUNCIL DECISION establishing the Specific Programme Implementing Horizon 2020 A more detailed Work Programme for the “Societal Challenges” part will set out funding allocations in more detail.</p>	<p>Ecosystems are covered as one of five priorities identified under the CLIMATE ACTION, RESOURCE EFFICIENCY AND RAW MATERIALS theme under Part III – Societal Challenges. The theme has an overall budget of €3.6 billion. No reference is made in the Horizon 2020 documents to policies to safeguard biodiversity (or indeed wider sustainability) across wider funding measures</p>
<p>Procedural instruments Appraisal of project proposals Ethics Review procedures for project proposals</p>	<p>Project appraisal does not appear to take account of environmental criteria Ethics Review process does not take account of environmental aspects</p>
<p>Institutional instruments No relevant arrangements identified</p>	

6.4 Best Frame of Action

6.4.1 Stages, levels and timeframe for intervention

Figure A6.1 provides a schematic overview of the stages of implementation of research and innovation funding and the related entry points for biodiversity proofing.

Figure A6.1: Stages of implementation of research and innovation funding and entry points for biodiversity proofing



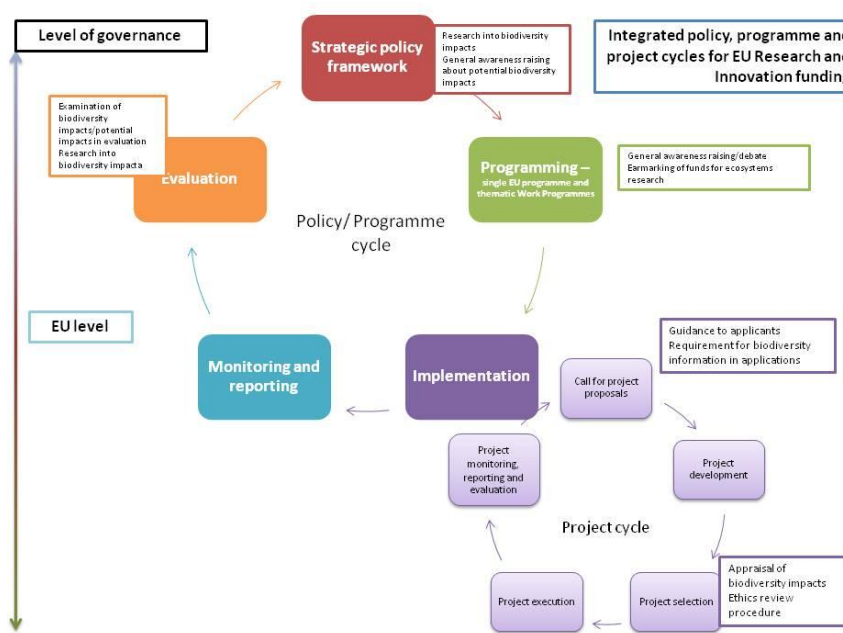
Possible entry levels include:

- EU level programming. Proposals have been published for a Regulation establishing Horizon 2020, a Regulation laying down the rules for the participation and dissemination in Horizon 2020, and a proposal for a Decision establishing the Specific Programme Implementing Horizon 2020. The only mention of biodiversity or indeed wider environmental issues is with regard to support for projects with these objectives. Work Programmes will be developed that will set out funding allocations and procedures in more detail, and could represent a potential point of entry. However, it is now very late in the programming process to influence the rules and procedures, and the Commission is not expected to propose significant changes. While the Parliament and Council have this power, it is unlikely that they will see biodiversity as a priority issue at this stage.
- Calls for proposals. Calls for proposals issued by DG Research under specific themes offer a potential point of entry – e.g. providing an opportunity to issue guidance to potential applicants regarding biodiversity issues and to request information from applicants regarding potential biodiversity impacts.
- Appraisal of proposals. Project appraisal criteria could potentially include consideration of impacts on biodiversity. However, there has been no requirement to include environmental information in project applications to date, and Horizon 2020 aims to simplify application and appraisal processes.
- Evaluation of programme. Interim and ex-post evaluation of the programme could examine effects on biodiversity, in order to enhance understanding of impacts. There is no evidence of such impacts being covered by previous evaluations, except with regard to specific environmental themes, and the breadth of the evaluation task and the marginal role of biodiversity is a barrier to achieving this.

