

Shared knowledge for managing Special Areas of Conservation

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BuSK – Building Shared Knowledge capital to support natural resource governance in the
Northern periphery - 2016-2019



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PREFACE

The BuSk project has at its core the challenge of acknowledging, combining and making use of local, scientific and other expert and relevant knowledge, and reconciling these in decision-making related to various land-use modes. As part of this challenge one of the objectives of Work Package 2 was to explore the ways in which Special Areas of Conservation were managed, utilized and contested within one of these peripheral rural areas, namely the West of Ireland.

The idea of putting together a ‘best practice’ guide is a difficult challenge. The reason such a guide is not as straight forward as perhaps one might first assume is largely due to the fact that each and every Natura Site for example, is protecting a different type, or combination, of species or habitat. Adding to this task is the realization that each landscape, even if it has the same reason for designation, is different due to other factors with any best practice serving only as a response to the issues affecting those particular protected elements (e.g. land abandonment, overgrazing, scrub encroachment etc.). Consequently each example requires its own best practice – a classic illustration being that of the BURREN Programme with its best practice guides produced for its specific area based on its specific requirements (see Sections 3, 5 and 7). Furthermore, any attempt at a broader conceptualization of a best practice guide would also have to be cognizant of land ownership and the vagaries associated with this such as privately owned land or commonages. In addition, any best practice scenario would also have to be attentive to issues such as farmer or community capacities; local leaders and/or activists; funding opportunities and constraints and wider institutional arrangements.

This report then draws on our previous work in terms of literature reviews and empirical findings regarding issues of designation, communication, funding, procedural issues etc. as carried out in Western Ireland as part of the BuSK project. While the focus of BuSK related to the northern peripheries, it was felt that for the purpose of ‘best practice’, examination, where useful, of areas outside of the northern peripheries (examples are taken from Africa, Germany and France) would be useful to enhance the debate around the conservation, management and utilization of these often fragile environments. These issues (designation, communication, funding, procedural issues etc.) are used as key principals that need to be addressed. Once the principal is stated, best practices are explored in terms of how these principals might be operationalized. The report thus

presents a set of guiding principles and best practices. It follows a standard format. First a principle is set out and addressed, this is followed by a best practice with examples (where possible) and, lastly, relevant tools are listed.

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1 INTRODUCTION

Many of the habitats and species that are protected under the Habitats and Birds Directives are dependent on, or associated with, agricultural practices. These habitats and species are now dependent on locally tailored extensive farming systems and practices for their continued survival. Yet, in the last 50 years, through the combined effects of farm intensification and land abandonment, farmland biodiversity has undergone a dramatic decline.

The importance of farmers for the Natura 2000 network is reflected in the fact that farmland makes up around 40% of the total area included in Natura 2000. Because a high level of biodiversity usually coincides with low agricultural productivity, most of the farmland in Natura 2000 is located in the more marginal farming areas. Most of the low intensity farming systems that are included in Natura 2000 have usually developed over time, with farm structures and farming practices being closely adapted to local conditions (Oppermann et al, 2012).

Abandonment of extensive traditional farming practices is the most important pressure on key farmland habitats and species of Community interest. The second most important pressure on key farmland habitats and species is the intensification of management. This has led to significant changes in agricultural habitats, such that many of the natural and semi natural elements that remained have been lost resulting in highly modified and simplified agricultural systems. Many of the habitats are affected by a combination of abandonment in some areas and intensification in other areas.

Insight from case studies show us that farmers were conscious and proud of their natural and cultural landscapes, traditional buildings, and traditional agricultural practices. They recognised the need for sustainability through the preservation and maintenance of the landscape but highlighted several challenges that they felt they faced in trying to continue to farm. Designation of lands was a highly contentious issue, as it was perceived that regulations were implemented with insufficient consultation or flexibility. Many stated that they did not fully understand the

objectives of many of the restrictions and felt they were unfairly bearing the costs of providing public goods.

While many of the farmers indicated that they would keep farming, it appears much less certain that future generations will follow. In addition, farmers indicated that it may not be possible for farmers to maintain traditional practices as the necessary skills are being lost. It was felt that while they may continue to farm, the way in which they do so is likely to continue to change (such as grazing regimes used), thus influencing the landscape and how it is 'managed'. Due to farm consolidation, the average farm is becoming increasingly larger and more fragmented. This in turn leads to reduced levels of agricultural management and the threat of partial or complete land abandonment, with negative implications for the cultural landscape and biodiversity.

As national governments are asked to incorporate biodiversity and conservation into their work and plans, it must be recognised that due to the variety of protected species and habitats and different landscapes there can be no definitive, authoritative guide to this in all its manifestations. Therefore, a best practice set of guiding principles appears to be the most appropriate way forward.

This report builds upon the findings from its case studies and presents a set of guiding principles and best practices. It follows a standard format. First a principle is set out and addressed, followed by a best practice, then examples (where possible) and lastly, relevant tools are listed.

2 PRINCIPAL: COHERENT INTEGRATED POLICY

While legislative context may appear complex, at first glance it might also appear to be unambiguous. However, it is important to recognise that approaches on the ground to the implementation of policies can differ depending on the context of the partner or stakeholder – or actors as they are referred to in the literature. It is therefore imperative that policies are coherent, integrated and fit for purpose.

Farmers' willing participation and sense of ownership of policy measures that impact their farming practices is vital to the effective implementation of these policies. It is important that farmers are involved in developing policy measures, including agri-environmental scheme design and commonage destocking, in order to better meet both the conservation or policy objectives, and those of the farmers.

2.1 Best practice

Policies:

Policies need to be informed (scientific local evidence), appropriate, flexible and adaptable in order to serve farmers and be usable in protected areas. Effective governance is integral to successful policy.

Governance:

Over the past number of decades there has not only been a significant increase in the number of protected areas around the world, but also a dramatic change in understanding about how protected areas can, and should, be governed and managed. While there is still a predominance of state-run protected areas, it will be imperative that other stakeholders are brought into the process of decision-making.

The multiple uses and fragmented ownership of land designated as Natura 2000 means that conservation measures will more often than not touch upon the interests of a wide variety of

stakeholders. Herein lies the challenge– policy makers, landowners, local businesses and different sectoral interests (for example, agriculture, forestry, fisheries, recreation, tourism), local communities, nature conservation agencies and NGOs are just some of the stakeholders who can have interests in and influence over the management of a Natura 2000 site.

For effective governance to take place it is necessary to develop partnerships among farmers, policymakers and researchers and all other stakeholders involved in conservation and use of agrobiodiversity. In Protected Areas where small farm holdings may be typical it will be necessary to have a special focus on traditionally-excluded constituencies: smallholder and subsistence farmers, women farmers, etc.

2.1.1 Example 1: Integrated and Coherent Policy

Issues of conservation are multidimensional and therefore cross sectoral. One approach to help coordinate policies is to identify policy gaps and coherence policy gaps. Policy gaps and coherence policy gaps could be said to occur where it can be recognised that relevant policies are not being implemented, if a policy type is under-represented, and if policies are not focused on the relevant drivers or pressure points. These issues are all relevant to understanding gaps in government, regional and local policy. The challenge is to develop a more coherent approach to the implementation of policy based on the analysis and identification of policy gaps.

Burren, Ireland

A relevant case study which demonstrates the value of this approach is the Burren Programme and its predecessor, the Burren Farming for Conservation Project (BFCP). Research conducted by Teagasc, University College Dublin and the National Parks and Wildlife Service in the 1990s highlighted a policy need to identify the important role that traditional farming practices, specifically winterage, plays in supporting the rich biodiversity and cultural heritage of the Burren. From 2005-10 the Burren LIFE programme developed the first major farming for conservation project in Ireland which placed farmers at the centre of the conservation agenda. It provided a pilot study for the development of a specific, targeted agri-environmental scheme since 2011 that was funded through the Department of Agriculture, Food and the Marine supported by the National Parks and Wildlife Service and managed by the Burren Programme.

The programme itself works with 200 farmers in applying the lessons of the policy gap analysis going back to the 1990s to support and incentivise farmers to maintain and enhance the habitats of the Burren (Dunford 2001; 2016).

2.1.1.1 Tools:

<http://www.burrengeopark.ie/wp-content/uploads/2018/05/Reviewing-Policy-Towards-the-Integration-of-Sustainable-Tourism-and-Conservation-Management.pdf>

2.1.2 Example 2. Lessons for Policy. Termoncarragh SPA, Mayo in Ireland.

Termoncarragh Lake is located on the Mullet peninsula in western Ireland amid extensive machair grassland. The decline in traditional agricultural activity in the Republic of Ireland, and the switch to more intensive methods, has had severe consequences for many birds associated with semi-natural habitats. Standard farm support payments, which are linked to agricultural good practice, generally do not tackle the root causes of such problems – what would be needed is support linked to ecological good practice.

Termoncarragh, a coastal freshwater lake and reedbed set amidst extensive machair grassland on the Mullet peninsula in north-west Mayo, is important for breeding waders and for wintering wildfowl, including barnacle geese *Branta leucopsis*, Greenland white-fronted geese *Anser albifrons flavirostris*, and whooper swans *Cygnus cygnus*. The corncrake, *Crex crex*, was also once a common sight here and still uses the area occasionally despite the recent population crash. There is consequently a high potential for restoration of suitable habitat for this species. The nearby Annagh Marsh, a small coastal machair and wet grassland site, was until recently the only regular Irish breeding site for the red-necked phalarope, *Phalaropus lobatus*. (need Ref here)

The economic mainstay for this district is low-intensity agriculture within small holdings. It is essentially based on subsidies, with low returns on the sale of farming produce. In the year 2000 an estimated 75% of farmers were in the Irish national agri-environment scheme (REPS), to help supplement their income. However this presented somewhat of a paradox in that the agri-environment scheme seemed to be hindering rather than encouraging the conservation of the local birdlife. Having not considered the species ecology or management needs during the design

stage, many schemes had either no impact on local wildlife or often turned out to be doing more damage than good. (need Ref here)

Demonstrating conservation friendly farming

Considering the generally negative attitudes of farmers to Natura 2000 site designation, (need Ref here) the inadequate linkages between farming and conservation and a lack of suitable demonstration areas to show bird-friendly practices, the conservation NGO BirdWatch Ireland, decided, in 2001, to undertake a three-year demonstration project with support from LIFE-Nature. It already had a landholding at Annagh Marsh and could use this foothold to establish a wider project, in partnership with Teagasc (the Irish state agricultural advisory service), to demonstrate birdlife-friendly farming.

