

Indicator measurement annex

Input Indicators

	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Short title	Cost per Single Payment Scheme (SPS) claim	Unit cost of delivery of Higher Level Stewardship (HLS) schemes	Total government funding to the Environment Agency for management of environmental quality of surface water bodies	Cost of Local Authority waste management per household	Total cost to government of bovine TB control in animals in England	Total Government capital investment in flood and coastal erosion risk management
Technical definition	The Rural Payments Agency's net running costs (excluding non cash and notional items) that are related to processing SPS claims will be divided by the total number of SPS customers in England within the year to give an average cost per claim.	National indicator to measure the administrative cost of delivery of HLS. Costs will include IT, administration and processing, project officer guidance and advice.	Funding to the Environment Agency to deliver improvements to the environmental quality of surface water bodies supports monitoring and analysis; regulatory activity; advice education and publicity to influence behaviour; and some funding for direct improvement activity. The indicator does not include the funding for direct improvement activity, which can fluctuate from year to year. It does include funding for advice, education and monitoring for the catchment sensitive farming initiative.	This reflects the whole cost to Local Authorities (LAs) in England for the cost of waste management (i.e. waste collection and disposal) per household.	This indicator represents the total cost of running Defra's bovine TB programme for England minus the income.	The indicator measures the total investment in flood and coastal erosion risk management in England both through capital grants from Defra to the Environment Agency and the Regional Flood and Coastal Committee levy on local authorities. The investment primarily funds asset improvement (building new defences and refurbishing, sustaining and improving existing defences). Alongside the associated impact indicator, this input indicator will show how value for money is achieved by both showing the investment in capital flood and coastal erosion risk management projects and the impacts, in terms of homes better protected and other economic benefits to the nation.
Rationale	RPA represents the largest area of spend under SRP1 and the Single Payment Scheme accounts for the majority of it. It is an area of high public interest under this priority.	Securing farmland under Higher Level Stewardship agreements is the best way of ensuring the most effective environmental management of farmland to conserve wildlife and maintain biodiversity; enhancing landscape quality and character; protecting the historic environment and natural resources and promoting public access and understanding of the countryside.	Funding of these environmental management functions represents the main direct consistent financial input made by Government to WQ improvements.	Waste is the largest area of spending under this priority. This indicator should be easily understood: people are familiar with their and their Council's actions on waste. Measurement 'per household' is more easily understood than, say, cost per tonne.	Easily understood and representative of Government expenditure across the whole of the bovine TB programme which includes TB surveillance and control activities. A measure of total expenditure was considered preferable to a unit cost measure because the nature of animal disease testing means that in the event that disease levels fall (and testing levels are maintained in the short to medium term) this would represent an increase in unit costs, even though the actual outcome on disease was positive. In addition, a unit cost measure on testing does not in itself relate to the impact on incidence of TB. Bovine TB represents the largest area of spend under this priority.	Flood and coastal erosion risk in England is increasing due to climate change and development in areas at risk. It is not possible to prevent all flooding or coastal erosion but there are actions that can be taken to manage these risks and reduce the impacts that they may have on communities. The benefits of managing the risk of flooding and coastal erosion typically outweigh investment costs many times over. By avoiding future damage to property, safeguarding insurance terms, and preventing the serious trauma and health impacts that flooding and erosion can cause. Defra capital investment in CSR07 delivered an average £8 in long-term benefits to society for every £1 of capital investment - amongst the best value for money in the public sector.