- Addressing biodiversity impacts outside the R&I process. Given the absence of evidence regarding impacts of EU R&I funding on biodiversity, the need for entry levels within the R&I funding process could be questioned. Most R&I projects themselves will have little or no impact on biodiversity, and there may be greater concerns that R&I activity leads to innovations whose wider adoption causes adverse biodiversity impacts. As such impacts are difficult to predict, it might be argued that they could best be addressed outside of the R&I process (e.g. through development control and other measures).

Figure A6.2 provides a further overview of how the policy/programme cycles and the project cycles interact, and where biodiversity proofing can support the better consideration of biodiversity concerns into research programming.

Figure A6.2: Implementation cycles and level of governance



Research and innovation play an important role in meeting biodiversity objectives, and this is reflected in the number of projects aiming to contribute to biodiversity priorities in the current budgeting period. The increasing focus on sustainable development through Horizon 2020 offers potential to grow this funding in the next budgeting period.

Cross-cutting tools and procedures to ensure that research and innovation projects do not impact negatively on biodiversity appear to be lacking at the EU level. This may not be of great concern, since evidence of negative impacts is currently lacking. However, there is potential for EU funded projects to have negative impacts on biodiversity in future. Consideration could therefore be given to the need to address potential biodiversity impacts in the project appraisal process.

The following measures and initiatives could be considered to address these concerns:

- **Research into the impacts of research and innovation programmes on biodiversity** (positive and negative, direct and indirect). There is currently very little evidence on this issue, other than that relating to direct funding for biodiversity projects, and further research would help to inform the case for policy action. Research could be funded by DG Research under the Horizon 2020 programme;
- **Guidance on the impacts** that different sectors and technologies have on biodiversity, and means of mitigating these, to inform project development and appraisal. Such guidance could be shared with other funding instruments and policy areas (e.g. Cohesion Policy) with input from DG Environment;
- **Requirements for the review of potential biodiversity impacts** as part of the project appraisal process in particular themes in which negative impacts are most likely to occur (e.g. in relation to food security and agriculture, energy and transport). Guidance could be given by DG Research to applicants within the documentation issued with calls for proposals.
- **Ring-fencing funds for biodiversity related research**, within the Climate action, resource efficiency and raw materials theme in Horizon 2020 and potentially in other themes relevant to biodiversity.

As funding is allocated at EU level, rather than through the Member States, any biodiversity proofing activity needs to be focused at this level, working with the Directorate General for Research and Innovation. The principal points of entry would appear to be:

- Negotiations on the legislative proposals for Horizon 2020 (up to the end of 2013);
- Consultations on Work Programmes;
- Consultations on specific Calls for Proposals;
- Provision of guidance to potential applicants;
- Appraisal of research proposals;
- Evaluation of programme, with respect to impacts or potential impacts on biodiversity.

One option for biodiversity proofing in future could involve integration of biodiversity considerations into the ethical review procedure that applies to research applications.

6.4.2 SWOT analysis

In the following we provide a SWOT analysis for the most promising initiatives and measures as described above.

Box A6.1 SWOT for research into the impacts of research and innovation programmes

<p>Strengths vis-à-vis Biodiversity: There is currently no evidence of negative effects of EU R&I funding on biodiversity. Research into this area would therefore seem to be a prerequisite for action.</p>	<p>Weaknesses vis-à-vis Biodiversity: Research in itself will not prevent adverse impacts on biodiversity occurring</p>
<p>Threats: Focus on research could delay action</p>	<p>Opportunities: Research would provide a firmer basis for taking action in future</p>

Box A6.2 SWOT for guidance to applicants

<p>Strengths vis-à-vis Biodiversity: Guidance to applicants regarding potential biodiversity impacts of particular sectors and technologies could help to integrate biodiversity concerns into project development, helping to avoid negative effects and even to encourage biodiversity friendly innovations</p>	<p>Weaknesses vis-à-vis Biodiversity: Guidance will not itself guarantee that biodiversity impacts are avoided, and may have little effect unless backed by sticks or carrots</p>
<p>Threats: Guidance could be ignored by applicants unless they have an incentive to follow it Developing, issuing and promoting guidance may not be a priority for programme managers, especially if biodiversity seen as marginal issue</p>	<p>Opportunities: Potential to positively enhance project development and implementation Could be used in conjunction with other measures – e.g. project appraisal process Potential to share guidance with other EU programmes (e.g. Cohesion)</p>