The intention of this project was to turn constraints into opportunity, both for the birds and for the local community, by demonstrating that Natura 2000 could be a positive element in realising potential socio-economic benefits to disadvantaged rural regions. In close collaboration with both the government agencies responsible for REPS and farmers' associations, the project set out to formulate and demonstrate best-practice techniques for creating ideal habitat conditions for targeted Annex I birds. These then could then be taken on board during the mid-term review of REPS, so as to create a more targeted bird habitat enhancement dimension to the agri-environmental scheme. This would be accompanied by a positive information campaign to counteract previous negative perceptions of Natura 2000 designations and to encourage further uptake of the new REPS scheme.

To enable the demonstration of best-practice management for corncrake, a plot of meadow land was purchased with the aid of LIFE funding. A ten-year agreement was concluded with a farmer and during the project, various techniques of grazing, composting, etc... were tried out, with varying success, in a trial and error experiment.

Management agreements were also signed with an increasingly important number of farmers within the Termoncarragh SPA to carry out one of the following activities:

- various combinations of grazing with early/late cover and centre-out mowing for the benefit of corncrake
- grazing to create habitat mosaics for phalaropes
- for the benefit of wintering geese, combinations of retention of winter stubble (oats etc), sowing of forage crops, no winter grazing (need Ref here)

BirdWatch Ireland used these demonstration sites as part of a series of training days run by its partner Teagasc for farmers entering the Rural Environment Protection Scheme (REPS) in Ireland. These proved to be very popular, with over 200 farmers attending in the period of the project.

Influencing policy

The medium to long-term aim of this process was to use this demonstration project to influence and support new prescriptions and options in future REPS. The project had to ensure, therefore, that its messages were reaching policy makers in agricultural and conservation bodies.

This was achieved quite successfully: experience gained in Termoncarragh was fed into the mid-term review of REPS 2 by Teagasc in 2003. This contributed to the revised REPS 3 in 2004, which increased baseline payments and brought in a new set of 'biodiversity options' within the agri-environment scheme. In June 2004 a new REPS measure specifically for corncrake, based on the LIFE project, was prescribed and became available to farmers.

2.1.2.1 Tools:

Project reference

- LIFE00 NAT/IRL/007128 Restoration Management for Annex I Birds at Termoncarragh Lake SPA

Read more

- LIFE database of projects/[environment /life/project/index.htm](http://www.birdwatchireland.ie) Project website: <http://www.birdwatchireland.ie>

2.1.3 Example: Governance in practice SUAS Project, Wicklow

A set of “good governance” principles can be taken into account vis-à-vis any protected area system or site. These principles provide insights about how a specific governance setting will advance or hinder conservation, sustainable livelihoods and the rights and values of the people and country concerned.

The SUAS Project is a European Innovation Partnership (EIP) funded by the Department of Agriculture, Food, and the Marine (DAFM) under the Rural Development Programme 2014-2020. EIP-AGRI projects are centered on a locally led operational group, which involves the cooperation of farmers, scientists, advisors, NGOs and others, coming together to address a specific issue or to take advantage of a new opportunity. The Wicklow Uplands Council assembled an Operational Group with a range of expertise and experiences to support the SUAS project. Members of the Operational Group include upland farmers along with experts in hill production, agri-environment, ecology, rural development, water quality, conservation, public relations, administration and finance. Stakeholders in the project include, Wicklow Uplands Council, Teagasc, Department of Agriculture, Food and the Marine, Department of Culture, Heritage and the Gaeltacht, The Waters and Communities Office and UCD.

In addition to this, members of the SUAS project participate with external structures and bodies. For example on the Board are Wicklow County Tourism, Heritage Forum, Recreation Committee, Joint Policing Liaison Committee, Irish Uplands Forum, Dublin Mountains Partnership, Wicklow Animal Welfare Forum, Wicklow Public Participation Network. By engaging with decision makers, Wicklow Uplands Council ensures that the views and diverse needs of the upland communities are highlighted and addressed. This also facilitates a two-way communication process whereby representatives report back to the Wicklow Uplands Council Board of Directors.

2.1.3.1 Tools:

<http://www.wicklowuplands.ie/suasproject/>

Technical tools such as the IUCN/WCPA *Best Practice Guidelines on Governance of Protected Areas* and the *Primer on Governance for Protected and Conserved Areas* are available to offer guidance. Networks of experienced and concerned professionals were created at the 2014 World Parks Congress in Sydney (WPC 2014) and The Governance Stream at WPC 2014 has provided a set of three strategic directions and twenty recommendations to clearly outline the work that is required.

<https://www.iucn.org/commissions/world-commission-protected-areas/our-work/governance>

3 PRINCIPAL: DEVELOP APPROPRIATE PARTNERSHIPS

Just as communities and the private sector have distinct and critical roles to play in the conservation of agricultural conservation resources, it should be recognised that in almost every successful campaign to promote on-farm conservation, a broad array of institutions have taken a role. Part of a national strategy should be to give official recognition and support to those institutions playing an intermediary role between communities and government agencies.

3.1 Best Practice

NGOs and research organisations can help to facilitate local, regional or national participation.

They vary greatly in their aims and capacities, from being highly technical or delivery oriented, to acting as advocates for community rights or environmental conservation. Such organisations may be particularly effective in developing a special focus on supporting the rights of traditionally-excluded constituencies: smallholder and subsistence farmers, women farmers, etc., and ensuring that they have the opportunity to participate in decisions about proposed programmes.

3.1.1 Example: Burren Programme (BP)

The BP, which initially targeted habitats, works closely with the Heritage Council and NMS to support a local ‘Field Monuments Advisor’ who advises farmers on their cultural sites, uncovering 240 previously unrecorded monuments in the process. Collaboration with Bord Bia has helped put Burren farmers on the national map in marketing Irish beef overseas while also recognising their achievements through the ‘Origin Green Farming for Conservation Awards.’

3.1.1.1 Tools

- Certain international and regional NGOs focus on providing guidance on these issues at national and community levels. Links to many of these can be found at:
<http://directory.google.com/Top/Science/Environment/Biodiversity/Agricultural/> or via the “links” on the www.ukabc.org web page.

- One approach to develop common purposes among different organisations and a definition of each partners' responsibilities is to use project planning and management tools in stakeholder meetings. A sourcebook that explains the use of such tools is available at: <http://www.worldbank.org/html/edi/sourcebook/sba102.htm>

4 PRINCIPAL: COMMUNITY PARTICIPATION

A key part of the success of conservation approaches is the level of participation of local communities and stakeholders. This argumentation is in line with several policy documents: The Convention on Biological Diversity (United Nations, 1992), the European Landscape Convention (Council of Europe (2000)), the Aarhus Convention (UNECE, 1998) and the Strategic Plan 2009e2014 of the Economic Commission for Europe (UNECE, 2008) express the potential and need to involve local people in landscape management and planning.

4.1 Best practice:

In addition to more direct “interventions”, it is critical for both agricultural and biodiversity planners to recognise that communities, and community groups, are their allies. Indirect forms of support and planning for community mobilisation, awareness raising and capacity building are also key to biodiversity conservation. It is critical to encourage and facilitate formation of community-based groups/community based organizations who participate fully in planning and management and to encourage the use of mass media and other avenues to regularly provide information.

There are a number of key advantages to community and stakeholder participation. These can include greater evidence base and diversity of views to improve decision making, increased trust between stakeholders and increased support for interventions.

To engage stakeholders it is necessary to be cognisant of a range of factors for example location, culture, heritage, traditions, employment (time of year will be relevant to farmers time availability) and profile of stakeholders. This will enable a targeted and relevant approach to community or stakeholder engagement. It will require innovation and resources.

4.1.1 Example 1: Innovation for Community Engagement in Conservation and Poverty Alleviation (ICECOPA) Kanungu, South Western Uganda

In this project dissemination and engagement with conservation issues is occurring through culturally relevant events.

Innovation for Community Engagement in Conservation and Poverty Alleviation (CECOPA) is an inclusive project being implemented under Tree Uganda Academy (TUA). Tree Uganda Academy is an eco-inclusive, social action, research and advocacy community-based organization established in July 2017, with an aim of making improvements in Environmental Sustainability and People's welfare.

ICECOPA project, is being applied through Formation of Tree Academy Groups (TAGs) at Parish level under the Village Savings and Loan Association (VSLA) Model, and Tree Academy Clubs (TACs) in Schools. Capacity building takes place with community members in their respective Groups and Clubs, equip them with conservation knowledge and skills as well as provide means of access to essential ecosystem services to better involve them in problem solving and ensure climate justice.

Therefore, it becomes possible to empower and work with community members to fight against the increasing destruction of Ecosystems, Poverty and Climate change. Steps involved include:

Steps:

- Information dissemination through Music Dance and Drama competitions among member groups
- Effective strategies set through group meetings to achieve environmental sustainability and approaches to properly account for the true full value of linked ecosystems and environment resource use.
- Practical engagement in conservation activities such as tree planting rehabilitation of protected areas and habitats.

“One of the biggest lessons we’ve learned over the last year is that conservation works best when local communities actively participate. Rather than protecting nature from people, we look for practical solutions that allow humans and other species to thrive together. Our work with tree

species and mountain gorillas in Bwindi and Mgahinga National Park shows just how successful this approach can be” (employee of the programme).

4.1.1.1 Tools:

<https://panorama.solutions/en/solution/innovation-community-engagement-conservation-and-poverty-alleviation-icecopa>

4.1.2 Example 2: Beach, Mohéli Marine Park The Parc Marin Mohéli, Comoros

This case study proved that community participation in PA management provides development benefits. They developed the project around three core building blocks.

- Revitalising community engagement in Park Management
- Community Action for Unsustainable Artisanal Fisheries
- Sustainable Agriculture in Watersheds and Vulnerable coasts

Pivotal to the solution, and an initial return to growth and sustainability, was the revived governance model and active restoration of trust and reciprocity between all stakeholders, particularly village community leaders and protected area management. This was the core building block that allowed improvements in Park management and allowed for commitment and incentives to implement the building blocks on sustainable fisheries and agriculture.

Re-addressing the institutional and governance framework for the Mohéli Marine Park has resulted in a more productive arrangement between local villages and protection authorities. Dialogue concerning impacts on local resources and livelihoods has moved from one of costs and claims to one of action and benefits. - Trade-offs between protection and exploitation have become possible and resulted in reduced impacts on marine and coastal ecosystems. New areas of ‘no-take’ zones have both increased ‘spill-over’ and recovery of key commercial species (octopus, holothurians) and provided strict biodiversity havens within the Mohéli island ecosystem. The active participation of villages in reducing watershed and coastal erosion are perceived as beneficial for their community, not just for the protected area.