Formula	(1) Direct SPS Costs + (2) Apportioned / Allocated Indirect / Shared SPS Costs + (3) Apportioned Corporate Costs divided by (4) Total Customers RPA have changed the methodology which they used to record costs before 2011/12. The previous model was created by PriceWaterhouseCoopers, as part of an independent review of the Rural Payments Agency. The new model has been internally generated by RPA and Defra in partnership. Therefore, 2011/12 and subsequent data will not be prepared on the same basis as the 2010/11 data.	(1) Number of live HLS agreements (2) Wage and salary cost of HLS delivery (3) Pension and social security costs of HLS delivery (derived from wage and salary cost) (4) Non payroll costs calculated as a proportion of total ES costs (5) Rent and communications costs of HLS calculated as a proportion of total ES costs. (6) Corporate services cost of HLS (7) Genesis costs of HLS calculated as a proportion of total ES costs From indicator components (above) unit cost of input indicator = $(2+3+4+5+6+7) / (1)$ £ per agreement	Actual spend using financial reporting systems to report on actual spend against the relevant functional splits in the Environment Agency Cost Allocation Model for management of Environmental Quality of Water. Example: Total allocated spend = National Office evidence, communications, operations, Corporate Services Directorate + National Office monitoring, assessment and planning, operations and support services + Regional and local delivery + National Office Resources, finance and facilities + water management for biodiversity – adjustment for Wales.	Cost per household = Total LA spend on waste management / number of households in England. The data on (i) waste management costs and (ii) number of houses comes from CLG. Please note UK Statistics Authority (UKSA) comments on the number of household statistics on the UKSA website: http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html (Report no. 117)	Total cost to government of bovine TB control in animals in England will be calculated by summing the costs of the bovine TB Programme minus the income received from tuberculin sales, salvage receipts and any EU income. The cost of R & D will not be included as it is unlikely to have an impact on the impact indicator over the SR period.	The indicator will record investment in flood and coastal erosion risk management. This includes: a) Capital expenditure by the Environment Agency for flood and coastal erosion risk management funded through capital grant from Defra b) Expenditure by the Environment Agency for flood and coastal erosion risk management funded through the RFDC levy. This includes all capital expenditure by the Environment Agency including for asset improvement, capital maintenance, habitat improvement, incident preparedness, mapping and data, regional and national costs. It does not include resource expenditure or any figure to reflect the support provided to the Agency's capital programme from its admin budget. While a proportion of the Agency's admin spend clearly relates to the delivery of its capital programme, attempting to separate this out and add it in here would result in confusing and inconsistent reporting that not meet the standards required of the official statistics. Figures have been restated in the April 2012 QDS in response to the latest updated information. They will therefore differ from the figures used in earlier editions of the QDS.

	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6
Short title	Cost per Single Payment Scheme (SPS) claim	Unit cost of delivery of Higher Level Stewardship (HLS) schemes	Total government funding to the Environment Agency for management of environmental quality of surface water bodies	Cost of Local Authority waste management per household	Total cost to government of bovine TB control in animals in England	Total Government capital investment in flood and coastal erosion risk management
Start date	2007/8	May-11	Apr-11	2008/09	2011/12	Apr-07
Latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data
Good performance (optional)	N/A	The aim is to drive down unit costs (whilst increasing HLS area and maintaining administrative standards). However, changes to unit costs are driven by two factors (number of agreements and administrative costs), it is therefore important to consider unit costs in the light of changes to the impact indicator.	N/A	A decrease in this indicator would indicate better value for money in waste management.	A decrease in this indicator could be viewed as an improvement in terms of costs to Government. However, the relationship between costs and disease levels is complex. For example, a decrease in costs may not necessarily correspond to a decrease in disease levels. Costs to Government may go up or down due to a range of factors, such as the volume of testing and the level of compensation payments. Increased testing would increase both costs and the number of TB reactors, because at this stage of the epidemic the more we look for the disease the more we are likely to find.	N/A
Behavioural impact	There is some risk that by reducing costs, quality is compromised and the risk of disallowance could increase. This risk is partly mitigated by parallel monitoring of other measures. There is also some risk that expensive small claims might be skewing the average cost per claim. The alternative approach is to calculate a cost per £ or Euro claimed. However, a cost per £ claimed is subject to exchange rate fluctuations given the amount claimed is set in Euros. A cost per Euro claimed is subject to the SPS rate in Euros declining over time (depending on the extent of the CAP reform) which would have a negative impact on a cost per Euro claimed indicator without reflecting any true deterioration in the efficiency of the RPA.	The aim is to select a unit for the indicator that will tend to counter the perverse incentive of the impact indicator – it is likely that the indicator will tend to favour small high-intensity HLS agreements.	No risk of perverse incentives for this indicator.	No risk of perverse incentives for this indicator.	A measure that captures total Government expenditure on bovine TB is less subject to perverse incentives than just measuring one component of TB expenditure (for example testing or compensation) where there could be an incentive to cut that single component of expenditure to produce a more favourable input measure.	Total investment in flood and coastal erosion projects alone is not an indication of a high performing programme. While increasing or decreasing total investment is likely to correlate with outcomes achieved, this indicator needs to be considered alongside the impact indicator and other factors to provide a robust view on the value for money being delivered by the investment.