Box A6.3 SWOT for Biodiversity criteria in Project Application and Appraisal Process

<p>Strengths vis-à-vis Biodiversity: Would enable potential biodiversity impacts of all projects to be addressed Strong incentive for applicants to address potential biodiversity impacts</p>	<p>Weaknesses vis-à-vis Biodiversity: Imposes a burden which may be seen as disproportionate, especially given lack of evidence on biodiversity impacts Conflicts with stated aim of simplifying appraisal process</p>
<p>Threats: Little weight may be given to biodiversity by applicants and/or appraisers Danger that potential impacts are ignored or downplayed</p>	<p>Opportunities: Unlikely to present strong opportunities</p>

Box A6.4: SWOT for integrating biodiversity criteria into Ethics Review procedures

<p>Strengths vis-à-vis Biodiversity: Based on an existing process, and therefore likely to be more feasible and less burdensome than developing separate approach</p>	<p>Weaknesses vis-à-vis Biodiversity: Feasibility - ethics review currently focuses on specific issues (e.g. animal welfare, human embryos) and does not include environmental criteria</p>
<p>Threats: Appetite to extend scope of Ethics Review may be limited</p>	<p>Opportunities: Offers potential to develop understanding of how biodiversity impacts might be addressed within R&I programmes as a whole</p>

6.4.3 Conclusions for best frame of action

Comparing the SWOTS for the different actions described above leaves the following conclusions:

- Given the shortage of evidence of the impacts of EU research and innovation funding on biodiversity, the case for intervention is not compelling;
- Research to assess impacts of EU research and innovation on biodiversity would appear to be a priority;
- Given the lack of attention to environmental proofing in general, and the stated intention of simplifying application and approval processes, biodiversity proofing is likely to meet substantial resistance;
- Integration of biodiversity into the Ethics Review process might be the most promising option for the future.

6.5 References

European Commission (2010) *Interim Evaluation of the Seventh Framework Programme*. Report of the Expert Group. European Commission, Brussels. http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/fp7_interim_evaluation_expert_group_report.pdf

European Commission (2011) *New Practical Guide to EU Funding Opportunities for Research and Innovation*. European Union Cohesion Policy. http://cordis.europa.eu/eu-funding-guide/home_en.html

7 ANNEX 7: GENERAL INFORMATION ON THE LIFE PROGRAMME

7.1 Principles and priorities of the funding instrument

7.1.1 Current framework

The LIFE programme has been on-going since 1992, and is the only dedicated financial instrument for the environment in the EU. The most recent LIFE+ Programme (2007-2013), fourth of its nature and laid out by Regulation (EC) No 614/2007, has a budget of €2.143 billion. It is designed to contribute to the implementation, updating and development of EU environmental policy and legislation, including the integration of the environment into other policies. More specifically, LIFE+ was envisaged to support the implementation of the 6th Environment Action Programme (6EAP), including the thematic strategies, and finance measures and projects with European added value in Member States. The sixth and latest Environment Action Programme was adopted in 2002, according to Decision 1600/2002/EC, and aims to provide guidance on environmental policy over a 10-years period. It sets out four environmental priority areas, including on climate change, nature and biodiversity, environment and health, and natural resources and waste. Whilst it was noted that LIFE+ did not result from the 6EAP (Ecologic et al 2011) the two are strongly connected, with the 6EAP seen as providing broad guidance on which projects and programmes should receive funding grants. The relationship has been described as 'mutualistic, each reinforcing and propelling the other' (Ecologic et al 2011). Objectives set in the context of the 6EAP are strongly reflected in the multi-annual strategic programme outlined in the Annex II of the LIFE+ Regulation. However, financing under LIFE+ has also strongly been shaped by progress in implementing key legislative and policy instruments in environmental policy, including the Water Framework Directive, Habitats and Birds Directive, Biodiversity Action Plan, waste and air legislation amongst others. Since the initial agreement of the LIFE+ programme, climate change has also further got up the political agenda, reflected by the adoption of the 2008/2009 climate and energy package (eg, Directive 2009/28/EC on the promotion of the use of energy from renewable sources) and the 2009 White Paper on Climate Change Adaptation, with impacts particular on the outline of the future LIFE programme beyond 2013 (see below).

