



Ystyried yr Heriau ar Safleoedd Natura 2000 yng Nghymru

Addressing the Challenges on Natura 2000 Sites in Wales

Rhaglen Natura 2000 LIFE yng Nghymru
LIFE Natura 2000 Programme for Wales

Adroddiad 3 / Report 3

Gwerthusiad o'r Trefniadau Rheoli Presennol An Appraisal of Existing Management Mechanisms (Action A.3)

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Natural Resources Wales
Cambria House
29 Newport Road
Cardiff
CF24 0TP

0300 065 3000 (Mon-Fri, 8am - 6pm)

enquiries@naturalresourceswales.gov.uk
www.naturalresourceswales.gov.uk

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Associated Inventories

Inventory of Current Management Mechanisms

Tab 1: Existing Mechanisms Available in Actions Database

Tab 2: Appraisal of Prominent Existing Mechanisms

Crynodeb Gweithredol

Mae yna 90 o wahanol drefniadau ar gael yng Nghymru i dalu sylw i'r problemau a'r risgiau sy'n wynebu Natura 2000 yng Nghymru. Mae'r rhain yn disgyn i wahanol gategoriâu megis deddfwriaeth a rheoleiddio, rheolaeth gadwraethol uniongyrchol, cytundebau rheoli defnydd tir Cyfoeth Naturiol Cymru, cynlluniau amaeth amgylcheddol a chynlluniau a phrosiectau rheoli tir / adnoddau.

Fodd bynnag, dim ond canran fechan o'r rhain sy'n cael eu defnyddio fel arfer - y rhai a ddefnyddir fwyaf aml yw cytundebau rheoli, rheoli'n uniongyrchol, ymchwilio ac, yn llai aml, gynlluniau amaeth amgylcheddol (Glastir ar hyn o bryd) a newidiadau i bolisiau a deddfwriaeth. Y rheswm pennaf fod cymaint o ddibyniaeth ar cyn lleied o ddewisiadau yw oherwydd eu bod yn cael eu hystyried yn effeithiol ac yn ddibynadwy. Fodd bynnag, mae'r ffaith bod ymarferwyr yn eu deall yn dda ac yn gyfarwydd â'u defnyddio'n eang hefyd yn berthnasol. Mae'r gwrthwyneb yn wir am ddewisiadau sydd braidd byth yn cael eu defnyddio.

Mae'r trefniadau a ddefnyddir fwyaf aml yn cael eu hystyried yn gyffredinol yn rhai addas ar gyfer gwaith rheoli ac adfer Natura 2000. Fodd bynnag, ni ellir eu defnyddio ym mhobman - maen nhw'n llwyddiannus ar rai safleoedd, gyda rhai rhywogaethau a chynefinodd, ond nid rhai eraill. Mae'n rhaid cael trefniadau hyblyg y gellir eu haddasu ar gyfer anghenion Natura 2000. Mae'r astudiaeth yn nodi manteision ac anfanteision y prif drefniadau ac yn nodi hefyd nifer o gyfleoedd ar gyfer eu mabwysiadu a gwella.

Does yna'r un trefniant yng Nghymru sydd wedi'i ddylunio'n benodol ar gyfer anghenion Natura 2000 ac ychydig iawn o drefniadau sydd wedi cynnwys gofynion Natura 2000 yn ffurfiol mewn cynlluniau neu wedi eu nodi fel blaenoriaethau.

Canfyddiadau astudiaeth a gynhaliwyd fel rhan o Raglen Natura 2000 LIFE yng Nghymru yw'r rhain. Cafodd ei hariannu ar y cyd gan Cyfoeth Naturiol Cymru a chynllun Natur LIFE+ yr Undeb Ewropeaidd. Roedd yr astudiaeth yn cynnwys casglu canfyddiadau gweithdai rhanddeiliaid, cyfweliadau gyda staff Cyfoeth Naturiol Cymru ac adolygu llenyddiaeth.

Executive Summary

90 different mechanisms are available in Wales to address issues and risks facing Natura 2000 in Wales. These fall into categories such as legislation and regulation, direct conservation management, Natural Resources Wales land-use management agreements, agri-environment schemes and land/resource management plans and projects.

However, only a small proportion of these are commonly used – the most frequent being management agreements, direct management, investigation and to a lesser extent agri-environment schemes (currently Glastir) and changes to policy and legislation. This heavy dependence on a small number of options is because in a large part, they are considered effective and reliable. However, the fact that they are well known and understood, easily accessible to practitioners and have a broad applicability is also relevant. The converse is the case for the little-used options.

The commonly used mechanisms are generally considered suitable for delivering management and restoration for Natura 2000. However, the suitability is not universal – they can be applied successfully to certain sites, species and habitats but not others. The need for flexibility within a mechanism, allowing it to be tailored to the needs of Natura 2000 is key. The benefits and constraints of the main mechanisms have been identified by the study along with numerous of opportunities for adaption and improvement.

There is no mechanism in Wales which has been specifically designed for Natura 2000 needs, and few mechanisms have Natura 2000 requirements formally integrated into the scheme or identified as priorities.

These are the findings of a study carried out as part of the LIFE Natura 2000 Programme for Wales, which is co-funded by Natural Resources Wales and EU LIFE+ Nature scheme. The study involved the collation of findings from stakeholder workshops, interviews with Natural Resources Wales staff and literature reviews.

1. Introduction

After more than a decade of work to identify and designate Natura 2000 sites, the challenge now is to implement the necessary management and restoration measures that will ensure that the sites and their habitats and species remain at or reach favourable condition. This is vital because 91% of Natura 2000 features are adversely affected by over 40 different issues (pressures)¹ and around two thirds of features are in unfavourable condition.

The issues and risks (threats) affecting Natura 2000 are addressed in a variety of ways using a number of established conservation management ‘mechanisms’. In 2013, the LIFE Natura 2000 Programme for Wales undertook a study of the available mechanisms used for Natura 2000 features. The study identified management mechanisms which have been used by conservation practitioners in Wales in the past and those which have been selected as being appropriate for ongoing and future management. It then evaluated the effectiveness and suitability of the main mechanisms to establish if they are fit-for-purpose.