Comparability	There is no comparable cost per claim equivalent to the RPA's Hybrid approach to SPS. Data for the 2011/12 financial year onwards is not comparable with data for 2010/11 or before. This is due to the change in methodology used to prepare the data (see above).	Comparison with SPS. Possible European comparison (Agri-environment delivery under Pillar 2), but availability of data unknown. Working with Natural England on international comparators, as EU Member States will have taken different approaches to their agri-environment schemes. Further work will be done on this over the next few months. Working with Natural England on possible private or public sector comparators for at least some elements of the unit costs, particularly in relation to the provision of advice and back-office processing costs. For example, industry comparators may include the costs charged for advice by land agents or other providers; public sector comparators may include the Single Payment Scheme.	All data are collected by the Environment Agency. It is not possible to make comparisons across organisations because only the Environment Agency exercises these functions.	Not available.	It may be possible to compare with Wales and Scotland.	Because of different geographical risk profiles, legal and policy frameworks it is not possible to establish meaningful international or private sector comparators at a programme level. However, specific activities within the programme are benchmarked and compared as part of the value for money and efficiency exercises. Similarly, internal regional comparisons are not feasible at the programme level.

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Collection frequency	Definitive calculation of unit costs in relation to the Agency's cost per claim will be undertaken annually.	Annually - more frequent reporting likely to be difficult and unrepresentative.	Annual	Annually	The frequency of reporting is expected to be on an annual basis as there is seasonality in the number of tests carried out.	Annually - more frequent reporting likely to be difficult and unrepresentative.
Time lag	In line with Annual Accounts.	Approximations of administrative costs will be used until the actual figures are agreed (probably within 3 months of the end of the financial year)	Provisional data will be available within two weeks of year ends. Validated data will be ready within about four weeks as part of Environment Agency year end financial procedures	Approx 8 months	Data will be available annually (based on financial year) but with a 3 month delay until final data can be published.	Annual figures on capital spend by Environment Agency should be available shortly after the end of the relevant financial year. Finalised outturns from local authority spend on the RFCC levy usually available by December following the end of the relevant financial year.
Data source	Net running costs as per the RPAs audited accounts. Total number of eligible claims will be taken from the RPA's IT system (RITA).	Reporting arrangements for data to be agreed with NE. Natural England are developing a project to collect data on administrative costs of agri-environment schemes.	EA financial reporting systems will enable calculation in accordance with the description.	Data is already available. Statistical summaries and National Statistics releases published by CLG.	Defra, AHVLA Agency, agreed contract prices with FSA, AHDB and FERA.	Defra, EA
Type of data	Official Statistic - OS	Official Statistic - OS	Official Statistic - OS	National Statistic - NS	Official Statistic - OS	Official Statistic - OS
Robustness and data limitations	Unit costs will be derived from accounts audited by NAO. Performance against unit cost target (as for all RPA targets) is appraised annually by Defra internal audit.	Methodology derived from a methodology developed by NE to determine the administrative costs of delivering OELS (agreed by NAO). Methodology approved by Defra Finance. Data validation carried out by NE. GENESIS data is subject to the standard quality assurance protocols of NE.	Data will be internally validated before submission and is subject to QA by NAO as part of the annual year-end accounting process.	The data is derived from Department for Communities and Local Government Revenue Outturn (RO) returns submitted by all local authorities in England. All local authorities complete all relevant parts of the RO returns, with the exception of the Subjective Analysis Return (SAR) which is completed by a sample of authorities and grossed up to provide estimates for all local authorities in England. Figures are subjected to rigorous pre-defined validation tests both within the form itself, while the form is being completed by the authority, and also as the data are received and stored.	As 95% of the TB work is being completed by OVs, currently a 2% check of all test charts are checked and audited. Going forward, when data is being collected from SAM, we will use exception reporting to investigate any anomalies. Details of such audit are still being discussed. WRS hours recorded are assured as utilisation is regularly checked. Again, exception reporting will highlight any anomalies that will be investigated.	We provide a quarterly performance update to Defra on progress made. A 100% reconciliation back to individual schemes is continually available. An annual list of completed schemes has always been made available for audit. Financial data is internally validated and externally subject to NAO audit.