4.1.2.1 Tools:

<https://panorama.solutions/en/solution/community-participation-pa-management-provides-development-benefits>

4.1.3 Example 4: Joint planning process for better pastoral paths and grazing areas layouts in RNCFS d'Orlu, Ariège.

A joint definition of pastoral clearings, organised by a group including all the stakeholders from the protected area, started up in 2014 to improve efficiency of pastoral paths and grazing areas layouts. During two field sessions, before and after clearing works, the representatives of the landowner and the manager (ONCFS) of the protected area, the livestock farmer and the company in charge of field clearing, reviewed together all the concerned areas (200 ha) to:

- compare individual stakes (related to pastoral or ecological issues),
- define the range and the local conditions of clearing
- and finally evaluate their quality.

By comparing interests and issues, sharing solutions and decisions, this process ensured transparency in work planning, social acceptance, appropriation by and better involvement of local stakeholders in the conservation policies implemented by the protected area manager.

4.1.3.1 Tools:

<https://panorama.solutions/en/solution/joint-planning-process-better-pastoral-paths-and-grazing-areas-layouts-rncfs-dorlu-ariege>

4.1.4 Example 5: Innovative initiatives

Award programmes

Some programmes incorporate awards in order to raise awareness. For example, The Mulkear EIP will establish an annual award programme entitled the “Mulkear Catchment Sensitive

Farmer Award” to acknowledge and support farmers who show real commitment to farm to improve natural water bodies and biodiversity. The Mulkear EIP will also annually nominate a Mulkear farmer to the recently established National Farming for Nature Award.

Educational Initiatives

Outreach education initiatives are a very effective means of engaging the community. For example, the Geopark in the Burren, Ireland, has a very interactive outreach programme. For example, it operates:

Schools Environmental Education – Integrated Catchment Management Programme

As part of our GeoparkLIFE project they developed a programme for secondary school children. Working with Dr. Tiernan Henry of the Earth and Ocean Sciences Department, and Dr. Gesche Kindermann of the Centre for Environmental Science in NUI Galway they undertook a project with the transition year students of Mary Immaculate Secondary School Lisdoonvarna that looked at the integrated management of their local water.

Universal Access Heritage Education Programme

The Burren & Cliffs of Moher Geopark has engaged with the Brothers of Charity, Ennis and local walking and heritage guide Tony Kirby to run a pilot project to open up the Burren landscape for people with physical and intellectual disabilities.

5 PRINCIPAL: APPLY APPROPRIATE SCHEME TO RELEVANT SPECIES OR HABITAT REQUIREMENT

National agri-environmental schemes targeting often abstract national objectives may provide cash and buy limited commitment, but it is increasingly recognised that they are not suited to guiding farming practices in protected areas. For many farmers, farming is multi-generational and is interconnected with a deep-rooted rural fabric made up of society, economy and environment. In some of these areas, existing farming systems and practices are already compatible with the conservation of the species and habitats for which the site has been designated under Natura 2000, and the emphasis will be on finding ways to continue to support these farming practices and give due recognition to the farmers involved. In others, traditional farming practices may have been abandoned or converted to another form of farming that is less compatible to nature, in which case it will be necessary to find ways to re-introduce compatible farming systems or adjust existing practices so that they are able to contribute once again to the conservation of the habitats and species of Community interest for which the site has been designated.

Locally-Led Agricultural Environmental Schemes (LLAES) have been identified as having significant potential to bring innovative solutions to bear and to ensure sustainable land management.

5.1 Best practice

A farmer-led results-based approach has been shown to have positive impacts on the condition of habitats and species. The Burren Programme is held up as a best practice example of LLAES across Europe while the Mulkear project is moving forward under a new European Innovation Partnerships Initiative (EIP) under the Rural Development Programme 2014-2020 (RDP). It is a new co-operation measure under Article 35(1) of the regulation. EIPs promote local solutions to specific issues and involve the establishment of Operational Groups (OG) to develop ideas or take existing ideas/research and put them into practice by being hands on in terms of working towards the resolution of a practical problem.

5.1.1 Example 1: Burren Programme

This innovative programme takes a farmer led approach where the farmer nominates and co-funds conservation actions on their farm, giving them the freedom to farm. What makes the Burren different is that it combines these actions with a results-based payment. To ensure that the desired results are achieved payments are made to farmers based on the environmental condition of their farm. Essentially each field gets a quality score and farmers who deliver the best environmental outcomes receive the highest payments. Key to its development and success has been the local partnership approach where farmers, NGOs, state agencies and government departments came together to find locally tailored and practical management solutions. This partnership is solidified in the implementation of the scheme where the farmers tailor the scheme to their farms and are supported by a dedicated project team, steering group and farm advisors.

McGurn and Moran (2013) and Keenleyside et al. (2014) explored how a LLAES might be rolled out at national level in Ireland and across the EU. McGurn and Moran (2013) demonstrate how the Burren Life Project approach—in particular, the field scoring system—could be adapted and applied to other areas of High Nature Value (HNV)—of which there are over one million hectares in Ireland—in a report on ‘A National Outcome-based Agri-environment Programme.’ Proposing a BLP-like hybrid AES to target areas of semi-natural farmed vegetation (heathlands, semi-natural grasslands, breeding wader sites) at a cost of €127m, the authors claim that ‘the development of a cost effective, targeted, outcome-based agri-environment programme has the flexibility to encompass all farm types; will encourage the maintenance and restoration of Ireland’s semi-natural agricultural habitats and associated ecosystem services (C sequestration, water quality and storage, biodiversity, landscape, cultural heritage, etc.); meet Ireland’s legal obligations to protect and improve the status of our species and habitats; and help maintain the agrarian presence that is an essential component of our rural landscape.’

Some of the key differences that distinguish this AES approach from others include:

- Simplified farm plan and paperwork
- Unique field scoring system

- Hybrid payment structure
- Farmer input
- Farmer awards

http://files.nesc.ie/nesc_research_series/Research_Series_Paper_9_BDunford_Burren.pdf

Moran outlines a suggested 10 step plan to develop a LLAES proposal that may be useful to local groups interested in LLAES. As can be seen local partnerships will need considerable support to develop meaningful proposals. Emerging groups should be supported as LLAES have significant potential to develop results orientated and innovative solutions (<https://www.catchments.ie/locally-led-agri-environment-schemes-innovation-partnership-locally-adapted-results-orientated-solutions/>).

Steps	Considerations
1. What is the environmental/biodiversity goal for your area?	Current priorities = Hen Harrier, Pearl Mussel Catchments and Upland Peatlands. Set goals related to yours selected priority
2. What is the environmental baseline?	What is the current state of the target for your area? Use existing information where possible.
3. What is already paid for in GLAS?	LLAES must be additional to GLAS, double payment is not allowed.
4. Define specific target and location	What is your specific target in terms of land type and location? Should be informed by step 2.

5. Start developing proposals	At this stage the local group should assess if it has the expertise and resources to develop programme. Identify if there is local support available?
6. Build understanding of the relationship between farm management and your environmental target	What are the qualities of a field/farm that provide the optimum conditions to achieve your environmental goal. Can a set of costed actions be developed that are linked to the achievement of optimum condition?
7. Development of indicators of success	Can a simple set of variables be selected that can be used to measure the delivery of the required result for the environment? Used as a basis for payment for result.
8. Are landscape-scale measures required?	Is there a need for groups of farmers to work together to deliver the required results? If desired this will add additional complexity that needs to be taken into account in scheme design.
9. Identification of institutional capacity to deliver	Need to ensure sufficient resources (financial and staff) will be available for ongoing implementation, monitoring and evaluation if proposal is successful. Ensure running costs are built into proposal.

10. Draft proposal developed and ready for call.

Includes: Scheme outline for area covering geographical extent; Target species/habitats; Scheme requirements; Detailed costings including resource requirements for ongoing implementation, monitoring and evaluation.

5.1.1.1 Tools:

- Keenleyside, C., Radley, G., Tucker, G., Underwood, E., Hart, K., Allen, B. & Menadue, H. (2014) Results-based Payments for Biodiversity Guidance Handbook: Designing and implementing results-based agri-environment schemes 2014–20. European Commission, DG Environment, No. ENV.B.2/ETU/2013/0046, Institute for European Environmental Policy, London.
- McGurn, P. & Moran, J. (2013) A National Outcome based Agri-environment Programme Under Ireland’s Rural Development Programme 2014–2020. Report produced for the Heritage Council. November 2013.
- [Burrenprogramme.com](http://burrenprogramme.com)
- <http://burrenprogramme.com/resources/>

This webpage has links to resources used for and during the Burren Programme.

5.1.2 Example 2: Mulkear EIP

The Mulkear EIP project is bottom-up in its design and nature and will be run by Mulkear Catchment Limited and wider support groups supported by the Department of Agriculture, Food and the Marine. The Mulkear EIP project is focusing on innovative measures to progress the advantages of conservation and agriculture. The project commenced in April 2019 and will run until at least December 2023 implementing a 5-year work programme with local farmers.

It is a partnership approach (multiple stakeholder- EIP, Mulkear Farmers, IFA, ICMSA, Teagasc, LAWCO, LAWSAT, ASSAP, Dairygold and two Local Authorities) focused on enhancing water quality and sustainable water management on farms by adopting a catchment approach and

implementing a suite of innovative catchment sensitive farming measures to support farm viability and biodiversity. The project will be implemented across Counties Limerick & Tipperary and has a total budget of €1,172,830.

Its key innovations include:

1. Innovation in Approach: Mulkear EIP OG - highly committed, experienced and multi-skilled body of farmers and catchment management specialists.
1. Innovation in Local Catchment Assessment – Putting Theory Into Practice: A meaningful and practical suite of on-farm measures and innovation in local catchment assessment. It will develop local catchment assessments to allow for the identification of pollution concerns at a farm, sub-catchment and catchment level. This work will greatly assist in the further refinement of getting “the right measure in the right place”.
2. Results Based Payments Approach: To reward farmers in proportion to the environmental outcomes they provide, and the value of the service delivered. Used where the farm risk assessment demonstrates a need for a particular type of measure – moving away from the limitations of ‘one-size fits all’.
3. Reverse Auction Approach: A type of auction where the roles of the buyer (the Mulkear EIP) and seller (local Mulkear farmer) are reversed. Mulkear farmers will be invited to bid for what they are willing to be paid to undertake measures to support catchment sensitive farming and improve water quality.
4. Digital Story Telling Initiative (DSTI): The DSTI will allow local farmers to tell the story of catchment sensitive farming in the Mulkear and the interrelationship between water quality, farming and the natural and cultural heritage of the Mulkear Catchment.
5. Use of Drones: Drones will be used for river corridor assessments and survey work in target areas e.g. tunnelling along river corridors, unrestricted river access points, bank erosion and slippage, the identification of possible “Sources” in different weather periods, and actual “Pathways” in wet weather periods.
6. Network of River Champions: The EIP will establish of a Network of River Champions at a farm level, community and agency level. This Network will be supported by a citizen science programme.