The LIFE+ Regulation provides for an EU financial instrument which enables, but does not require the participation of individual Member States (Farmer, 2011). It thus does not need to be transposed into national law. However, a number of Member States have developed new administrative arrangements, for example the creation of a LIFE+ Government Working Group (GWG) in the UK (Farmer, 2011). LIFE+ is managed centrally by the Commission, assisted by the LIFE+ Committee. The Committee consists of representatives from the Member States and helps to determine the content of the monitoring reports from beneficiaries; establishing indicators to monitor LIFE+; amending non-essential elements of the Regulation such as adding measures to Annex 1; laying down methodology for project selection; and deciding upon the list of projects to receive funding (Farmer, 2011). Member States can inform the Commission of their own national annual priorities and comment on the project proposals they forward to the Commission.

Future.....

Following an ex-post evaluation and an impact assessment on the future financing programme for the environment in 2010, the Commission called for its continuation into the next funding period 2014-2020. The proposed Regulation on the establishment of a programme specifically dedicated to funding the environment and climate action (LIFE) was published on 12 December 2011. The programme is now more closely aligned to Europe 2020 objectives, and will serve as a financial instrument for climate action as well as the environment more generally. Given that a 7th Environment Action Programme is still missing, the objectives of the new programme particularly reflect those set under the flagship initiatives of the Europe 2020 strategy for sustainable growth,

including the resulting roadmap for a resource-efficient Europe and the roadmap for a low carbon economy by 2050. The development of the new instrument has also been impacted by the release of the new Biodiversity Strategy to 2020, and the shift in focus from the implementation of the Habitats and Birds Directives to the actual management of the Natura 2000 network.

The new LIFE programme is intended to be a catalyst with a particular focus on the implementation and integration of these issues in other policy areas and Member State practice. Special emphasis is given to the achievement of better governance, the improvement of the knowledge base, and priority issues such as resource efficiency, biodiversity loss and climate adaptation and mitigation. To achieve its objectives, the new LIFE programme has been allocated a financial envelope of €3,618 million in current prices (€3,200 million in constant prices), as stated in the Communication on the next Multi-annual Financial Framework and the proposed Regulation. This expenditure will fall under the heading of 'Sustainable Growth: Natural Resources' of the next Multi-annual Financial Framework. As regards the approach and management of expenditures under the new LIFE programme, the European Commission has opted for a flexible top-down approach for all types of projects, instead of the bottom-up approach currently applied under LIFE+. In practice this means that instead of issues to be financed based on bottom-up suggestions, the European Commission will now be responsible for developing multi-annual work programmes valid for at least two years, including specific but non-exhaustive (to keep flexible) priorities linked to specific targets and assessed by defined indicators. In addition, it envisages the creation of new type of projects, namely 'integrated projects'. They refer to 'projects implementing [...] on a large territorial scale [...] environmental or climate strategies or action plans required by specific environmental or climate EU legislation [...]'. The funding will still mainly consist of action grants, and will also still include operating grants and public procurement contracts. However, there will now also be scope for contributions to innovative financial instruments (eg loans combined with technical assistance grants), though these have not been specified in any detail. At the same time, the minimum co-financing share of the EU will be increased to 70 per cent and in exceptional cases to 80 per cent, compared to the previous 50 to 75 per cent. It also envisages an increased use of flat rates and lump-sums. The programme is to remain centrally managed, ie with tasks such as selection and monitoring potentially 'outsourced' to an existing executive agency, for example the European Agency for Competitiveness and Innovation.

7.2 What is the current impact of the key funding measures on the achievement of the biodiversity target and what implications do the identified future developments have?