The findings are laid out in this report and the accompanying ‘Inventory of Existing Management Mechanisms’. Mechanisms which are considered less than fit-for-purpose for Natura 2000 will be taken forward as priorities for change and development. Opportunities for utilising new and innovative management mechanisms are covered in the fourth report in this series ‘New Solutions for Natura 2000 in Wales’².

1.1. LIFE Natura 2000 Programme

The LIFE Natura 2000 Programme is developing a strategic forward plan to manage and restore Natura 2000 species, habitats and sites in Wales. Working with interested organisations it will determine the key challenges facing these European protected sites, and identify the actions required, priorities, costs and funding opportunities to address them.

The Programme is run by Natural Resources for Wales and funded by the European Union scheme LIFE+ Nature. For full details see Natura 2000 in Wales: Facts and Figures³.

¹ Challenges Facing Welsh Natura 2000 Habitats and Species, LIFE Natura 2000 Programme for Wales: Report 2, An Analysis of Issues and Risks, Natural Resources Wales, 2014

² New Solutions for Natura 2000 in Wales, LIFE Natura 2000 Programme for Wales: Report 4, Potential New Management Approaches and Mechanisms, Natural Resources Wales, 2014

³ Natura 2000 in Wales: Facts and Figures, LIFE Natura 2000 Programme for Wales: Report 1, Natural Resources Wales, 2014

1.2. Natura 2000 in Wales

There are 114 designated N2K habitat and species features on the 92 Special Areas of Conservation and 20 Special Protection Areas in Wales. These are described in full in Natura 2000 in Wales: Facts and Figures report.

1.3. Definitions

Mechanism: A legislative, regulatory or policy instrument which enables organisations to implement management changes on a Natura 2000 site to deliver conservation improvements. For example, agri-environment schemes, direct management or byelaws. Natural Resources Wales conservation officers responsible for Natura 2000 sites, routinely log actions required to address issues and risks in the Actions Database. In each case an appropriate mechanism is selected as a means of delivering the action.

Feature: A habitat or species on a Natura 2000 site, designated under the Habitats or Birds Directive.

Issue: A factor that needs to be addressed as it is preventing the achievement of Natura 2000 habitat or species conservation objectives.

Actions Database: A database hosted by Natural Resource Wales', to share information about actions required to address conservation management issues and develop work programmes on all designated sites in Wales. Each action is comprised of a mechanism, organisation responsible for delivering the action and a timeline.

1.4. Methods

The identification of mechanisms used in the past (for completed actions) and planned for use in the future (current actions) was based on an analysis of data held in the Natural Resources Wales Actions Database.

The appraisal of the suitability and effectiveness of the mechanisms was carried out in three ways:

- structured interviews with Natural Resources Wales specialists
- a literature review
- workshops at a series of four stakeholder events held in June 2013. The workshops were attended by 77 stakeholders representing a variety of organisations with an interest in Natura 2000, including those from government and the conservation, agricultural, marine, recreation and water resources sectors. Collectively they brought a wide range of experience and expertise.

The findings of the three sources were combined to produce the results described in Section 2. For full details for the methods used see Appendix A.

1.5. Data and Method Limitations

The Actions Database holds data created at a detailed management unit level by conservation officers who generally have a good level of ecological expertise and sound knowledge of the Natura 2000 sites for which they are responsible. However, some mechanisms are better recorded than others, for example, the data for the terrestrial and freshwater and wetland features was extensive and of high quality, however, data for marine and bird features was less comprehensive.

There was a high level of expertise in the workshops, however, the data produced is qualitative and dependent on the knowledge and opinion of those attending on the day. There was a tendency for attendees to focus on those mechanisms which are commonly used and with which they were most familiar. While a range of representatives attended the workshops, the majority were from the conservation/biodiversity sector, with an under-representation from other sectors such as farming, fishing or industry.

The interview process used a sample of Natural Resources Wales staff with relevant expertise. Only the most prominent mechanisms were included.

The literature review sampled a number of readily available articles and research papers for the dominant mechanisms only. It was in no way exhaustive.

Further information on limitations is shown in Appendix A.

NB. The results shown in this report and in the Inventory of Existing Management Mechanisms are the findings of the research; they do not represent the a policy position or recommendation of Natural Resources Wales or the LIFE Natura 2000 Programme.

2. Usage of Management Mechanisms

90 different mechanisms are recorded in the NRW Actions Database; the full list is shown in the Inventory of Existing Management Mechanisms.

The mechanisms are divided into the following categories. The number of different mechanisms in each category is shown in the table overleaf.

Mechanism Category	No of mechanisms
Legislation and regulation	43
Direct conservation management	9
Land/resource management plan/project	9
Agri-environmental scheme	8
NRW land-use agreement	8
Changes to operations/management	6
Commons	2
Land ownership/tenancy	2
Forest scheme	1
Investigation	1
No remedy	1
Total	90

2.1. Most Commonly Used Mechanisms for Natura 2000 in Wales

The five most common mechanisms used by NRW conservation officers to address issues affecting Natura 2000 features are shown in the table below. 'Completed actions' refer to those which were logged in the database in the past and which are now complete. 'Current actions' refer to those which are currently planned or underway.

Completed actions		Current actions	
Mechanism	%	Mechanism	%
Investigation	20	Investigation	25
New NRW Management agreement - private sector	16	Discharge/ PPC consent – Review of Consents	17
Renegotiate existing NRW management agreement	16	Direct management	9
NRW Direct Management	15	New NRW Management Agreement - private sector	8
Direct management	7	Changes to policy and/or legislation	4
Subtotal	74	Subtotal	63

Based on frequency of occurrence and displayed as a percentage of the overall number of mechanisms selected.

Three out of the main five mechanisms selected to address completed and current actions within Wales are the same. The direct management and management agreement mechanisms are well known ‘tried and trusted’ measures which have been and continue to be relied upon to deliver appropriate management and restoration for Natura 2000. The high rate of Investigation reflects the continuing need for evidence about the nature of issues and the appropriate actions required to inform decision making.