7. Mulkear Conservation Volunteers: The Mulkear EIP will re-establish the Mulkear Conservation Volunteers to help protect, manage and enhance the natural heritage of the Mulkear Catchment.
8. Local and National Awards: The Mulkear EIP will establish an annual award programme entitled the “Mulkear Catchment Sensitive Farmer Award” to acknowledge and support farmers who show real commitment to farm to improve natural water bodies and biodiversity. The Mulkear EIP will also annually nominate a Mulkear farmer to the recently established National Farming for Nature Award.

(<https://www.mulkeareip.com/>)

5.1.3 Tools

<https://www.mulkeareip.com/>

<https://www.teagasc.ie/media/website/publications/2018/5.Teagasc-National-Agri-Envir-Conference-2018-Ruairi-O-Conchuir.pdf>

6 PRINCIPAL: MONITORING, EVALUATION AND REVIEW

Monitoring, evaluation and review are essential to assess the effectiveness and efficiency of measures in delivering their objectives, and to allow schemes and management practices to be adapted and refined over time.

6.1 Best practice

A suite of indicators specific to the CAP as a whole, and rural development policy in particular are established through the Common Monitoring and Evaluation Framework (CMEF). These include common context indicators for Natura 2000 areas, conservation status of agricultural habitats and HNV farming, to be applied in all Member States. Managing authorities may also put in place additional indicators relevant to their national/regional situation.

Monitoring should allow assessing the uptake and coverage of the measures, any possible difficulties and constraints for their implementation, as well as their impact in relation to the pursued conservation objectives. It is important to design monitoring schemes that can also be applied at farm level using suitable indicators that can be easily verified. Involving farmers in regular monitoring of the results achieved through their implementation of the required measures has proved to be very effective and a way to improve their participation in the implementation of the schemes. Wider public communication is also very important to create a positive image of the target species and habitats, and recognise those who make efforts to protect them (Olmeda., C., Keenleyside, C., Tucker G., and Underwood, E. (2018)

6.1.1.1 Tools

Hockings, M., Stolton, S., Leverington, F., Dudley, N. and Courrau, J. (2006). *Evaluating Effectiveness: A framework for assessing management effectiveness of protected areas*. 2nd edition. IUCN, Gland, Switzerland and Cambridge, UK. xiv + 105 pp.

7 PRINCIPAL: BEST PRACTICE GUIDELINES MUST BE CONTEXT SPECIFIC

Every landscape and place is different, and any best practice guidelines must be equally so. To implement policy at local level tools such as best practice guides must be accessible, usable and fit for purpose. A simple procedure that guides farmers and farming communities to identify and map resources, set targets to improve biodiversity and restore degraded habitats is necessary. Tools, indicators or lists must be locally adaptable and flexible for use and to ensure that it can link with existing biodiversity initiatives.

7.1 Best practice

Natura 2000 sites afford protection across a large spectrum in terms of size and scale, e.g. from a view, to a landscape. Therefore, it is necessary to use or develop a best practice guide for each protected site.

7.1.1 Example: Testing suitable land use methods for Steppes and their birds in Spain

In two LIFE-Nature projects in Steppes in Spain, the beneficiaries, the Regional Government of Extremadura's nature conservation department and the NGO Sociedad Española de Ornitología (SEO/Birdlife), tested different management models in farming estates to find ecologically sustainable agricultural models. The aim was to enhance the conservation status of the Natura 2000 habitats and species of the La Serena steppes with the help of local farmers.

In the SEO project, two farm estates were selected, chosen for their value for steppe birds, and an agreement reached with the owners/leaseholders that the estates would be managed during the LIFE project according to ecological guidelines. Data from these two pilot estates were compared with two other control estates which stayed under conventional farm management. Under the agreement, the farmers carried out their work under the technical supervision of the beneficiary, in return for a compensation for their effort.

SEO produced a management model at the end of the project for the La Serena Natura 2000 area which comprises an arable farming, livestock and game hunting management. It also worked out

technical guidelines for appropriate agri-environmental measures to continue the good practices defined by the project and transmitted them to the Regional Government of Extremadura in summer 2005. The Regional Government project, using the information it had gathered, elaborated a specific agri-environment scheme.

In addition to this, both LIFE projects helped to promote sustainable practices in the district. The actions undertaken triggered debate and expectation amongst farmers. They had an incentive effect: farmers not involved in the projects voluntarily applied some of the management actions, once they had seen the results obtained with these alternative methods. Sowing legumes proved particularly popular - it provides additional food for the sheep as well as for the birds in late summer when pasture is no longer available – and farmers expressed their intention to continue this practice on their own after the LIFE project.

Both projects brought together relevant stakeholders (different administrations, hunter and farmer associations and conservation NGOs) in several meetings, facilitating dialogue, a key asset for future decisions on the management measures to be applied in the Natura 2000 area. These meetings also discussed the wider issues farming in the region was facing, such as the lack of interest from local young people in the profession.

7.1.2 Example: Burren

As a result of various projects undertaken on the Burren an extensive baseline information has been established. This has facilitated a number of best practice guidelines for the different species and habitats in that area.

- [A Guide to Conservation in the Burren – BurrenLIFE Best Practice Guide No. 1](#)
- [The Agricultural Heritage of the Burren – BurrenLIFE Best Practice Guide No. 2](#)
- [Sustainable Grazing of Burren Winterages – BurrenLIFE Best Practice Guide No. 3](#)
- [A Guide to Feeding Cattle on Burren Winterages – BurrenLIFE Best Practice Guide No. 4](#)
- [A Guide to Controlling Scrub on Burren Winterages and Other Areas – BurrenLIFE Best Practice Guide No. 5](#)

7.1.2.1 Tools:

https://ec.europa.eu/environment/nature/natura2000/management/gp/farming/03case_steppes.html

There are numerous best-practice guides available. For example:

Byrne, Dolores and Moran, James (2018). Best practice guidelines for managing lowland species-rich grasslands and marsh fritillary grassland habitat in north-west Ireland. Report prepared for the European Union, Agreement No. 07.027722/2014/697042/SUB/B2.

This guidance has been prepared to assist farmers and landowners in understanding the options for managing their semi-natural grasslands to achieve optimal wildlife benefit and to provide practical information for integrating nature conservation into ongoing farm management.

Finney, K., Kelly, S., Edge, R., Donaghy, A. and Copland, A (2018). Breeding Waders - Best practice guidelines for farming for conservation on the Shannon Callows. Report prepared for the European Union, Agreement No. 07.027722/2014/697042/SUB/B2

This document has been prepared as a guide to the preservation and/or enhancement of habitat for breeding waders in Ireland. The term 'waders' is an umbrella term describing a range of bird species based on the common characteristic of foraging for food in and around water bodies or wetlands. While waders are found throughout the world, the four species covered in this document - curlew, redshank, lapwing and snipe - are found in Ireland and associated with farmland habitats, particularly lowland wetland.

Maher, Caitriona; and Copland, Alex (2018). Best Practice Guidelines for Shannon Callows: Species-rich Floodplain Meadows with Ground Nesting Birds. Report prepared for the European Union No. 07.027722/2014/697042/SUB/B2

This document provides best practice guidelines to allow farmers to optimise delivery of biodiversity on species-rich floodplain meadows.

Berastegi Gartzandia, A., Campión Ventura, D., Clavería Iracheta, V. & Iragui Yoldi, U. (2018). Perennial crops in the Mediterranean mosaic landscape, Best Practice Guidelines for Navarra. Report prepared for the European Union. Agreement No. 07.027722/2014/697042/SUB/B2

This document has been prepared as a guide to the conservation of both natural and human elements present in the Mediterranean hilly mosaic landscape which are widely recognised as being of high conservation value.

HNV-Link: High Nature Value Farming: Learning, Innovation and Knowledge (HNV-Link).
<http://www.hnvlink.eu/>

The HNV-Link Thematic Network was conceived as an innovation brokering process, coordinating and stimulating 10 High Nature Value (HNV) farming Learning Areas (LA) through 5 work packages (WP). Each Learning Area includes one or more Natura 2000 habitats. The aim is to contribute to the sustainability of HNV farming areas by helping to build capacity in the LA to develop and implement innovations addressing their specific HNV farming challenges and needs. The objective is to establish multi-actor groups, at the level of each LA, acting as active innovation brokers, able to sustain long-term territorial dynamic on HNV innovation, exchanging best practice and up to date research results. Each area has produced lessons and guidelines.

8 PRINCIPAL: FUNDING

Despite their universal appeal for recreation, tourism, conservation and ecosystem services, few if any natural protected areas in the world enjoy a fully funded status. This imposes limits both on the conservation programmes which can be undertaken and the services which can be offered to visitors.

A multi- approach may be used to address the issue of finance. Firstly, a financial plan should be prepared alongside a management plan and secondly measures need to be put in place to help farmers to identify alternative income sources from the PA.

8.1 Best practice

PART 1: Financial Plan

Securing sufficient financial resources are vital if protected areas are to continue to provide benefits and fulfil their role in biodiversity conservation. Funding for PA in agriculture areas predominantly rely on agricultural environmental schemes or Pilot initiatives. Both are vulnerable to short term financing and the pilot initiatives are awarded on a competitive basis. Neither provide security to the landowner to invest in the protected area.

A financial plan is a tool which helps to determine the protected area's funding requirements (including the amount and timing of that funding) and to match income sources with those needs. Financial planning differs from financial budgeting in that it not only identifies how much money is needed for different types of activities, but also locates the most appropriate funding sources for short, medium, and long-term needs.

8.1.1 Example 1: Department of Conservation in New Zealand: National Ownership of Protected Area

The Department of Conservation (DOC) is the sole conservation management agency in New Zealand and carries out all conservation management functions for all national parks, reserves and conservation areas in the country, as well as marine conservation issues and 'off-estate' advocacy for conservation. By law, DOC cannot set fees for entry to any area of public

conservation land in New Zealand. However, fees and charges may be set for the provision of facilities and services, and for the issue of concessions, permits and other consents. DOC raises around \$23.6m per annum from fees, charges and other forms of 'external' revenue. This represents approximately 15% of the total budget of the Department.

The Department 'retains' all the revenue that it raises from 'external' sources, i.e. sources other than central government. Thus all existing and additional monies earned are available for expenditure on conservation management. This is a major incentive to the Department to maximise revenue generating activities and the recovery of costs. For example, facility and service fees and charges are generated from the use of huts and camps that the Department provide in PA.