7.2.1 Potential current impact

It needs to be emphasised that the LIFE programme is designed to contribute to the achievement of EU biodiversity targets, including in particular the implementation of the Birds and Habitats Directives as well as more widely promoting the integration of biodiversity into other policy areas. Though the instrument's budget is rather small it plays an important role as catalyser and in leveraging financing for biodiversity across different policy sectors (GHK et al 2011). By improving general environmental conditions it also more largely benefits biodiversity conservation by reducing some of the pressures facing biodiversity, including climate change, air pollution and poor water quality. It can be assumed that the benefits by far exceed the potential negative impacts resulting from projects it finances. Nevertheless, risks remain that might be overlooked by focusing on individual environmental benefits across projects and not considering their wider potential negative impacts or win-win situations. Negative impacts can also result from the re-direction of the limited funding available for biodiversity and nature conservation to other funding streams, less directly

profiting biodiversity and at the same time at risk of its loss and the services it provides (eg, resource efficiency).

Measures: The LIFE+ programme supports projects under three thematic components: LIFE+ Nature and Biodiversity, LIFE+ Environment Policy and Governance (EPG), and LIFE+ Information and Communication. A minimum of 78 per cent of the LIFE+ budget (roughly €1.5 billion) is to be spent on action grants for projects in the Member States, whereas the remaining 22 per cent is to be spent directly by the European Commission in the form of operating grants and public procurement. Of the €1.5 billion for Member State projects, at least 50 per cent is 'ring-fenced' for the Nature and Biodiversity component. Annex I lists the types of measures eligible for co-funding. It needs to be emphasised that these explicitly exclude routine environmental spending on infrastructure for water or waste management, or on pure research. Rather, LIFE+ focuses on innovative, best practice, or demonstration projects and measures. Campaigns aimed at raising public awareness of and participation in EU environment policy are also eligible, as are monitoring and training in relation to forestry and fire prevention. According to a survey of project beneficiaries in the recent impact assessment and ex-post evaluation of the LIFE+ programme (GHK et al 2011), the annual investment costs of the programme based on expenditure in the first three years amounts to €199 million for the nature strand, €233 for the EPG strand and €17 million for information and communication.

Activities: In the context of the LIFE+ nature and biodiversity stream, financed activities particularly focused on the implementation of the Birds and Habitats Directive and the Natura 2000 network (GHK et al 2011; GHK et al 2010). These included activities related to administration and communication (e.g. the establishment of management plans as well as network activities and tourism management), conservation and restoration activities as well as land purchase. In addition, financing was provided to activities contributing to the achievement of the biodiversity objectives to halt biodiversity loss, including for example the conservation of high nature value farming, restoration of ecosystems outside Natura 2000 or the development of action plans (eg, urban bee biodiversity action plan) (GHK et al 2011; GHK et al 2010). EPG activities referred to inter alia developing a new approach / technique / process for monitoring of environmental impacts within a municipality or sector; introduce methods and action plans for reducing environmental impacts; informing policy; assistance in purchasing infrastructure / capital costs that reduces environmental impacts (e.g., purchasing a biofuel production plant); good practice / produce instructions / tools / kits/ guidelines to industry (eg, sustainable tourism management model); testing and demonstrating / developing a technology / technique / process / product that reduces environmental impacts within a municipality or sector (eg, demonstrating technologies that reduce urban pollutant loads in waters)

Impact: Assessments of the environmental impacts of the LIFE+ programme mostly focused on the environmental benefits achieved or not achieved. Little to none information is available on the potential negative impacts the funding of certain environmental activities might have on others and biodiversity in particular. For example information might be available to what extent a project has contributed to reducing emissions, but no information is collected whether this might have led to trade-offs for biodiversity objectives. As most of the potential negative impacts could result from spending on environmental infrastructure in relation to water and waste management, it needs again to be re-iterated that these types of investment were excluded from financing under the current LIFE+ programme. In addition, due to its small budget the LIFE+ programme provides funding for best practices mainly and as such the impact can be considered minimum compared to other funding streams. However, it also needs to be emphasised that the funding instrument is assumed to have quite a catalytic effect and as such the financing of some potentially harmful activities, for example linked to development of certain technologies, can have widespread effects. In this regard it is particularly relevant to mention that the programme has sometimes been criticised of not

following-up on projects it has been financing (GHK et al. 2011; GHK et al 2010). Negative impacts on biodiversity and nature conservation from LIFE+ often are also strongly related to the effectiveness of financing under the related strand. For example, a report by the European Court of Auditors (2009) criticised that at the outset of projects, the selection procedure adopted by the Commission did not have enough emphasis on sustainability when scoring projects for their suitability. Sustainability should be a core component of all projects and was considered particularly relevant to nature conservation projects where restoring and protecting habitats and species is more often than not a long term process.