For completed actions the Discharge/PPC consent – Review of Consents mechanisms is also widely used. It relates to air quality issues in all environments and water quality issues in the marine and its frequent use reflects the fact that an active Review of Consent process has been undertaken in Wales from which there are a significant number of outstanding actions. Changes to policy and/or legislation is also used for a relatively small number of current actions indicating that that existing arrangements have failed to address the issues – this mainly relates to marine features.

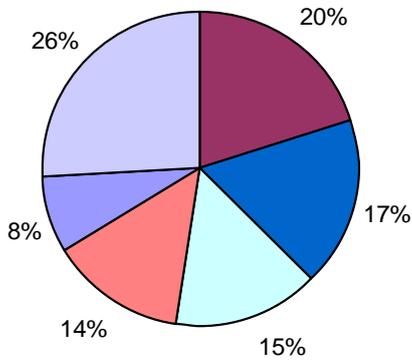
Overall, the picture is of a high level of dependence on only small number of mechanisms.

2.2. Mechanisms Used for Different Feature Groups

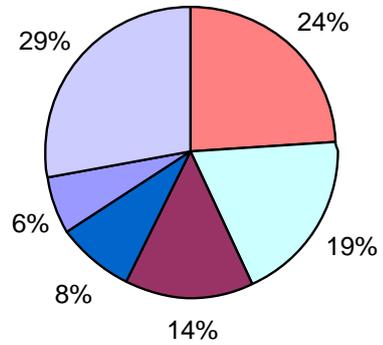
The data was analysed at a more detailed level, that is, for marine, freshwater and wetland, terrestrial, bird and bat features separately and the results are shown below.

Mechanisms used for completed actions for different feature groups

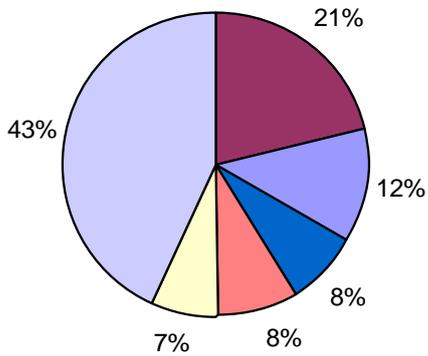
(a) Terrestrial features



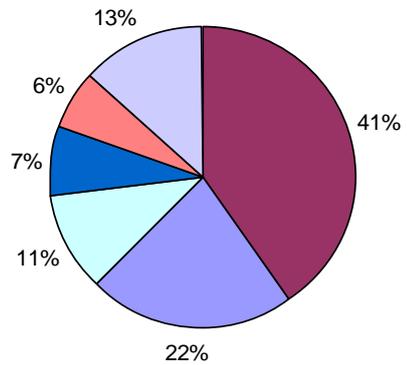
(b) Freshwater and wetland features



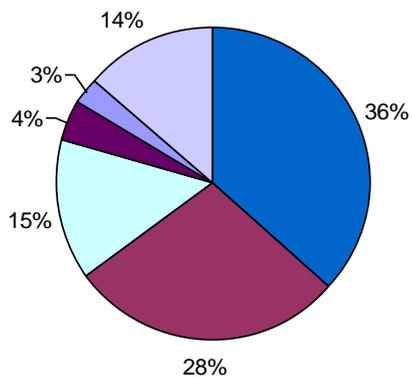
(c) Marine features



(d) Bat features

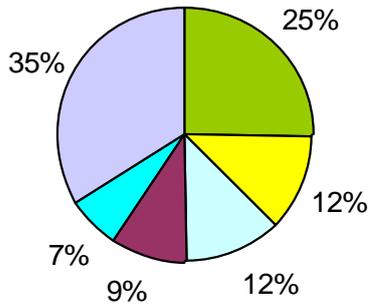


(e) Bird features

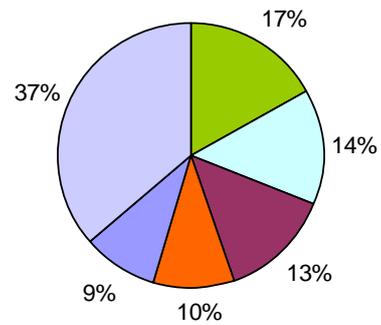


Mechanisms used for current actions for different feature groups

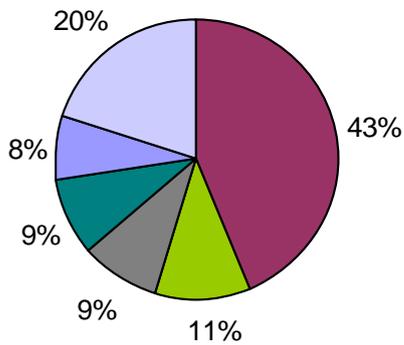
(a) Terrestrial features



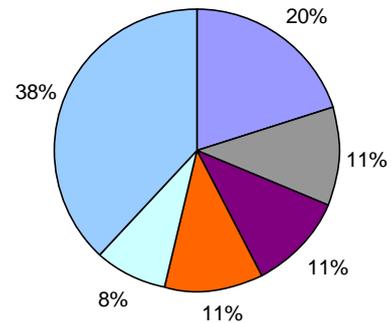
(b) Freshwater and wetland features



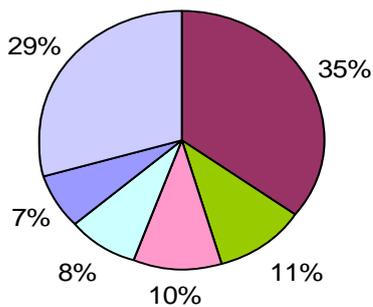
(c) Marine features



(d) Bat features



(e) Bird features



Terrestrial Features

Completed actions: An analysis of the data from the Actions Database suggests that in the past there was a reliance on a small number of mechanisms to address 80% of issues affecting terrestrial features (3, 5 or 7 depending on the feature type).