Facility and service fees

The Department maintains and operates a network of around 1,100 back-country huts and 250 campsites throughout the country. These include nine tracks in a 'Great Walk' brand, with such international tourism icons as the Milford Track and the Routeburn Track as well as the Abel Tasman, Kepler and Heaphy tracks. The other huts are divided into various categories depending on the level and quality of facilities at each. Camps are likewise categorised by levels of service. By law, the Department is not permitted to charge for the use of the track system but can charge for the use of any hut or camp facility provided. There is a national system of fees for these facilities, and generally charges are levied by category. The hut and camp fee system was introduced in New Zealand in the later 1980s and early 1990s. Before that most huts and camps were free. It is fair to say that there was some initial resistance, but – by working with the national representative bodies (e.g. tramping clubs) – DOC got broad acceptance of the fees within a couple of years. At the 'top' end of the hut market are the Routeburn and Milford tracks, with fees of \$35 per person per night (ppn). Most of the other 'Great Walks' are charged at around the \$15 per person per night mark. There is an extensive network of other huts where fees are 50 Financing Protected Areas either \$10 ppn or \$5 ppn, depending on the services provided. There are also about 300 small remote huts that are free. Campsite charges range from \$7 ppn for the fully developed camps (showers, cooking facilities etc. provided) down to \$3 ppn for very basic camps. For the Great Walk system of tracks, the fees are set in such a way as to ensure that

the system as a whole recovers all the costs of provision of hut facilities from users. So, there is no taxpayer subsidy towards the provision of Great Walk huts. For the other categories of huts and camps, there are varying levels of subsidy from the taxpayer to the users (i.e. the difference between the price charged for a facility, and the cost of providing that facility).

8.1.1.1 Tools :

<https://portals.iucn.org/library/sites/library/files/documents/PAG-005.pdf> page60.

8.1.2 Example 2: Compensation for environmental services from privately owned mountain forests in Costa Rica.

One of the most important innovations of Costa Rica's 1996 Forestry Law was the decision to compensate forest owners for the environmental services their forests provide to society. This system, the Payment for Environmental Services, is supported by a tax on fossil fuels. In recognition of the fact that urban authorities, hydroelectric corporations, and irrigation projects usually use the hydrologic resource of mountain watersheds without acknowledging this service, new proposals have been put forward for financing the system, such as including the cost of watershed management in the cost of hydroelectricity and drinking water supply. Several studies have shown that Costa Ricans are willing to pay for these costs in order to maintain the ecological functions and environmental services derived from forest ecosystems, particularly mountain forests.

An effective way to compensate private forest owners

The main assumption underlying payment for environmental services is that forests would be better maintained and protected if forest owners were compensated for the services that their forests provide. Forests cover about 40% of Costa Rica's territory, 60% of these are private forests. In the past, one problem implementing sustainable practices was that, although these have benefits to society, forest owners received very few of these benefits. In this respect, payment for environmental services is an effective way to capture these benefits and transfer them to forest owners. Moreover, Costa Rica cannot afford to establish and manage more

national parks and protected areas in order to guarantee the specific environmental services of mountain forests.

How the compensation system works

The compensation system is managed by the National Fund of Forest Planning of Costa Rica, which is in charge of collecting resources and paying the beneficiaries for the environmental services. Funds come mainly from two sources: a selective tax on consumption of fuels and other hydrocarbons, and international payments for environmental services of global value. The National Fund has been able to negotiate payment for watershed services with several hydroelectric corporations. The first was Campaña Energía Global, which owns two hydroelectric projects in the Central Volcanic Range of Costa Rica this company acknowledges the payment of watershed services to forest owners in two watersheds. On average, the company pays US\$10/ha/year and the funds are disbursed by the National Fund, along with the Foundation for the Development of the Central Volcanic Range. Another company to join this initiative was Campaña Nacional de Fuerza y Luz, which agreed to pay up to US\$40/ha/year in a hydroelectric project in the Aranjuez river watershed in the Tilarán Range. Studies show that the value of this watershed service varies from US\$5/ha/year to US\$70/ha/year. The sums fixed for the payment for watershed payments in Costa Rica have resulted from negotiations between the National Fund and the corporations; they are a balance between the willingness to pay, and the importance of the forest for the protection of the hydrological resource

8.1.2.1 Tools:

THE ICUN created guidelines to provide protected area managers with information about financing protected areas and where to look for finance beyond existing sources. Access to funds is becoming increasingly important for effective management. These guidelines are available at <https://portals.iucn.org/library/sites/library/files/documents/PAG-005.pdf>

Part 2: Encouraging or supporting farmers how to use PA for alternative sources of income

8.1.3 Example 3: LIFE Project in the Rohn, Germany: Creating new marketing outlets

The strength of this LIFE-Nature beneficiary's work lay in its attention to the local community, notably the farmers. The Biosphere Reserve went a step further in supporting these farmers who were willing to manage the semi-natural habitats. Drawing on LEADER and Objective 5B (EAGGF) structural funds, it carried out a set of infrastructure development projects to organise on-farm slaughter and processing of meat into end products with higher added value, provide sheep stables and cold stores and start up a farm shop to sell the produce directly to consumers.

These infrastructures allowed farmers to get better prices and outlets for their sheep meat, which was also promoted as a nature-friendly product. A typical shepherd on one of the sites restored by LIFE was, by 2002, selling 70% of his annual lamb surplus directly to local restaurants and hotels at good prices.

A network of partner companies was subsequently built up. Within this network, enterprises would swap products and services. 40 enterprises were member by the end of the LIFE project – farm holdings, hotel-restaurant enterprises and product/services providers (e.g. a wood processing firm). As part of this initiative, local hotels and restaurants in the network would commit themselves only to use Rhön sheep for their menu. This would also explain that by choosing the dishes containing Rhön sheep meat, visitors help to preserve the landscape they have come to enjoy.

Through active participation with farmers, long-term maintenance of the habitats was restored thanks to the funds invested through LIFE-Nature. However, unlike the volunteers who come to work camps to lend a hand with management work, farmers have businesses to run and need a sufficient return to survive on the marketplace and earn a livelihood.

So in addition to kick starting agri-programmes the projects went one step further in making land use conform to Natura 2000 guidelines attractive to farmers, by investing in infrastructure (local slaughter and processing, cool stores, farm shops) and networks (between farmers and local butchers, restaurants, hotels) through which produce can be sold at good prices directly to consumers, using the benefits to nature conservation as a selling point.

8.1.4 Example 4: Tarnava Mare. Supporting farmers in Natura 2000 in Transylvania, Romania.

An additional element of agri-environmental payments is their potential to support common grazing. Common grazing is a strong tradition in Tarnava Mare and is essential to the survival of the small-scale farming communities of the area. However, it is breaking down under economic pressure. Common land is owned by Town Halls who are not eligible to receive agri-environmental payments, and Town Halls are not permitted to sell common land. Increasingly, Town Halls are renting out common land for periods of 5 years or over, so that the land users can claim agri-environment payments. Typically, a Town Hall owns 2-3,000 ha of common land. Of this, generally 2,000 ha are rented out to shepherds, and the remaining 1,000 ha is used by village grazing associations, usually made up of over 30 small-scale farmers. Until now this land has not been eligible for agri-environmental payments, but in one village in the project area, the Town Hall has rented 1,000 ha to the grazing association for 5 years. The grazing association is using the income derived (224,000Euros/year from direct payments and agri-environment payments combined) to buy machinery for scrub control, improve tracks and cattle drinking troughs, etc. This is an excellent model for linking common land to incentive payments.

8.1.4.1 Tools:

https://ieep.eu/uploads/articles/attachments/3a7cffe5-6a4e-463c-b632-418851576042/Farming_for_Natura_2000-Annex_E-Case_studies.pdf?v=63664509858

PART 3: Generating alternative income

At a local level, ‘there remains a critical lack of awareness among many farmers of the resource that they are being paid to protect, of its significance and of the subtleties involved in its management’ (Dunford, 2002). Nature-based tourism has the potential to enhance global biodiversity conservation by providing alternative livelihood strategies for local people. There is a need to explore ways in which the farmers who maintain the landscape can benefit directly from the tourists and tour operators who enjoy that landscape. The mutual beneficial relationship is dependent on local participation.

8.1.5 Example 5: LIFEgeopark Ireland sustainable tourism within the area of the Burren and Cliffs of Moher UNESCO Global Geopark.

The Burren and Cliffs of Moher region of Co. Clare, Ireland, was designated a UNESCO Global Geopark in 2011. The particular personality of the region has evolved through a distinctive combination of geology, ecology, archaeology, agriculture, history, culture, commerce, creativity and community. Just over 5,000 people live in the Geopark. Large areas of the region have been designated by the EU as Special Areas of Conservation and its most significant habitats and species are protected by EU Directives. Approximately 3% of the area is a National Park, the rest of the land is in private ownership

The Geopark contains some of the most highly visible natural and cultural attractions in Ireland, such as the Cliffs of Moher and Poulnabrone Dolmen. It has a wide range of heritage sites and trails that attract thousands of coach and car bound visitors as well as geologists, archaeologists and botanists, historians, spiritualists, hikers and surfers. The ownership of these sites is either private or public, and their management is either non-existent or quite varied in approach and effectiveness. The aim of GeoparkLIFE was to develop a model of integrated and adaptive site management that can be transferred across a range of sites and circumstances. A 'learning by doing' approach was undertaken based on selected demonstration sites. These demonstration sites are located within the EU Special Areas of Conservation, or are National Monuments and reflected a broad range of location, ownership and visitor use. The GeoparkLIFE project worked with statutory agencies and private landowners to create practical ways of collaborating. This involved sharing of knowledge on existing management policy regulations and the planning procedures involved in the development of sites as visitor attractions. Research through the GeoparkLIFE project identified a need to obtain baseline data that recorded the current condition of natural and cultural heritage sites and the visitor use of these sites. Such data helped develop site specific adaptive management plans that focus on site conservation and an enhanced visitor experience. This initiated a more holistic approach to site management, looking at all of the

impacts on a site including visitor behaviour, than was previously applied. The programme also produced a Heritage Sites and Trails Monitoring App; a system of monitoring sites and trails that will be used by the agency partners such as the National Parks and Wildlife Service, the Office of Public Works, and the Rural Recreation Service

GeoparkLIFE undertook to develop the skills base of stakeholders, in working together and in the understanding and management of conservation activities. This was done through a series of practical case studies where participants learned by doing. These case studies looked at policies, procedures and training needs for a range of conservation programmes from increasing biodiversity in the Tidy Towns programme, to community volunteers taking on the conservation of a heritage site, to tourism businesses taking on hedgerow management and assisting landowners to manage visitor impacts on their land, to transition year students engaging in river catchment mapping research in their town, to developing more sustainable transport options in the region, and integrating Leave No Trace more effectively into business practice. Most of the case studies were built on projects that the participants brought to the GeoparkLIFE programme as activities that they wished to enhance under the programme. Others evolved out of the challenges or needs emerging from other actions in the programme. All of the case studies show how to strengthen positive and progressive activism in conservation management and research. Guidelines and training supports have been developed directly from the ‘on the ground’ experiences of the participants (http://www.burrengeopark.ie/wp-content/uploads/2017/11/Summary_Report.pdf).