Collecting organisation	Rural Payments Agency	Natural England	Environment Agency	Local Authorities	AHVLA	Environment Agency
Return format	£	£	£	£	£	£
Geographical coverage	England	England	England	England (waste is a devolved issue)	England - The majority of TB budgets will be devolved from April 2011	England
How indicator can be broken down	N/A	The input indicator is calculated at the National level (England) and delivered as a national scheme. There is no breakdown of figures below this level.	National	Disaggregation to LA level estimates is potentially misleading as differences between LA demographics/geographical attributes could render comparisons irrelevant.	England only (and only after devolution, some components are GB at the moment)	It does not make sense to break the indicator down to regional (or other) levels because the geographical variation of risk throughout the county and the lumpiness of the capital programme would provide a confusing picture.
Further guidance	N/A	N/A	N/A	N/A	N/A	N/A

Impact Indicators

	Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6	Indicator 7	Indicator 8
Short title	Agricultural soils nitrogen balance	Farmland birds index	Productivity of the UK agricultural industry	Uptake of Higher Level Stewardship (HLS) schemes	Net improvement in surface water bodies in England	Household recycling rates	Cattle herds that are Officially TB Free (OTF)	Number of households where the risk of damage from flooding and coastal erosion has been markedly reduced
Technical definition	The soil nitrogen balance is a measure of the total loading of nitrogen on agricultural soils over the crop year, expressed in kilograms of nitrogen (N) per hectare of managed agricultural land. The surplus N is generally lost to the environment either to the air or to water causing significant environmental impacts. The soil nitrogen balance provides the single best measure of the widest range of impacts on ecosystems health.	Farmland bird numbers provide a good indication of the overall level of biodiversity and the extent and quality of habitats so represent the most suitable single measure of public goods. The farmland birds index is based on population trends for 19 farmland bird species. Short-term change may be only assessed reliably over a five year period. As of January 2011, the smooth (rather than unsmoothed) index will be used, to match the convention in the National Statistics of using smoothed data for short-term comparisons.	The measure used is total factor productivity (or TFP) which shows the volume of output leaving the industry per unit of all inputs including fixed capital and labour. It is the trend in this indicator that is important rather than individual changes in particular years. As of January 2011, Defra have improved our method of pricing fertilisers, which feeds into the Total Farm Productivity indicator. We have therefore recalculated this indicator. Results from Jan 2011 QDS onwards will not match previous editions.	National indicator capturing area of land covered by Higher Level Stewardship, as a proportion of the total Utilised Agricultural Area.	The Environment Agency monitors a wide range of chemical and biological 'Quality Elements' in bodies of river, lake, estuarial and coastal water (termed 'Water Bodies'), including oxygen balance, diversity and abundance of populations of aquatic plants and animals, and chemical and organic pollutants. The indicator reports the year-on-year improvement in quality of these measured elements, taking into account any deteriorations.	The indicator will record the proportion of waste from households that is recycled. This will include materials collected by both local authorities and private/voluntary organisations working on behalf of local authorities. It will exclude material which is collected for recycling, but actually rejected at collection, during sorting or at the gate of a recycling reprocessor. It will include material diverted from residual household waste ('black bag' waste) for recycling through sorting or further treatment.	Data on the percentage of herds in England that are OTF (where non-OTF herds are defined as being issued with a TB2 restrictions form) will be presented. This indicator only reports on non-OTF herds because of a TB incident (and not those restricted because of an overdue test or for any other reason).	The indicator measures cumulatively the number of households that have had their risk of damage from flooding reduced through both government investment in flood defence schemes and property level measures. As of the Jan 2011 QDS, this indicator measures the cumulative number of households <i>within a financial year</i> .