7.2.2 Potential future impact

Measures: Based on identified priorities, the new programme has been divided into two sub-programmes, environment and climate action. In the previous programme, climate change was covered under the thematic component 'Environment Policy and Governance', but now figures prominently as a sub-programme. The main argument used for this change refers to the new importance given to the issue of climate change in Article 191 of the Treaty on the Functioning of the European Union (TFEU). 'Climate Action' has been allocated €904.5 million (€800 million in constant prices ie according to the base year; €46 million to administrative issues) of the budget, and includes the three specific priority areas 'Climate Change Mitigation', 'Climate Change Adaptation' and 'Climate Governance and Information'. The sub-programme environment has been allocated a budget of €2,701 million (€2,400 in constant prices; €113 million to administrative issues), and includes the priority areas 'Environment and Resource Efficiency', 'Biodiversity' and 'Environmental Governance and Information'. The latter replaces the LIFE+ topic on 'Information and Communication', with a shift in focus to more actively promoting the dissemination of knowledge for decision-making, in addition to awareness raising campaigns. The proposal recognises the importance of funding biodiversity by including the requirement that at least 50 per cent of the resources provided to projects by action grants should be dedicated to supporting biodiversity and nature conservation.

Activities: Specific objectives have been outlined for each of the three areas of the climate change sub-programme, which with regard to mitigation should particularly contribute to greenhouse gas monitoring and reporting; policies relating to land use, land use change and forestry (LULUCF), emissions trading systems, renewable energy, energy efficiency, transport and fuels amongst others. Concrete examples of funding possibilities for climate change adaptation have not been outlined in the proposal. Funding under the environment sub-programme will be closely linked to the new EU Biodiversity Strategy, and the implementation of the Habitats and Birds Directives and Natura 2000 management. Also, the introduction to the proposal reiterates that priority should be given to Natura 2000 financing and in particular to the Prioritised Action Frameworks envisaged under Article 8 of the Habitats Directive. Expenditure on 'Environment and Resource Efficiency' on the other hand will be closely related to actions envisaged in the 'Roadmap to a Resource-Efficient Europe' and the implementation of the Water Framework Directive, as well as waste and air quality legislation. Market-oriented private sector innovation is to be covered by the future Horizon 2020 programme.

Impact: The overall budget under the new LIFE programme has seemingly increased compared to the previous LIFE+, although it still forms a very small part of the EU budget (totalling 1,025 billion in constant prices which represents 0.3 per cent of the 2014-2020 MFF). A direct comparison remains difficult, particularly in relation to biodiversity funding, due to several substantial changes to the allocation of resources. This for once refers to the more prominent role climate change plays and the fact that the new sub-programme takes up a large share of the increase. To what extent this covers ecosystem-based approaches to climate change mitigation and particularly adaptation remains rather opaque as it has not been clearly outlined in the proposed Regulation and description of activities to be financed. In addition, it needs to be highlighted that financing of infrastructure is now

not necessarily excluded, unlike in the previous programme. There is thus the risk of harmful impacts and missing important synergies if collaboration and cooperation between the related institutional actors is lacking and no appropriate safeguards are in place. On the other hand, this focus offers important opportunities for taking forward integrated approaches to climate change and ecosystem services protection. In addition, though it is stated that action grants will remain the main type of intervention, the exact allocation of funds to them remains unclear (LIFE+ required a share of 78 per cent). Although at least 50 per cent of the action grants have been allocated to biodiversity, it is, at least at this stage, not possible to determine the exact financing to be allocated to biodiversity and Natura 2000 and whether this has increased compared to the previous programme. Related information might only become available when the progress of the programme is assessed; given the tracking of biodiversity expenditure is a requirement under the 2014-2020 MFF. However, the methodology on how this is exactly to be achieved has not been provided in detail. Ambiguity on the share of innovative financial instruments bears the risk that it remains unnoticed if funding is substantially shifted from grants to equity and debt instruments to leverage private financing instead of being additional.