On average one fifth of all logged mechanisms were for Investigation which demonstrates that a high level of uncertainty existed or insufficient information was available on the issues. 32% of implemented mechanisms were management agreements and 24% direct management. 46% of the mechanisms involved NRW as the responsible organisation.

Current actions: While management agreements, direct management and investigation are still relied upon, a slightly wider range of mechanisms are utilised. One quarter of current actions relate to the Review of Consents process for discharges, reflecting the fact that a significant number of these are still outstanding. Establishment of Commons Councils is a newly available mechanism which was selected as a means of addressing intractable issues related to joint management particularly on upland commons.

Freshwater and Wetland Features

Completed actions: The picture for freshwater and wetland is similar to terrestrial features with a reliance on the same a small number of mechanisms to address 80% of the issues (4 or 5 for wetland and riverine features; 10 for standing water features). Direct management is the most common mechanism, reflecting practical works carried out on wetlands and standing waters. Management agreements and investigation are the most commonly selected mechanism to address issues affecting great crested newts and riverine features respectively.

Current actions: As for terrestrial features, there most common mechanism is the review of discharge consents. Glastir (targeted element) was also cited 10% of the time indicating an interest in this relatively new scheme. But management agreements, direct management and investigation still figure highly, although there is a larger percentage of 'Other' mechanisms used (37% compared to 29% for completed actions)

Marine Features

Completed actions: Investigation is by far the most common mechanism selected, reflecting the paucity of information available in the marine environment. A larger range of mechanisms were used to address issues than for non-marine features, suggesting there may be specific local approaches being

employed. Direct management is a significant mechanism, as are management agreements, but the latter can only be used in the coastal zone rather than sub-tidal areas. Issue notice/consent accounted for 7% of selected mechanisms on average. Grazing licences, new Tir Gofal agreements and new NRW management agreements for the voluntary sector are some of the less frequently selected mechanisms.

Current actions: The need for investigations has increased to 43% of all actions, demonstrating the continuing challenge to obtain robust evidence on marine features. Significant resources will be needed to address this. As with other features groupings Review of consents work is also important. Changes to policy and legislation were logged on average 9% of the time, which demonstrates the importance of regulation, and policy as management tools in the marine environment to manage a common resource and the fact that limitations to the existing regimes are being increasingly recognised.

Bird Features

Completed actions: Overall, 508 completed actions were recorded from the Actions Database for bird features (although there were no completed actions for marine birds) and 14 different mechanisms were selected. The largest proportion of completed actions were associated with management agreements (51%), and investigation (28%), in contrast to the low utilisation of agri-environment schemes (4%). There was a heavy reliance on these options with 'Other' mechanisms only making up 14%. The high figure for management agreements represents the extensive use of this mechanism in the uplands. Glastir represented 8% of all recorded mechanisms and was surprisingly low for uplands.

Current actions: There was an increased percentage of investigation actions logged, and a larger percentage of other 'actions', but otherwise the key mechanisms of Review of Consents (discharges), management agreements and direct management dominate.

Bat Features

Completed actions: Supporting the findings from other feature groups, the analysis of completed actions suggests there is a high dependency on a small number of mechanisms. Investigation accounted for the largest proportion of actions (41%) with direct management contributing 22% and management agreements consisting of 18%. There were no completed actions affiliated to either Tir Gofal or Glastir agri-environment schemes.

Current actions: This shows a quite different picture with a much lower reliance on investigation and the introduction of agri-environment mechanisms as a chosen option. The number of 'other' mechanisms has trebled.

2.3. Conclusions on Mechanism Usage

The dominant pattern across all feature types is one of heavy reliance on a small number of mechanisms – namely direct management, management agreements, review of consents and to a lesser extent agri-environment schemes. The majority of these mechanisms fall under the responsibility of Natural Resources Wales.

However reliance on the narrow range of mechanisms could be a cause for concern as budgets and resources are limited and there is limited scope for scaling-up operations. The involvement of NRW in the majority of mechanisms used has the advantage of providing quite close control over work and ensuring a high level of expertise is applied. However, the major challenge of bringing Natura 2000 features into favourable condition cannot be realistically met by a small number of organisations, however dedicated.

Notably there is a dependency on mechanisms which rely on significant ongoing input of public money (often via quite bureaucratic processes). While such incentive-based approaches clearly have a role, there is scope for consideration of alternative models of financing

While on one hand the reliance on a small number of mechanisms indicates the efficiency and effectiveness of them, it also may suggest a lack of knowledge about or inaccessibility of other options, and limited scope for the introduction of new ideas and methods. Some lesser known mechanisms may also produce good results in a cost effective way and failure to use them could amount to lost opportunities.

It should be considered that some actions may be particularly slow to be delivered, and remain for a prolonged period as ‘Current actions’. This may apply in particular to mechanisms such as Changes to policy and legislation, which are non-specific and could take many years to implement.

Investigation appears frequently for all features, particularly in the marine environment. In many cases, the nature and extent of the issue is not fully understood and some degree of data gathering is required to make informed, robust decisions. The need shows no particular sign of reducing over time. Investigation may be as simple as a site visit to look at the problems in more detail, but can involve significant research requiring major time and expense. Lack of confidence amongst conservation officers, disagreement about measures needed, and other uncertainties can lead to investigation actions being logged inappropriately rather than the more practical mechanisms, which can lead to delays in tackling the problem.

3. Appraisal of Current Management Mechanisms

The major, most commonly used management mechanisms were assessed to identify the extent to which they are 'fit for purpose'. This was done by drawing together the results of the workshops, interviews and literature review, which is presented in full in the Inventory of Current Mechanisms.

A summary of the comments received for each major mechanism is shown below⁴. The figures reflect the number of advantages and disadvantages of a particular mechanism and potential for improvement. However, the number of comments is also affected by the familiarity and level of knowledge participants had for a particular mechanism.