Rationale	Nitrogen is a key input from farming mainly from mineral fertilisers and animal feeds. Excessive use of nitrogen leads to surplus levels in agricultural soils, measured by the nitrogen balance. This surplus is likely to be lost to rivers or air, posing a significant environmental risk. Any reduction in this surplus will reduce the environmental risks.	Bird populations are considered to be a good indicator of the broad state of wildlife because birds occupy a wide range of habitats, they tend to be near or at the top of food chains and there are considerable long-term data on changes in bird populations which helps in the interpretation of shorter term fluctuations.	This indicator is a key measure of agriculture's economic performance and a key component of its competitiveness. It measures how efficiently the industry uses resources available to turn inputs into outputs. It is based on the ratio of the volume of outputs to the volume of inputs.	Securing farmland under Higher Level Stewardship agreements is the best way of ensuring the most effective environmental management of farmland to conserve wildlife and maintain biodiversity; enhancing landscape quality and character; protecting the historic environment and natural resources and promoting public access and understanding of the countryside. Agri-environment schemes represent a major area of spend. Delivery of high-value environmental benefits under HLS will continue to be a priority area for Defra during the Spending Review period.	Water is essential for life. Protecting and improving the water environment is key to maintaining viable, productive ecosystems on which human life depends. A good quality, well managed water environment reduces the cost of treating water for human consumption and food production and contributes to reducing the impact of flooding as well as providing leisure opportunities that everyone can enjoy freely. We need to monitor change in the environment to check that we are doing the right things to protect and improve it where necessary. The indicator provides a means to track improvements whilst taking into account any deteriorations that may occur.	This indicator was chosen as it relates to an established EU target (50% recycling rate by 2020 in Waste Framework Directive), and is a readily recognised and easily understandable measure that reflects the efforts made by Local Authorities to drive management of waste up the waste hierarchy.	This indicator will represent a measure of success in reducing the general herd incidence of bovine TB. When combined with the input indicator, this indicator is a good outcome measure of the success of Government policy in containing and ultimately eradicating bovine TB in animals in the long term.	Flood and coastal erosion risk in England is increasing due to climate change and development in areas at risk. It is not possible to prevent all flooding or coastal erosion but there are actions that can be taken to manage these risks and reduce the impacts that they may have on communities. The benefits of managing the risk of flooding and coastal erosion typically outweigh investment costs many times over. By avoiding future damage to property, safeguarding insurance terms, and preventing the serious trauma and health impacts that flooding and erosion can cause Defra delivers on average £8 in long-term benefits to society for every £1 of capital investment - amongst the best value for money in the public sector.