8.1.5.1 Tools:

<http://www.burrengeopark.ie/wp-content/uploads/2015/03/GeoparkLIFE-Vision.pdf>

<https://www.euoparc-ai.org/>

The EUROPARC Federation, is an independent, non-governmental organisation which aims to work with national parks across Europe in enhancing protection. EUROPARC facilitates international co-operation in all aspects of protected area management to further improve and conserve our shared natural inheritance. The EUROPARC Federation endeavours to exchange

expertise, experience and best practice as well as to collaborate with others to ensure the value and meaning of protected areas is at the heart of Europe.

ICUN: <https://www.iucn.org/content/sustainable-tourism-protected-areas-guidelines-planning-and-management>

Sustainable Tourism in Protected Areas: Guidelines for Planning and Management. No. 8. Paul F. J. Eagles, Stephen F. McCool and Christopher D. Haynes, 2002, xv + 183pp.

Tourism Sector and Biodiversity Conservation Best Practice Benchmarking.
https://ec.europa.eu/environment/archives/business/assets/pdf/sectors/Tourism_Best%20Pratice%20Benchmarking_Final.pdf

This Sectoral Guidance document includes examples of best-practice guidance concerning the main risks, responsibilities and opportunities for companies in relation to nature and biodiversity conservation.

9 PRINCIPAL: RAISE AWARENESS

The success of the protected area will depend upon having the support of the community and other key stakeholders. Two key steps towards achieving this support are through community participation in management activities and by raising awareness of the protected area and its benefits. It is necessary to identify how the community can be involved and include strategies for promoting the values and benefits of the protected area.

9.1 Best practice

Raising awareness for land owners and the public in general is key to achieving sustainable conservation. Different approaches have been used but the more successful are those that have been innovative, creative and sensitive to cultural and local context.

9.1.1 Example 1: Raised Bogs in Tipperary, Ireland. A *LIFE* story.

Two of the project sites in this initiative were selected as demonstration sites as they displayed a range of project actions and are located close to population centres. At each of these sites, visitor information panels describe the overall LIFE project and features particular to that site. Girley Bog (Site No 12) is located 7kms south-west of Kells, Co. Meath. This site contains a significant area of high bog which includes typical bog vegetation and topography, including hummock / hollow systems. Scohaboy Bog (Site No 15) is located just outside the village of Cloughjordan in Co. Tipperary.

A major objective of this restoration project has been to raise awareness of the importance of raised bog habitats. This was achieved through extensive Public Relations which involved a number of approaches and built largely on experience gained from previous successful LIFE projects completed by Coillte on blanket bog and raised bog restoration (LIFE02/NAT/IRL/8490 and LIFE04 NAT/IE/000121). Project information brochures were produced and circulated. The project website www.raisedbogrestoration.ie has been a very effective way of providing information about the project objectives and actions to an international audience. It also contains links to previous Coillte LIFE funded bog restoration projects. Another very effective method of telling their story has been the production of a promotional DVD which has been circulated to all

secondary schools in Ireland, aiming to educate this generation about this very important habitat. This has served to generate interest and awareness and local communities have been hugely supportive of Coillte's restoration work. These communities have actively participated in the promotion of the project from the very beginning.

9.1.1.1 Tools:

http://www.raisedbogrestoration.ie/wp-content/uploads/2015/10/4595-Project-Results_for-website-LR.pdf

9.1.2 Example 2: Burrenbeo, Burren Co Clare, Ireland

Research conducted on the Burren, Ireland resulted in the establishment of another important group, Burrenbeo Teoranta (later to become the Burrenbeo Trust) in 2002. It developed a website, which at the time was considered 'new media' to tell the story of the 'living Burren' to an online community within, and far beyond, the Burren.

At this time it was clear that 'many representatives of local, regional and state management bodies, visitors and even well intentioned "conservationists" remain hopelessly oblivious to the important role that farmers play in protecting and contributing to the Burren's heritage, and of the constraints within which these farmers operate. This is a situation that needlessly stifles real co-operation and development' (Dunford, 2002). Similarly, at a local level, the author found that 'there remains a critical lack of awareness among many farmers of the resource that they are being paid to protect, of its significance and of the subtleties involved in its management'. This very much echoed findings by O'Rourke (2001) that suggested the local communities had not taken ownership of their own heritage; that this story was effectively 'owned' by scientists, academics and 'outsiders.' For example, according to the survey by Dunford (2001), very few farmers or their children ever learned about the Burren in school, unless they happened to have an enlightened teacher with a personal interest. Since its launch in 2002 Burrenbeo (www.burrenbeo.com) has helped to reshape the narrative around the Burren from a rather elitist, academic-led perspective to one that celebrates local people, place and tradition, 'opening eyes to the living Burren.'

Burrenbeo also took this message into local schools through the Eco-Beo programme, a 20-week, 10-module course on local heritage and stewardship, from which over 1,200 young Burren 'experts' have graduated, many of them the sons and daughters of local farmers.

Burrenbeo also helped engage the broader Burren community through monthly walks and talks, volunteering events and festivals, including the Burren Winterage Weekend, which is a unique celebration of the rich legacy of pastoral farming in the Burren. The degree to which Burrenbeo Trust, a local Environmental NGO, has complemented the farmer-focused work of the BLP cannot be underestimated, helping as it has to align stakeholders' perspectives and ensuring a more integrated and co-operative approach to addressing management challenges in the area.

9.1.2.1 Tools:

<https://burrenbeo.com/>

10 PRINCIPAL: DEVELOP A CO-MANAGEMENT PLAN

Co-managed PAs may offer a more equitable method of establishing and running PAs (Governance refers to who holds the power, authority and responsibilities, whereas management refers to resources, plans and actions (Lockwood, 2010; Lyver et al., 2014; Borrini-Feyerabend et al., 2012) as they provide opportunities to reduce local costs or provide benefits via the potential to tailor rules to local conditions, increase regulatory compliance, improve collaboration, and lead to greater stakeholder engagement and empowerment (Ayers et al., 2017; Carlsson and Berkes, 2005; Berkes, 2009).

10.1 Best practice

Co-management planning gives value to the tacit knowledge of local populations in improving the management of protected areas and consequently encourages local participation (Reed, 2008). Critical to the planning of protected areas is the widest possible consultation with stakeholders and the development of objectives that can be agreed and adhered to by all who have an interest in the use and ongoing survival of the area concerned. Several guidelines have been published for the preparation of management plans. The aim of the guidelines is to explain the planning process in a concise, easy to follow document.

10.1.1 Example 1: Guidelines for management planning of protected areas: ICUN.

These Guidelines are one of the Best Practice Protected Area Guidelines series published by the ICUN. These Guidelines, based on global best practice drawn from many areas around the world, represent a working framework for protected area planners to consider and adapt to their needs and circumstances.

The structure of the publication is as follows:

Chapter 2 introduces basic concepts and definitions

Chapter 3 explains the requirements for successful management planning

Chapter 4 describes the management planning process

Chapter 5 sets out what needs to be done to involve people in management planning

Chapter 6 deals with the international dimension to management planning

Chapter 7 sets out an abbreviated management planning system where it is not possible to adopt the full process.

The Annex discusses the roles and responsibilities of people involved in the management planning process.

10.1.1.1 Tools:

<https://www.iucn.org/content/guidelines-management-planning-protected-areas-0>

10.1.2 Example 2: Solomon Islands Management plan Guidelines.

The aim of the guidelines is to explain the planning process in a concise, easy to follow document. The guidelines are intended for use by government and non-government organization personnel, and others working in the protected area field that are assisting local communities with the preparation of management plans. The guidelines in the document are presented in four parts.

Part A	Management Plans and The Law	<i>Presents background information on protected areas, management plans and the Solomon Islands Protected Area Act and Regulations</i>
Part B	Preparing the Plan	<i>Looks at the stages in the planning process from preparing a project plan and timetable, information collection and developing the plan content</i>
Part C	Writing the Plan	<i>Contains a step-by-step guide on how to write the management plan using a standard template. It provides detail on what information to include in the plan</i>
Part D	A Management Plan Template	<i>Includes a management plan template with explanatory notes for each section. The template is provided as a separate document.</i>

SOURCE: Court, S. (2013) Guidelines report: information and guidelines for writing a protected area management plan, Solomon Islands.

10.1.2.1 Tools:

<http://www.coraltriangleinitiative.org/library/guidelines-report-information-and-guidelines-writing-protected-area-management-plan-solomon>

10.1.3 Example 3: Conservation Action Planning Toolbook, UK

Conservation Action Planning (CAP) is a proven approach for planning, implementing and measuring success for conservation projects. The CAP process accomplishes this by prompting a conservation team to work through a series of diagnostic steps that culminate in the development of clearly defined objectives and strategic actions. Together these represent a testable hypothesis of conservation success that forms the basis of an “adaptive” approach to conservation management.

An overview of the CAP process is presented in the CAP Basic Practices document (see *Resources and Tools*). This Handbook is a more detailed “toolbox” designed to help you explore and apply this process step-by-step. It contains 10 modules, which correspond to the 10 steps in the basic practice of CAP. Each module provides a description of the individual step, its importance and expected outputs. In straightforward language, the following chapters detail a basic approach to implementing each step. For each of the steps, there is a discussion of some of the challenges that provide rich opportunities for user innovation. The toolbox also provides case studies that illustrate how different conservation teams have executed each step and a list of additional reading references and related tools. These resources provide more in-depth background on the step and/or ways a user might supplement or enrich both their understanding and application of that step.

The basic concepts of this conservation approach follow an adaptive management framework of setting goals and priorities, developing strategies, taking action and measuring results. These basic concepts are reflected in each of the three key analytical methods, which in addition to CAP include Major Habitat Assessment and Ecoregional Assessment. In general, Major Habitat

and Ecoregional Assessments focus on setting goals and priorities, CAP focuses on developing and implementing strategies to address the priorities and achieve the goals, and all three methods incorporate aspects of measuring results. This process also supports the protected area management goals of the Convention on Biological Diversity.

10.1.3.1 Tools:

https://www.conservationgateway.org/Documents/Cap%20Handbook_June2007.pdf

11 PRINCIPAL: A WHOLE FARM APPROACH

Realizing that everything is connected must be the starting point for influencing farming practices. Farming or the environment or conservation cannot be treated in isolation. Conventional approaches to managing protected areas have often seen people and nature as separate entities. They preclude human communities from using natural resources and assume that their concerns are incompatible with conservation. Since most protected areas in the world have people residing within them or dependent on them for their livelihoods, a more holistic approach must be taken into account. Dividing land into usable and unusable parcels is not sustainable, for the habitats or the farmers.