Prominent Mechanisms

Mechanism	Summary of mechanism	No of different constraints identified	No of different benefits identified	No of different improvements identified
Glastir – all elements	5 year whole farm sustainable land management scheme available to farmers and land managers across Wales.	51	14	28
NRW management agreements	Payment for delivery of specific environmental management made under S.15 Countryside Act 1968 or S.16 of the National Parks & Access to the Countryside Act 1949.	22	23	23
Direct management (including Direct management – marine)	Where land is owned by a partner organisation and the actions involve direct management of the unit (or areas out-with the unit but within their ownership).	16	11	22
Investigation	Where a cause of unfavourable condition needs to be identified before a relevant party or action can be identified.	11	7	13
Discharge/PPC consent – Review of Consents (RoC)	Discharge or PPC consents which were identified as needing to be revoked or modified as a result of the RoC process to avoid impact on site integrity.	17	5	7
Discharge / PPC consent - revoke or amend AMP	Discharge or PPC consents which were identified as needing to be revoked or modified as a result of the RoC process to avoid impact on site integrity.	7	0	17
Enforcement	An issue requiring enforcement of a regulation or legislation to address it.	9	3	11
Byelaws	Byelaws can be made where certain activities are not captured by the provisions of S.28 WCA 1981 (as amended).	10	6	5
Implementation of appropriate coastal management	Local authorities have duties relating to the way coastal management is undertaken.	7	7	6
Changes to policy and/or legislation	Requirement for changes to policy and/or legislation to resolve or control an issue or risk.	7	4	8
Water Level Management Plans (WLMP)	Implementation of actions within a WLMP to raise water levels or change ditch management to address a management issue.	6	3	5

⁴ This includes all mechanisms with more than two comments the inventory.

Facilitate Establishment of Commons Council(s)	S.26 of the Commons Act 2006 enables Welsh Government to establish Commons Councils. Functions can include regulation of agricultural activities and management of vegetation. Used where other mechanisms would not be sufficient to control activities taking place under common rights.	7	4	1
Agree Mitigation within Shoreline Management Plan	Used when mitigation for a feature is required	6	3	2
Abstraction licence – revoke or amend Review of Consents (RoC)		5	5	0

Less Prominent Mechanisms

Other mechanisms highlighted in the study, which received less than two comments, are shown in the table below. Of these two were obsolete. In two other cases, it was argued that the mechanisms are rarely used due to the requirement to compensate. For the remainder the low response reflects the fact that the mechanism is rarely used and/or poorly understood. These are not discussed further in this report but more details can be found in the Inventory.

Mechanism	Comment
National Park Authority agri-environment scheme	Obsolete
Flood risk management –operational work	
Better Woodlands for Wales	Obsolete
Tenancy negotiation or buy out	
Compulsory withdraw/modify notice/consent	Requires compensation
Issue notice/consent	
Cross compliance check required	
Enforcement (S34 Road Traffic Act/S28p(6))	
Planning permission – enforce conditions	
Planning permission – revoke or modify	Requires compensation
Application of Slurry Silage & Agricultural Oil Regulations	
No remedy	
Flood risk management capital/improvement scheme	
Implement Asset Management Plan (AMP) scheme	
SMS production and agreement	
Fisheries enhancement projects	

A further 56 mechanisms available in the Actions Database were not mentioned in the study. This indicates that they are rarely used.

3.1. Summary Appraisal of Prominent Mechanisms

The suitability and effectiveness of existing mechanisms expressed in terms of constraints, benefits and proposed improvements, as determined by the research are summarised below.

3.1.1. Glastir

Agri-environment schemes such as Glastir, are required under EU law, which provides a level of continuity and funding which is not enjoyed by many other schemes. As such they offer great potential for delivering management and restoration on Natura 2000 sites. Their focus is on gaining broad uptake across the wider farmed environment and this makes them well suited to addressing broader off-site Natura 2000 issues (such as diffuse pollution), considering whole farm management, and enabling areas adjacent to Natura sites to be managed more sympathetically.

However, study participants felt that it is this broad-scale and generic approach which is a constraint when Glastir is used specifically for the management of Natura 2000 features. Available prescriptions are often not well suited to the individual requirements of features on a particular site. There is limited flexibility so modifications, if possible, are cumbersome to arrange with little room for future changes once an agreement is in place. Reliance on producing agreements without the input of project officers on the ground could also result in inappropriate prescriptions and missed opportunities for Natura 2000. Some participants argued that it could not be assumed that Glastir will automatically produce benefits for Natura 2000 and inappropriate agreements could even result in deterioration to Natura 2000 features.

The Glastir Targeted Element key priorities are carbon soils and water management, with biodiversity also included. Certain Natura 2000 needs are incorporated within these priorities but alongside a range of other factors within a complex system. Some Natura 2000 landowners may not be eligible to apply or able to meet criteria for the higher level element. There is also no requirement for agreement holders to consider any Natura 2000 land within or adjacent to the holding.

Suggested improvements included making the prescriptions more flexible or specifically designed to deliver for Natura 2000 features. Grazing prescriptions were particularly highlighted in this regard; better incentives for cattle, pony and horse grazing are needed.

There was a sense that management agreements and Glastir were somehow in competition, with a trend for farmers to move from the former to the latter, due in part to better payments rates. This was a cause for concern given the view that management agreements were better placed to deliver specific and successful outcomes for Natura 2000.

3.1.2. NRW Management Agreements

Section 15 Management Agreements are a frequently-used mechanism to deliver appropriate management for Natura 2000, and many of those involved in the study will have been very familiar with its strengths and weaknesses. It is highly regarded, and often considered to be the most efficient and effective tool available for delivering positive outcomes for Natura 2000 across non-marine sites in Wales. Its key strengths are seen at its flexibility (the ability to tailor an agreement to the specific needs of the site, features and landowner), high quality of specialist ecological advice from NRW conservation officers and potential for a long term (adaptable) arrangement (at least 5 years with opportunity to renew). It can be used on a wide range of land holdings, not just agricultural ones.

Key constraints are the fact that there are relatively fixed resources in terms of annual budgets and supporting staff. The current scale of operations will not deliver favourable condition for all Natura 2000 features in the near future. The mechanism is voluntary so adoption and success relies upon the landowner being sympathetic to the aims of the agreement, the agreement being remunerative and the landowner having the skills and confidence to be able to implement the agreed measures. Establishment and maintenance of positive relationships between NRW and the agreement holder are essential to success.