Formula	Soil nitrogen balance calculates the net surplus of nitrogen in agricultural soils based on total inputs minus total removals. Two main changes have come into effect, which will improve the data in the October 11 QDS relative to previous editions of the QDS. Results for 2009 <i>only</i> have been adjusted retrospectively to ensure comparability with 2010. These take account of register improvements following the full Agricultural Census in 2010 and the introduction of a survey threshold in line with requirements for the EU Farm Structure Surveys, below which farms are no longer surveyed.	Farmland bird index is made up from (a) generalist species and (b) farm specialist species. There are 7 species in the Generalist index and 12 species in the Specialists. The index provides a robust method of aggregating the numbers of each of the 19 species to give a single overall figure. The indices portray the annual changes in abundance. Within the indices, each species is given equal weighting, and the overall index is the geometric mean of the species indices. Individual species populations within the index may be increasing or decreasing, irrespective of the overall trends. Species indices are derived by modelling count data and estimates are revised when new data or improved methodologies are developed and applied retrospectively to earlier years. A smoothed index is also calculated, which enables short-term assessments of change over five year period.	Total factor productivity (TFP) index = (volume index of final output at market prices)*100/(volume index of all inputs). When aggregating indices, the particular formula used is the Fisher one; the geometric mean of the Laspeyres and Paasche indices. For the Laspeyres index a 'volume relative' is calculated for each output component as: (volume in year n)/(volume in year n-1). The total output index is then calculated by taking a simple weighted average of all the volume relatives, where the weights are the values of the components in the year n-1. For the Paasche index a 'volume relative' is calculated for each output component as: (volume in year n-1)/(volume in year n). The total output index is then calculated as the reciprocal of a simple weighted average of all the volume relatives, where the weights are the values of the components in the year n. The Fisher index is calculated as the square root of the product of the Laspeyres and Paasche indices. The above method is repeated for the inputs and Total Factor Productivity calculated as: (index of final output at market prices)*100/(index of all inputs).	(a) Total area of agricultural land within HLS agreements. (b) Total utilisable agricultural area of all farms in England for the base year (2010) Indicator = (a)/(b)	Indicator: Per cent net improvement = (improvements - deteriorations)/(improvements + deteriorations + unchanged) Variables: Improvements = (magnitude of improvement in assessment A) + (magnitude of improvement in assessment B) for all assessments. Deteriorations = (magnitude of deterioration in assessment A) + (magnitude of deterioration in assessment B) for all assessments. Unchanged = Sum of unchanged assessments <i>(Magnitude of improvement or deterioration refers to the number of status classes the measurement improved or deteriorated by, for example an improvement from poor (class 2) to good (class 4) is an improvement of 2 status classes).</i>	HH recycling rate (%) = total HH waste recycled / total HH waste generated	The percentage of OTF herds is calculated as: 100 - ((the number of non-OTF herds / the number of herds in England) * 100)	Number of households where the risk of damage from flooding and coastal erosion has been markedly reduced = (OM2 Households built before January 2009 moved from one category of flood risk to a lower category in comparison with the do nothing case) + (OM 4 (Households at very significant risk built or converted before January 2009 provided with appropriate property-level measures such as resistance and resilience)).

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Start date	2000	Base year for the index is 1970	1973	2008/09	2009/10	FY 1995/6 (Quarterly figures were first produced since FY 2006/07)	2005	2008
Latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data
Good performance (optional)	Decrease	An overall increase represents improvement. Ideally, increases will be observed in the farmland specialists and in particular in the priority species.	Increase at a rate of 2% or more	Increase. Note however that an increase resulting from a fall in the utilised agricultural area might be a cause for concern.	Increase	An increase in recycling rates demonstrates improvement.	An increase in the number of OTF herds should be regarded as improved performance. However, it should also be recognised that an increase in the amount of testing that is undertaken at this stage of the epidemic, would mean it likely that more disease was found, and consequently a greater proportion of herds might be non-OTF.	Increase
Behavioural impact	Reducing levels of nitrogen use reduces the environmental risks but also reduces inputs (fertilisers and animal feeds) thereby improving economic performance.	The indicator covers the provision of public goods from landscapes and biodiversity. This indicator is balanced by the input indicator which measures the economic performance of farming. There is a risk that farmland bird populations become an outcome rather than being used as a measure of the extent and quality of habitats.	The indicator is a measure of economic performance and does not explicitly account for environmental performance. This risk is mitigated with the publication of other types of environmental measures such as the Business Plan indicators 'Farmland Birds Index' and 'Agricultural soils nitrogen balance'.	The collection and measuring of the data is carried out already. There could be an incentive to manage larger schemes covering more utilisable area in detriment of smaller ones that may have a bigger impact on the environment. This risk is partly mitigated by the assurance that all of the options in HLS are capable of delivering a certain level of environmental benefits and partly by the choice of unit cost (which could favour smaller high impact agreements).	No risk of perverse incentives.	No risk of perverse incentives for this indicator	There is some risk of perverse incentives by doing more testing in those areas that are at lower risk from bovine TB, and proportionally less testing in those areas at high risk from bovine TB. This would artificially produce an improvement in the performance measure. However, bovine TB policies are developed in conjunction with the TB Eradication Group (a group containing Departmental, AHVLA, industry and veterinary experts) which mitigates this risk to a great extent.	Measuring the number of homes where flood and coastal erosion risk has been reduced is not, on its own, an indication of a high performing programme. This indicator needs to be considered alongside the input indicator to provide a robust view on the value for money of the outcomes being delivered. As there is only one pair of Business Plan indicators to cover flood and coastal erosion risk management, the focus has been on monitoring the headline statistic of value for money in the programme of investment in improved defences. However other activities within the programme are a crucial part of a sustainable approach. These include delivering environmental outcomes, routine maintenance of existing defences, mapping, forecasting and warnings, incident response, adaptive approaches, especially to manage coastal change and the development and implementation of innovative approaches. These activities will be monitored through indicators in the Environment Agency Corporate Plan and outcome measures (OMs) reported quarterly to Defra.