11.1 Best practice

Farming is first and foremost a business. A farmer's main aim is to provide a good living for their family from the land. It is necessary to demonstrate to farmers that designated land can still be used and provide revenue. The protected areas are also the product of the interaction between landscape, farming, and the natural environment. Therefore, any plan to conserve or save biodiversity must address all issues simultaneously.

11.1.1 Example 1: Using conservation to develop new farming outlets in the Rhön, Germany

In the Rhön (an upland area straddling the German Länder of Thuringia, Hessen and Bavaria), hundreds of hectares of abandoned and overgrowing Annex I grasslands were restored by two consecutive LIFE projects between 1993 and 2002. These habitats were threatened by too little agricultural use. In the past calcareous grasslands in the former GDR had been grazed by great flocks of sheep but after the transition to a market economy these flocks, no longer protected by a closed market with guaranteed consumers, rapidly disappeared.

The strategy of the LIFE beneficiary (Rhön Biosphere Reserve) was to try to keep farmers using this land or getting them back onto already abandoned land. This reflected the Reserve's desire to maintain the Natura 2000 areas as a land effectively used by the local population, in continuity with the past, rather than as a 'museum landscape' managed by conservationists.

For abandoned and overgrown grasslands, the scrub and shrubbery were first removed. After these one-off measures, there was a phase of intensive recurring management (repeated mowing, grazing by sheep) to consolidate the initial clearance. After about two seasons, i.e. from about the third year after scrub cutting, the land could be integrated back into agricultural use – but as extensively used land (mowing, grazing), under agri-environment schemes. The LIFE project contracted local farmers and shepherds to do this clearing and follow-up work wherever possible.

This had two advantages:

- by being involved, the farmers became aware of the nature and Natura 2000 values;
- the payment for the contract work was an interesting additional income, especially as the work was often done during quiet periods like winter, and in turn this increased acceptance for the conservation of Natura 2000 sites.

Nevertheless, restoration of abandoned grasslands is an expensive and laborious task. Consequently, the second LIFE project initiated an action to try to stop the land being abandoned in the first place, which meant getting involved in the economics, structure and practices of local farming. In this action, the Biosphere Reserve and the local agricultural authority worked closely together on identifying the problems farmers were facing and helping them find new and effective ways of managing the grasslands.

First, a series of meetings were held, informing farmers about the idea. Because of the unexpectedly high turnout, it was possible to set up 5 working groups, not 2 as originally estimated, each based on a farming village. In these five groups the problems farmers faced were discussed and mutually beneficial solutions (for farmers and conservation alike) were sought.

A leading problem raised by farmers in the western Rhön is that property is very fragmented (thousands of plots averaging 0.5-1 ha each) which hinders farming. Moreover, as milk and meat prices are low, there is a trend to abandon livestock farming in the lowlands as well. Consequently there is less demand for hay – which makes mowing upland grasslands unattractive, in spite of agri-environment support being available for such mowing. Annex I habitats are thus threatened by abandonment.

Responding to the groups' concerns about land fragmentation, the Bavarian Agriculture Ministry in 2002 provided grants to farmers to allow them to swap land between them informally, on a seasonal basis, without having to go through the cumbersome procedures of sale, lease or official rural land consolidation. That way, it was possible for each farmer to have the use of consolidated blocks of land in an easy and informal way.

Other initiatives which came out of the groups included:

- organising equipment pools for agricultural machinery and labour pools where farmers can exchange or pool resources;
- creation of a suckler cow herd, owned jointly by farmers in Fladungen village, whose winter fodder includes hay from the grasslands thereby providing an incentive to continue mowing hay meadows.

Agri-environment contracts are widely deployed throughout the Rhön. However, to find a socially and economically more attractive basis for this recurring management than merely agri-environment premia on their own, the Biosphere Reserve, in close synergy between LIFE and other EU funding instruments, launched initiatives in favour of extensive, conservation-friendly use of land.

A good example can be seen in the site 'Mittelhut', where LIFE had cleared and restored an area of 140ha of semi-natural grassland habitat. Because of the size of the area restored, sheep grazing was viable and the Biosphere Reserve succeeded in persuading an association of five farmers to take up use of this land. The members of the association each took a share in a communal flock of sheep (which rapidly rose to 1,000 animals) and employed a shepherd to take care of it. This approach was also used in other parts of sites where grassland habitats were restored. By the end of the LIFE project in 2002 there were 3,000 sheep grazing large areas of semi-natural habitats in the Rhön.

The Biosphere Reserve went a step further in supporting these farmers who were willing to manage the semi-natural habitats. Drawing on LEADER and Objective 5B (EAGGF) structural funds, it carried out a set of infrastructure development projects to organise on-farm slaughter

and processing of meat into end products with higher added value, provide sheep stables and cold stores and start up a farm shop to sell the produce directly to consumers.

These infrastructures allowed farmers to get better prices and outlets for their sheep meat, which was also promoted as a nature-friendly product. A typical shepherd on one of the sites restored by LIFE was, by 2002, selling 70% of their annual lamb surplus directly to local restaurants and hotels at good prices.

A network of partner companies was subsequently built up. Within this network, enterprises would swap products and services. 40 enterprises were member by the end of the LIFE project – farm holdings, hotel-restaurant enterprises and product/services providers (e.g. a wood processing firm). As part of this initiative, local hotels and restaurants in the network would commit themselves only to use Rhön sheep for their menu. This would also explain that by choosing the dishes containing Rhön sheep meat, visitors help to preserve the landscape they have come to enjoy.

Best practice summarised

The strength of this LIFE-Nature beneficiary's work lay in his attention to the local community, notably the farmers. Without their active participation, long-term maintenance of the habitats restored thanks to the funds invested through LIFE-Nature, would be impossible. However, unlike the volunteers who come to work camps to lend a hand with management work, farmers have businesses to run and need a sufficient return to survive on the marketplace and earn a livelihood.

So in addition to kick starting agri-programmes the projects went one step further in making land use conform to Natura 2000 guidelines attractive to farmers, by investing in infrastructure (local slaughter and processing, cool stores, farm shops) and networks (between farmers and local butchers, restaurants, hotels) through which produce can be sold at good prices directly to consumers, using the benefits to nature conservation as a selling point.

11.1.1.1 Tools:

- LIFE93/NAT/D/010200 Habitat Protection in the Rhön

- LIFE98NAT/D/005064 Rhön Biotope region
– Building Block for Natura 2000

Read more

- LIFE database of projects/[environment /life/project/index.htm](http://environment.life/project/index.htm)
- Project website: <http://www.biosphaerenreservatrhoen.de/englisch/indexengl.html>
- <http://www.unesco.org/mab/br/focus/2002Dec/Rhon.htm>

12 PRINCIPAL: PAYMENT STRUCTURE SHOULD BE RESPONSIVE AND INCENTIVISE FARMERS TO PARTICIPATE AND INNOVATE.

There is a shift to move beyond compensating farmers for halting negative practices and instead incentivise positive management by paying for the delivery of clearly defined, measurable environmental outputs/results.

12.1 Best practice

The payment structure of agri-environment programmes can be divided into two main categories; Outcome/results-based payments and Prescription/action-based payments. Research and results from a number of pilot projects have shown that results-orientated agri-environment programmes offer a more effective means of delivering better environmental outcomes if they are well designed and accompanied by robust environmental indicators to measure outcomes (Matzdorf and Lorenz, 2010; Osbeck et al., 2013).

12.1.1 Example 1: Burren Programme

The Burren Programme operates a hybrid payment structure. The Burren Programme, as with the Burren Farming for Conservation Programme (BFCP), divides its annual farmer payments roughly equally between payments for actions and payments for outputs.

Payment is available on fields of species rich limestone grasslands. Usually these fields are used for winter grazing, though 'lowland grasslands' which may be lightly summer grazed are also included if they are species-rich. Every eligible field is assessed annually (usually from May to September) by the farm advisor using a user-friendly 'habitat health' checklist. Farmers are made aware of their scores, indeed they are encouraged to score their own fields, and they may appeal a score if they feel it is inaccurate. All scores are reviewed for accuracy and consistency by the Burren team and many also are checked by Dept. of Agriculture inspectors.

Field Scores

The field score, which ranges from 0 to 10, is calculated using nine distinct, weighted criteria which, taken together, give a very accurate picture of the ‘health’ of the grazed habitats in that management unit. These criteria are:

1. Grazing level;
2. Amount of litter (dead vegetation);
3. Extent of feed site damage;
4. Extent of damage at natural water sources;
5. Level of bare soil and erosion;
6. Level of encroaching scrub;
7. Amount of bracken and purple moor grass;
8. Extent of weeds and agriculturally-favoured species; and
9. Ecological integrity.

Once the field score is calculated, it is multiplied by the available payment rate per hectare and by the size (ha) of the field, to calculate the ‘output payment’ for that field. Under the Burren Programme, all fields with a score of 6 or more receive payment but higher scores receive higher payments – increased payment rates are available for fields scoring 9s and 10s. Fields with a score of 5, only receive payment in the first two years. Payments per ha can range from €8/ha to €180/ha depending on field score and farm size (payments are ‘banded’ to reward smaller holdings). This gives farmers the incentive to manage their fields in ways that will improve their scores and their payment as well.

Payment for Actions	Payment for Results
The annual farm plan contains a list of actions (jobs) which are nominated by the farmer with the aim of improving the site’s management and conservation condition. Each job is individually costed and co-funded by the farmer and is carried out within the	Every eligible field of species-rich Burren grassland and heath is assessed annually with a user-friendly ‘habitat health’ checklist. Each field receives a score between 1 and 10: all fields with a score greater than 3 have received payment but higher scores receive

<p>year by the farmer or a local contractor. Payment issues only when jobs are complete and to a satisfactory standard. The farmer can ‘opt-out’ of a planned action if he/she so chooses, ensuring maximum flexibility for the farmer.</p> <p>Most farms nominate a mixture of jobs to suit the needs of their land e.g. removing encroaching scrub from species-rich grassland, repairing internal walls, improving water supplies or enhancing access. Work undertaken often includes scrub control, wall repair, water provision, access provision, the purchase and installation of gates and feeding equipment and the restoration of damaged habitats.</p>	<p>higher payments. This gives farmers the incentive to manage their fields in ways that will improve their scores and their payment as well.</p> <p>The results-based payment system allows farmers greater freedom to decide how to manage their land (with advice if needed) and also guarantees the taxpayer better value for money – no delivery, no payment! It also generates data which demonstrates the positive environmental impact of Burren Programme.</p>
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The results-based payment system has three main advantages (<http://burrenprogramme.com/impact/outputs/>). Firstly, it allows farmers greater freedom to decide how to manage their land while encouraging and supporting them to use their skill and experience to improve their environmental and agricultural performance. Secondly, this system guarantees the taxpayer better value for money — no delivery, no payment! — unlike other programmes who pay the same rate regardless of environmental output. Thirdly, the field scoring system acts as a monitoring system which generates data which clearly demonstrates the positive environmental impact of the Programme. Between 2010 and 2014, the area of Burren grassland in very good condition (scoring 8,9,10) increased and the area in poorer condition decreased (scoring 3–7). This landscape-level (15,000ha) data offers a strong endorsement of the Burren Life hybrid approach, which has also been adopted by the Burren Programme.