For larger farms the contribution of the management agreement payments to farm income is often very small, so the incentive to join or fully comply with the scheme is minimal, especially given the, often significant labour and time involved. Payments need to be sufficiently lucrative to provide an adequate incentive.

The scheme is constrained to site boundaries and is not well suited to addressing off-site issues or those which require a coordinated regional approach.

A large number of improvements were identified by participants, many being practical suggestions to improve efficiency through activities such as streamlining the application process and additional staff training. There were calls for a more strategic prioritised approach to allow the targeting of funds and effort. Increase in investment is also needed to improve the overall frequency of monitoring and allow the monitoring of ecological outputs rather than just compliance.

3.1.3. Direct Conservation Management

This mechanism is widely used and is an effective tool for delivering focused conservation management across a wide variety of ecosystems and issues (coastal management, removal of weirs, riparian management, wetland sites, and marine non-native species). It can be straightforward and cost effective

to implement. Its ability to deliver quickly gives this mechanism the best potential for use as an emergency mechanism in the case of, for example, an oil spill.

Direct management tends to be the main mechanism used on National Nature Reserves and other NRW land holdings, and on nature reserves owned by voluntary sector bodies. So while is an important mechanism, its scope tends its geographically restricted. It is less relevant to standing water and riverine features and it is not applicable to most marine features.

While National Nature Reserves have a (limited) budget for direct management, other organisations may have to invest effort in identifying and applying for funds, and managing external grants, which can be very time consuming.

Activities can be somewhat ad hoc without continuity. And there is a tendency for work to be done in isolation lacking communication between departments and organisations, and others dealing with similar off-site issues. It is hard to scale-up this mechanism, as it is limited by constrained budgets and the number of experienced staff. A more strategic approach with improved communication was called for.

Other suggestions include improved use of direct management as a tool to set up demonstration sites which can act as exemplar for best practice and a teaching resource. Direct management should also be used as a means of involving and engaging users and local communities.

3.1.4. Investigation

Investigation was not considered to be a management mechanism as such, as it did not directly deliver management on the ground. However, it was regarded as key part of the process of developing effective actions and is often the first step towards identifying and/or resolving an issue.

Lack of evidence was considered to be a significant limiting factor, especially in marine and freshwater and wetland environments. Evidence was seen as essential to aid decision-making and develop appropriate actions but also to inform and persuade others of the need to manage Natura 2000.

However, there was the perceived risk that investigations could be overly generalised, costly and time consuming, without adequate feedback into the planning of subsequent actions, which could actually hinder rather than facilitate progress. Sometime the mechanism is used a catch-all to record cases of uncertainty or disagreement.

Numerous specific suggestions were made for improvements, mostly focusing on improved guidance, training, procedures and communication of results.

There were also calls for an increased budget for investigation (or at least a fixed ring-fenced budget) and a greater degree of strategic steer as to which investigations should be prioritised.

3.1.5. Discharge/ PPC consent – Review of Consents

The Review of Consents process was considered to have been relatively effective, although resource intensive mechanism, to deal with regulated point sources of emissions and discharges. The mechanism prevented further deterioration of features and in some cases brought benefits by resolving issues.

The process is now complete, however, it was pointed out that there are actions identified during the process which are still outstanding, such as exceedances of air quality targets for many Natura 2000 sites. It was felt that the Actions Database should be amended to include a new mechanism such as 'Issues arising from the RoC process' to deal with these.

The outcomes of the review were not perceived to be ambitious enough and it is suggested that this may be due to the need to compensate applicants and lobbying from industry. It was argued that while the mechanism addressed larger emitters, problems still exist with discharges from small regulated sources which produce in-combination effects. Enforcement of consents was also seen to be an ongoing problem.

The mechanism was regarded as being an inappropriate means of dealing with diffuse pollution from unregulated sources.

3.1.6. Discharge/PPC consent - revoke or amend Asset Management Plan

This mechanism was considered to have the potential to be effective as it regulates point source discharges and emissions and ensures that they are not damaging Natura 2000 features. However, it was noted that the mechanism requires updating as discharges are now regulated under the Environmental Permitting Regulations.

Benefits of the mechanism are that it provides a clear and consistent approach to regulation and has resulted in a reduction in the impact of emissions and discharges on Natura 2000 features than would have otherwise occurred. Industrial units are dealt with under one licence and this enables a better understanding of the contributing factors on a site and how they work in combination. The regulatory regime can also take account of new technology and techniques.

However some participants raised specific drawbacks, such as insufficiently stringent water quality standards, inability to set aerial limits below background levels, the existence of licences which are not currently fully utilised (posing a future risk) and the permitting of breaches in air quality targets providing they are within set percentages. Also licences do not have to be reviewed on a regular basis, which can be problematic if new evidence shows they are damaging a feature.

Smaller point source aerial emissions (e.g. smaller agricultural units) are not regulated under this system and so are difficult to control. There is a lack of effective mechanisms to control diffuse air pollution from other sources (i.e. marine shipping). More reliable enforcement of the legislation is required.

3.1.7. Enforcement

Enforcement was considered to be a valuable mechanism for Natura 2000 in some situations providing it is carried out effectively and appropriate penalties applied. There is normally a clearly defined procedure which makes the mechanism easier to understand and use.

However, enforcement work is relatively resource intensive, and can be technically difficult and bureaucratic and in many cases it is understaffed. Identification of offences and gathering supporting evidence can be difficult, especially in remote areas, hampering the progress of cases. Many offences relating Natura 2000 are not police priorities. Fines can also be insufficient. There is resulting perceived lack of enforcement in relation to for example, byelaws, cross compliance and recreational activities in the marine environment.

Suggested improvement included incorporating an element of education and awareness-raising alongside enforcement work. The establishment of a single point of contact/helpline for reporting offences was also suggested, along with streamlining of the enforcement process. Publicity of high profile prosecutions could act as a deterrent.