Comparability	Indicator is based on recognised and standard methodologies and allows comparisons with other countries. Results for 2009 only have been adjusted retrospectively to ensure comparability with 2010. These take account of the methodological changes outlined above. Results prior to 2009 are not comparable with later data.	Indicators are based on recognised and standard methodologies and allow comparisons with other countries.	Compiled from set of Economic Account for Agriculture which are compiled in accordance with internationally agreed methodology.	Possible European comparison (Agri-environment uptake under Pillar 2), but availability of data unknown and schemes in other Member States are in themselves not directly comparable.	Data are collected by a single organisation, so there are no cross-organisational comparability issues.	Possible to obtain some EU comparators	It may be possible to compare with Wales and Scotland.	Because of different geographical risk profiles, legal and policy frameworks it is not possible to establish meaningful international or private sector comparators at a programme level. However, specific activities within the programme are benchmarked and compared as part of the value for money and efficiency exercises. Similarly internal regional comparisons are not feasible at the programme level.

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Collection frequency	Annually	Collected and published annually.	Annually	Quarterly - more frequent possible (data updated daily)	Annual	Quarterly collection, annual comparison. Indicator compares Q2 of each year	TB statistics are published on a monthly basis. The frequency of reporting will be on an annual basis. Reporting more frequently can be misleading due to the variability and seasonality of the data.	Quarterly
Time lag	Data published by July of the year following the reference year (6 months).	The index is published a year following the reference year.	Published four months after the year to which the latest data relate and one month after receipt of final data items.	Virtually no lag due to use of live administrative data from the Genesis database.	Three years' monitoring data are used in compiling each year's figures in order to reduce the uncertainty inherent in environmental monitoring. 2009 results are an exception, covering data from 2004 - 2008 to ensure sufficient coverage of Quality Elements. The results are available in the Autumn of each year - about 9 months after the most recent set of samples are taken to allow for analysis and assessment of the data. For example, 2010 results cover data collected from 2007 - 2009.	6-7 months	3 months	Finalised and validated quarterly figures on numbers of homes protected in a quarter are usually available around two months after the end of each quarter.