7.3 Stipulation of safeguards in place

What potential tools are in place to support biodiversity-proofing, and which tools are planned to be introduced under forthcoming policy reforms?

Current.....

- Multi-annual strategic framework: First developed for half-term 2007-2010 as part of the Regulation. A strategic programme for 2011–2013 decided by the LIFE+ Committee. It sets out detailed objectives and priorities for the different financing strands.
- National contact points: Following the annual call for proposals, applicants to the programme must submit their proposals to the competent national authority of the Member State in which the coordinating beneficiary is registered. Member States forward project proposals to the European Commission, and may set national priorities and may prepare comments on proposals, in particular in relation to national annual priorities.
- Eligibility criteria: general eligibility criteria refers to the projects' significant contribution to the objective of the programme, their technical and financial coherency, ensure EU added value and where possible the promotion of synergies across the objectives of the 6EAP.
- Methodology of project selection procedure for 2008-2013 in accordance with Article 6 of the LIFE+ Regulation: The LIFE Unit of the Environment Directorate General is responsible for the evaluation procedure. It will verify the admissibility, exclusion and eligibility, the selection and the award criteria and propose to the LIFE+ Committee a list of project proposals for co-financing, according to the criteria outlined in the "Guide for the evaluation of LIFE+ project proposals" which is published each year with the call.
- Monitoring indicators: This includes tables on initial output indicators as well as final outcome indicators and according guidelines for project beneficiaries.
- Ring-fencing: 78 per cent of planned expenditures have been ring-fenced for action grants, of which at least 50 per cent for biodiversity and Natura 2000.

Upcoming.....

- Multiannual work programmes: These should lay out their duration, allocation of funds between each priority area and between different types of funding within each sub-programme (eg, action grants and debt and equity instruments), selection and award criteria for grants, and
- Specific but non-exhaustive (to keep flexible) priorities linked to specific targets to be assessed by defined indicators. These will be defined by implementing acts. Indicators will refer to

expected outputs and final outcomes (see above) at project level and expected outputs at programme-level.

- Tracking of biodiversity expenditure: To be established as part of requirements for the next MFF though methodology remains unclear; to be derived from the OECD "Rio markers".
- Executive agency: As part of the new proposed Regulation the possibility will be explored of delegating to a large extent the selection and monitoring tasks to an existing agency such as the European Agency for Competitiveness and Innovation, while keeping the governance of the LIFE Programme within the Commission.
- Ring-fencing: 50 per cent of action grants still to be ring-fenced for biodiversity and Natura 2000, though the share for action grants remains now unclear as not specified, as unsure how much would be needed to be dedicated to the use of new financial instruments.

7.3.1 Challenges to intervention

Which tools are missing and what are challenges to their introduction such as degree of political difficulty in changing political path-dependencies, institutional arrangements, closed actors networks or dealing with insufficient administrative capacities

One of the major problems related to the current implementation of LIFE is the absorption capacity in Member States, which sometimes is severely limited. Insufficient administrative capacities on Member State level can lead to poor dissemination, guidance and monitoring and an overall weak application process, particularly in smaller EU Member States and in the EU 10 that lack expertise with European application processes. Another recurring problem relates to the sustainability of projects. Oftentimes the lifespan of funded activities does not last beyond the duration of the LIFE funding. Ensuring a long-term and independent impact is a critical challenge for Member States and hence also the selection of projects that have good prospects of running on their own after LIFE funding ceases to exist. Adopting a stronger top-down approach will help with priority setting, but priority setting also needs to remain reflective of Member State needs. Good communication is therefore essential.

In the future, LIFE will be informed through the work agenda of two different Directorate Generals in the European Commission, requiring increased coordination effort to tackle potential problems of policy incoherence and negative trade-offs. Making sure that potential infrastructure investments are not overly harmful for biodiversity will require improving on the safeguards, both with regard to requesting clear ex-ante information on their biodiversity impacts in the application procedure and tracking and monitoring project developments afterwards. As the Commission envisages opening LIFE for financial engineering, clear directions will need to be set up for the use of innovative financial instruments. Attention needs to be paid to maintain a strict focus on overall impacts of projects and not simply focusing on potential to leverage a high amount of additional private investment.

7.4 References

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