3.1.8. Byelaws

Byelaws can act as a deterrent to control the some adverse impacts on Natura 2000 and they are much easier to implement than changes to national legislation and can be tailored to meet the specific needs or a particular site or feature. The establishment of bylaws can be used to engage stakeholders and raise awareness about conservation.

Participants identified a lack of knowledge of byelaws amongst conservation practitioners, including which byelaws are already in existence, how to create them, appropriate uses, degree of effectiveness and how to enforce them. As a result they tend to be under utilised as a mechanism for conservation.

The formulation of new byelaws was considered to be expensive and their creation time consuming and slow. In some cases it is difficult to prove beyond doubt that some activities are damaging features and in these cases introducing and enforcing byelaws without a solid scientific basis could risk losing the good will of users. Stakeholders may be involved in devising byelaws and this may limit their value for Natura 2000.

Byelaws are often difficult to enforce and it is necessary that an appropriate penalty be attached to them to ensure that they are an adequate deterrent. Reduced levels of enforcement or practical problems limiting the ability to enforce byelaws was considered to be a major limitation, for example, there are no longer dedicated fisheries enforcement officers. Byelaws often rely on self-policing.

3.1.9. Implementation of Appropriate Coastal Management

Appropriate coastal management was defined by participants as management methods which consider the whole system rather than individual stretches of coastline and 'softer sea defences' such as beach recharge and maintenance of protective habitats, rather than traditional hard defences. These techniques would generally have positive impact on Natura 2000 features and could have associated socio-economic benefits such as the maintenance of tourist beaches. It was also argued that costs would be lower than traditional methods.

However, the priority of coastal management is to prevent flooding and loss of property, rather than Natura 2000 management and hard defences will always be used in some areas (e.g. towns), so a scope for appropriate management is constrained. Appropriate coastal management projects also present a range of technical and practical challenges and require various licences and consents. There is also the need to balance potentially conflicting needs of different features (for example, sand dunes vs. intertidal habitats).

3.1.10. Changes to Policy and/or Legislation

It was considered that certain changes to policy and legislation are essential if Wales is to overcome all barriers to achieving favourable condition for Natura 2000 features. However it was acknowledged that it this is a lengthy and expensive mechanism without any guarantee that the outcome would bring the changes hoped for. Measures may be modified or 'watered down', poorly implemented or inadequately enforced. In addition to this participants recognised that there is currently a lack of political will to regulate further or to address issues affecting conservation particularly in light of the current economic climate.

Numerous legislative and policy changes were suggested by contributors, relating to for example, invasive non-native species, diffuse air and water pollution, grazing, forestry and fragmentation of habitats.

3.1.11. Water Level Management Plans

Water Level Management Plans (WLMPs) were considered to have the potential to address issues affecting Natura 2000 features. However, it was claimed that their use is currently very limited in Wales (although they have been more extensively adopted in England).

WLMPs have the advantage of bringing stakeholders together to discuss their water level management needs in a structured way and enable funds to be drawn down to undertake water level management. However, the mechanism has had limited success because the difficulty of brokering of agreement between stakeholders with very different objectives, especially as it is a voluntary arrangement.

3.1.12. Facilitate Establishment of Commons Councils

In theory, the concept of Commons Councils was considered to be very positive as many Natura 2000 sites are on commons where it inherently difficult to reach agreements and implement changes. Commons Councils have more power than commoners' associations and have the potential to control more of the management of a common (i.e. shepherding, clearing, animal welfare issues).

However, setting up a council takes a lot of time and resources as it is necessary to engage with all commoners. The effectiveness of the council depends on the commoners cooperating, making mutually acceptable agreements, and being willing to accept the authority of the council regarding organisation and regulation. In practice this could be divisive and result in poorer relationships. Councils and their members also take on significant responsibilities and potential liabilities of others (for say abandoned livestock or failure to comply with the terms of an agri-environment scheme) which may discourage uptake of the mechanism.

3.1.13. Agree Mitigation within Shoreline Management Plan

It was felt that this mechanism has the potential to improve the condition of Natura 2000 features, but this depends on the full integration of Natura needs into the plans and a commitment to fully implement the actions identified. The plans need to inform planning decisions.

However, the fact that Shoreline Management Plans (SMPs) are focussed on protecting health and property means that full integration of Natura 2000 needs may be a challenge.

Practical and larger policy and economic considerations can hamper efforts, for example, SMPs may recommend that acquisition of land to compensate for losses due to managed retreat or realignment of coastal defences. However, this can be very costly with a long lead in time, and the land may not be available due to competing land use interests. It may also result in the loss of other valuable habitat. If the areas are too small they are less likely to produce the desired replacement habitat.

3.1.14. Abstraction Licence – Revoke or Amend Review of Consents

The mechanism was considered to be successful as it facilitated the assessment of existing abstraction licences to ensure that they were not adversely affecting Natura 2000 features and provided positive outcomes for features. It also enabled a list of consents to be modified or revoked and the impetus to undertake this work. In addition to this it produced a large amount of data during the appropriate assessment which increased our understanding of the sites and will be of use for future management.

Relative to the outcomes the process was considered to take up a lot of resources, be complex and time consuming and took a long time to complete. The need for compensation has made authorities reluctant to use the mechanism to its full potential. It was also noted that changes to abstraction licenses mean that smaller abstractions are no longer regulated.

4. Conclusions

There is a very wide range of mechanisms available in Wales with the potential to address issues and risks on Natura 2000 sites, however, only a relative small proportion are regularly used (no more than around 20 out of 90). The study does not confirm why this should be, however, the implication is that rather than the mechanisms being unsuitable, there are other factors at play. These include the fact that commonly-used mechanisms are seen as effective, trusted, well known and easily available. While little-used mechanisms are not well known and the technical detail poorly understood by conservation practitioners. They may have quite a narrow specialist application or be difficult to access within normal corporate procedure and practice.

For the 14 most prominent well-used mechanisms, the study revealed a wealth of information about the benefits, shortcomings and improvements of the schemes. The mechanisms were largely considered to be suitable to deliver management and restoration of Natura 2000 but not universally – most mechanisms could only be

applied effectively on some sites and features where the specific requirements were compatible with the mechanism.