12.1.1.1 Tools:

Keenleyside, C., Radley, G., Tucker, G., Underwood, E., Hart, K., Allen, B. & Menadue, H. (2014) Results-based Payments for Biodiversity Guidance Handbook: Designing and implementing results-based agri-environment schemes 2014–20. European Commission, DG Environment, No. ENV.B.2/ETU/2013/0046, Institute for European Environmental Policy, London.

Keenleyside et al. (2014) examine a range of results-based AESs in Europe, producing a ‘Results-based Payments for Biodiversity Guidance Handbook’ to assist public and private bodies interested in designing and implementing results-based AESs. This guidebook, which contains a useful step-by-step guide to AES design, case studies (including the BLP) and lots of useful resources, was part of an EC initiative <http://ec.europa.eu/environment/nature/rbaps/>), which included expert articles and case-study videos, and also allocated funding for some pilot ‘Results based’ initiatives including one in Ireland—Spain (Shannon Callows, Leitrim and Navarra) to which the BLP team contributes.

While the guidebook lists many different types of results-based payment schemes for farmland, each one is different—most, for example, use plant or animal species as indicators, but a few, including BLP, use other habitat attributes. BLP feels strongly that its indicators are best placed to meet the requirements of being ‘quantifiable, reliable and ensure biodiversity outcomes, are sufficiently balanced, context-specific and sensitive to the impacts of agricultural practices, yet are transparent, understandable and measurable at reasonable cost for farmers and others’ (Keenleyside et al., 2014), unlike other methods that can be complex and as a result disempower the key agent in delivering the appropriate management response—the farmer.

http://www.efncp.org/download/AGRI_ENVIRONMENT-SCHEME-RDP-2014-2020_final12Dec.pdf

13 CONCLUSION

Sharing knowledge and developing best practices will result in more focused and effective conservation action taking place across the globe. Over the last fifteen years, many teams from many different organisations have adopted, and are using, conservation practices in one form or another. Their experiences and feedback have helped refine and shape different methods. Sharing knowledge will help improve the method and the practice of conservation across the globe.

These studies typically underscore the multiple roles that protected areas may now play in society and the need to be sensitive to social and institutional dynamics in order to achieve long-term protection objectives (Laven et al. 2010, p. 197). Managers of protected areas are increasingly using participatory arrangements – or “co-management” – to integrate ecological, cultural, and community perspectives (see Lane 2001, Ribot 2008, Laven et al. 2010). Natura 2000 sites are not strictly protected areas where all activities are systematically excluded. It adopts a different approach: one that fully recognises that humans are an integral part of nature and that the two work best in partnership with one another, however, the mismatch occurs when implementation at local level does not reflect these objectives. It is clear through the work of the GeoparkLIFE programme that the problem is not necessarily a lack of policy, but the need to recognise that there is a wide and diverse range of legal and policy instruments which may not always be in direct alignment. This also indicates that it is likely to be when international and national policies are actually implemented on the ground at local level that difficulties and friction may occur. Traditionally, protected areas have been managed by government agencies, however, new governance institutional arrangements provide greater flexibility and are more innovative in securing financial resources from public and private sources.

Despite international commitment and legislative requirements the integration of farming practices and conservation still face a number of challenges.

- Current poor administrative and procedural integration of EU and national assessment requirements addressing biodiversity issues;

- Constraints on potential opportunities for biodiversity enhancement during development resulting from the minimalist conservation/protection approach of the assessment directives.
- Shortcomings in public consultation effectiveness;
- Discrepancies, lack of standards and accessibility issues with regards to biodiversity (spatial) data;
- Lack of complete and up-to-date fundamental biodiversity data;
- Conservation objectives and site management plans are often incomplete or rudimentary;
- Inadequate range and availability of biodiversity and taxonomic expertise in Ireland and current limitations with regards to the optimum use of such expertise;
- The inconsistent quality of individual assessments; and
- The need for additional guidance to establish a minimum national standard for biodiversity data gathering and impact assessment.

Without adequate information it will not be possible to support farming and associated biodiversity. However, as demonstrated above, new institutional arrangements exist and new schemes have been developed. These schemes are designed to encourage farmers to protect and enhance the environment on their farmland by paying them to provide ‘public goods and ecosystem services’, including maintenance of natural and cultural heritage. It was highlighted that scheme requirements should be simple and flexible and focus on conservation results rather than strict management methods or prescriptions. The scheme will also need to be tailored for areas with differing farming systems and habitats/species. The involvement of farmers in designing such a scheme is critical. There is also a need to investigate the potential of diversifying farm enterprises as a means of providing economic benefits to farmers. Diversification may also add value to conservation-grade brands and increase biodiversity.

It needs to be recognised that the preparation of plans can be expensive and time consuming. While short cuts can be taken, this will be to the detriment of the protected area. Those organisations with responsibility for management are urged to make the strongest possible commitment to planning so as to avoid the long-term perils of management which lacks a strategic direction.

The adaptation and implementation of these models will require management, administration and communication resources. A core and non-negotiable requirement will be the ability to initiate and sustain multiple stakeholder engagement. There is a need to build institutional, community and individual capacity to manage protected area systems effectively, equitably and sustainably, and to cope with the myriad of challenges faced in practice. This set of principles, practices and tools should be of mutual benefit to sustainable agriculture and to biodiversity conservation planning.

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Guidance on how to support Natura 2000 farming systems to achieve conservation objectives, based on Member States good practice experiences.

<http://ec.europa.eu/environment/nature/natura2000/management/docs/FARMING%20FOR%20NATURA%202000-final%20guidance.pdf>

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15 SUPPLEMENTARY REFERENCES

Suggestions for continued reading on Natura 2000:

This section provides an overview of some of the online resources dedicated to Natura 2000. It is by no means a complete list of all available websites and web pages.

Natura 2000 at the European Commission's website:

http://ec.europa.eu/environment/nature/natura2000/index_en.htm Public Natura 2000 viewer:

<http://natura2000.eea.europa.eu/#natura.org>

This website is maintained by Eurosite, it contains a wealth of examples of good practice local level communication and implementation of Natura 2000. More than 150 case studies have been collected for this website, each of them compiled by managers of Natura 2000 sites - they provide a useful reference for modes and means of communicating the importance of Natura 2000 to stakeholders for the purpose of generating support for the appropriate implementation of site management plans and the sustainable use of sites. These case studies were collected by Eurosite, on behalf of the European Commission, for the projects 'The Natura Network Initiative' and 'The Natura 2000 Networking Programme'. Each case study includes the contact details of at least one member of the Natura 2000 site's management team - these details have been made available for those who wish to make direct contact with experienced Natura 2000 managers for advice and continued networking. [natura.org: http://www.natura.org](http://www.natura.org)

Other suggestions

Alterra: <http://www.alterra.wur.nl/UK/>

ECNC: <http://www.ecnc.org>

Eurosite: <http://www.eurosite.org>

Each organisation is active in guiding and supporting the application of best practice for natural site management in Europe, consequently their respective websites offer frequently updated news, information and resources of value to Natura 2000 site managers, stakeholders and academics.

Likewise, many pan-European organisations involved in nature and biodiversity conservation - either directly, or through crosscutting issues - feature Natura 2000 related content. Particularly useful websites include:

- The [IUCN Red List of Threatened Species](https://www.iucn.org/resources/conservation-tools/iucn-red-list-threatened-species) assesses risk of **species** extinction

<https://www.iucn.org/resources/conservation-tools/iucn-red-list-threatened-species>

- The [IUCN Red List of Ecosystems](https://www.iucn.org/resources/conservation-tools/iucn-red-list-ecosystems) assesses risk of **ecosystem** collapse

<https://www.iucn.org/resources/conservation-tools/iucn-red-list-ecosystems>

- The [IUCN World Heritage Outlook](https://www.iucn.org/resources/conservation-tools/iucn-world-heritage-outlook) assesses **World Heritage sites** over time

<https://www.iucn.org/resources/conservation-tools/iucn-world-heritage-outlook>

- The [World Database on Key Biodiversity Areas](https://www.iucn.org/resources/conservation-tools/iucn-world-heritage-outlook) assesses **sites important for biodiversity**

<https://www.iucn.org/resources/conservation-tools/world-database-on-key-biodiversity-areas>

- [Protected Planet](#) assesses **protected areas**

<https://www.iucn.org/resources/conservation-tools/protected-planet>

- [ECOLEX](#) provides a gateway to **environmental law**

<https://www.iucn.org/resources/conservation-tools/ecolex>

- [PANORAMA](#) provides **practical solutions** for sustainable development

<https://www.iucn.org/resources/conservation-tools/panorama>

Forests:

- [InfoFLR](#) - Forest Landscape Restoration resource

<https://www.iucn.org/resources/conservation-tools/more/infoflr>

- [Restoration Opportunities Assessment Methodology \(ROAM\)](#)

<https://www.iucn.org/resources/conservation-tools/more/restoration-opportunities-assessment-methodology>

Protected areas sites:

- [BIOPAMA Reference Information System](#)

<https://www.iucn.org/resources/conservation-tools/more/biopama-reference-information-system>

Supplementary reading providing overview and context for CAP:

TNC, 2005. Conservation Action Planning: Developing Strategies, Taking Action, and Measuring Success at Any Scale--Overview of Basic Practices. The Nature Conservancy. Available in English and Spanish.

http://conserveonline.org/workspaces/cbdgateway/cap/resources/1/TNC_CAP_Basic_Practices.pdf

http://conserveonline.org/workspaces/cbdgateway/cap/resources/1/TNC_CAP_Basic_Practices_Spanish.pdf

Low, G. 2003. Landscape-Scale Conservation: A Practitioners Guide. The Nature Conservancy.

http://conserveonline.org/workspaces/cbdgateway/cap/resources/4/2/Landscape_Practitioners_Handbook_July03_PR.pdf

TNC, 2006. Conservation by Design, A Strategic Framework for Mission Success. The Nature Conservancy.

http://conserveonline.org/workspaces/cbdgateway/files/cbd_brochure.pdf