It is common for practitioners to have to seek ways to shoehorn Natura 2000 requirements into the existing framework and prescriptions of a mechanism. And this reflects the fact that none of the mechanisms have been designed specifically to address Natura 2000 needs. While this is not necessarily negative, the study found that, in general, Natura 2000 was **not** identified as one of the main priorities of mechanisms, and there was little attempt to integrate Natura 2000 in a structured way.

A number of the mechanisms lacked any strategic framework or set of priorities and this was an improvement which was called for by participants in the study. They also concluded that if favourable condition is to be met across Natura 2000 features, then more financial and staff resources need to be invested in the mechanisms. While significant increases in publicly funded budgets are unlikely in the near future, consideration could be given to financing the mechanisms differently or generating alternative sources of funding to boost the budgets.

Participants also made a number of specific, practical suggestions for improvements relating to factors such as streamlining procedures, training needs, improvements to the Actions Database and these will need to be considered by relevant officers.

Appendix A: Methods Used in Study

1. Appraisal of Mechanisms

The Actions Database was queried to determine the number and nature of the mechanisms recorded against each issue for each Natura 2000 feature.

Mechanisms for 'completed actions' refer to those which have been carried out in the past and are now complete. Mechanisms for 'Current actions' are those which have been planned by NRW conservation officers and which are currently being implemented or are planned to be implemented in the near future.

Any obviously erroneous or irrelevant entries were screened out, with the advice of conservation officers. The data was then sorted to facilitate analysis.

The analysis identified the frequency of occurrence of mechanisms (sorted in descending order) against the issues which they have been selected to address. This indicated the main mechanisms being used to address the issues affecting Natura 2000 features. The data for these features were amalgamated by feature type, by feature group and at a Wales level.

2. Stakeholder Contributions

77 individuals representing a variety of organisations including governmental and non governmental bodies, and the agricultural, marine and water industry sectors attended 10 different workshops at series of four events across Wales in June 2013. They are described in full in the Challenges Facing Natura 2000 Species and Habitat report.

At each event, participants were allocated to workshops for either terrestrial, marine, freshwater and wetlands or bird features. Each workshop was provided with a list of mechanisms derived from the Action Database which have been selected to address the main issues affecting Natura 2000 features for that feature grouping.

Participants were asked to complete two tasks:

- Comment on the suitability of the mechanisms presented, to address the issues in question.
- Identify additional mechanisms from the full list available in the Actions Database which would be suitable to address these issues.

The participants also identified other mechanisms not currently available, or commonly used, and novel mechanisms; these are discussed in the New Solutions for Natura 2000 in Wales report.

3. Structured Interviews

A series of structured interviews were undertaken in which Natural Resources Wales habitat and species specialists and regional conservation officers were asked a predetermined set of questions in order to derive information about the suitability and effectiveness of mechanisms currently used to address the prominent issues affecting Natura 2000 features and about suggested improvements to these mechanisms.

The interviewees were only asked about the main mechanisms (top 80%) as determined by the 'data analysis' used to address the main issues at a feature group level. The interviews were undertaken during September and October 2013 and involved a sample group of 15 subjects.

There was a good level of awareness of the main mechanisms among interviewees. When asked 86% of interviewees said they had knowledge of the main mechanism.

4. Literature Search

A literature review was carried out for the following categories of mechanisms. In each case the aim was to consider suitability and effectiveness of the component mechanisms.

- NRW land use agreements
- Legislation and regulation
- Agri-environment schemes
- Land/resource management – plans and projects
- Commons

The mechanism categories of Investigation, Changes to operations/management and Direct conservation management were not included in the literature review because they were too broad in nature to produce meaningful results. The remaining categories were not included because they were obsolete or not relevant.

5. Limitations of Data and Methodology

Actions Database Data

- Whilst the Actions Database holds an extensive dataset created at a detailed scale by professional conservation officers, there are shortcomings in some of the data. For example, data on the marine and bird features is less comprehensive and up-to-date than that for terrestrial and wetland ones. This fact was highlighted by stakeholders in workshops. A strategic review of the marine data is also ongoing which creates some differences in number of actions registered between issues.

Inconsistencies between information inputted by staff including human error may create discrepancies or biases in the database. For example, some mechanisms such as Investigation may have been overused by inputters because of their broad definition and general applicability.

- There are mechanisms which are not included in the Actions Database list of mechanisms and therefore are not represented.
- The use of frequency of occurrence may overestimate the number of uses of mechanisms when the data is grouped as some mechanisms may have been counted more than once due to the action affecting more than one feature.
- Actions associated with 'sea fish industries' have been removed from the data. This means that mechanisms associated with these actions will be under represented in the analysis in relation to marine features. NRW's review of Sea Fisheries actions is currently underway.

Stakeholder Consultation

- Participants had different levels of experience of the Actions Database and the range of mechanisms, and this was reflected in their responses to some degree.
- The different workshops presented and discuss the data in slightly different ways, e.g. broader or more detailed scales. These differences impacted upon the ability to compare the output across the different workshops.
- There was a tendency for more commonly-used and well known mechanisms to be discussed in more depth, than those that the participants were less familiar with, which may bias the results.
- The output from the workshops and the structured interviews is based on the professional opinion of the stakeholders. The results of the workshops are affected by individuals' contributions and interactions of participants on the day.
- While a range of representatives attended the workshops, the majority were from the conservation/biodiversity sector, with an under-representation from other sectors such as farming, fishing or industry.

Structured Interviews

- It was not possible to cover all the main mechanisms fully, due to lack of available expertise/experience in certain areas. Certain mechanisms therefore had fewer interviewees commenting on them and this may bias results.

- There was a tendency for participants in the workshops and the structured interviews to focus on the constraints rather than the benefits of the mechanisms.
- The sample number for the structured interviews was limited to 15 participants. The limited number of participants and the decision to focus the interviews on Natural Resources Wales staff may lead to some bias in the results.

Literature Review

- The literature review sampled a number of readily available articles and research papers for the dominant mechanisms only. It was in no way exhaustive.