Data source	Main data sources are the Annual June Survey of Agriculture, Cereal Production Survey, British Survey of Fertiliser Practice and Cattle Tracing Scheme.	The farmland birds index is based on data collected through the BTO/JNCC/RSPB Breeding Birds Survey, combined with data from other birds surveys. The index is compiled by RSPB/BTO under contract with Defra.	Defra (plus supporting boards and agencies)	Natural England Genesis database. This is the administrative system for recording details of agreements under Stewardship schemes. Utilised agricultural area figure is based on the 2010 estimate from the June survey of Agriculture.	Existing data from the Environment Agency's Water Framework Directive monitoring program.	Local Authorities	TB statistics are published on the Defra internet site.	Defra website
Type of data	Official Statistic - OS	National Statistic - NS	Official Statistic - OS	Official Statistic - OS	Official Statistic - OS	National Statistic - NS	Official Statistic - OS	Official Statistic - OS
Robustness and data limitations	Meets quality criteria of OECD and Eurostat. Methodology has been reviewed by external contractors (ADAS).	Farmland bird index is published as a National Statistic. To do this it must meet a number of relevant quality criteria. It is a well-established indicator with a long time series dating back to the base year of 1970. Because of annual fluctuations in bird populations, year-on-year comparisons are not statistically valid. The shortest time for valid comparison is 5 years (e.g. comparing 2003 with 2008). Any biodiversity response to policy intervention is likely to be gradual and only observable over several years, so annual change is not meaningful.	Regular quality assurance is provided by the quality assurance of the UK production and income accounts; by industry representatives and the NFU. The methodology was reviewed in an economic report in 2003 "Productivity of UK Agriculture - causes and constraints" http://www.defra.gov.uk/evidence/economics/foodfarm/reports/documents/ProdRep.pdf	Both data sources are subject to quality checks. The data in the Genesis database is used to form the basis of payments to farmers so can be considered reliable and accurate. The total utilised agricultural area figure is based on the June survey of agriculture and is a National Statistic, meeting the associated quality criteria.	The data provided is indicative of surface water quality in England. The assessments are derived from summaries of the Environment Agency's monitoring programmes. The Environment Agency confirm that the data is being used in an appropriate manner and the data provided is fit for this purpose. Appropriate quality controls and risk assessment are in place to ensure the quality of the data provided. There are quality assurance checks and procedures carried out by the EA and its analytical laboratories are UKAS accredited. Derived data is sense checked by Defra.	Statistics are National Statistics, validated by the contractor as system administrator, and verified by the Environment Agency through their QA processes, which include a programme of visits to LAs.	Data is evaluated by Defra statisticians, Defra veterinary advisors, and TB policy experts. Bovine TB policy, and how the statistics are presented are also open to scrutiny by the TB Eradication Group - an England group on eradication of TB in cattle set up to make recommendations to the Secretary of State.	The aims and objectives and key performance measures are established in the Environment Agency's Corporate Plan, published annually, and subject to policy and public scrutiny. Progress is reported quarterly through the Corporate Scorecard, as well as Defra/EA official level quarterly review meeting and reviewed through bi-annual Ministerial Performance Reviews and the Defra Supervisory Board. Appropriateness of measures may also be subject to scrutiny by the NAO and EA Internal Audit reviews.
Collecting organisation	Defra	Royal Society for Protection of Birds (RSPB), British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC)	Defra (plus supporting boards and agencies)	Natural England, Defra.	Environment Agency	Local Authorities	AHVLA	Environment Agency
Return format	Kg of nitrogen per year	Smoothed Index	Volume index, 2005=100	Measured by the area of land covered by HLS as a proportion of total utilised agricultural area.	% net improvement in water quality elements	%	%	Number of households
Geographical coverage	England	England	UK	England	England	England (waste is a devolved issue)	England	England
How indicator can be broken down	Currently reliable estimates only available at UK and England level. Reliable regional breakdowns are being developed.	Some regional information is available, but it is not a direct disaggregation of the national index.	Available only at UK level	Regional level. Data can be geo-referenced allowing other breakdowns to be carried out.	England only	Data is collected at LA level. Rates can be calculated at national, regional (NUTS2) or local (LA) level.	County level	National level data will be provided. OM2 can be broken down to show the number of households protected in deprived communities.
Further guidance	Soil nitrogen balance will be published as an official statistic within a Statistics Notice in March 2011.	National Statistic published on the Defra biodiversity statistics website: http://www.defra.gov.uk/statistics/environment/biodiversity/		Number of Higher Level Stewardship agreements and total utilised agricultural area (http://www.defra.gov.uk/evidence/statistics/foodfarm/landuselivestock/junesurvey/documents/Jun2010-Eng.pdf)	N/A	WasteDataFlow - LA waste management statistics (http://www.defra.gov.uk/evidence/statistics/environment/wastats/index.htm OR www.wastedataflow.org)	Incidence of TB in Cattle including the absolute number of OTF herds (http://defraweb/foodfarm/farmanimal/diseases/atoz/tb/stats/index.htm)	Flood and Coastal Erosion risk management quarterly reports: http://www.environment-agency.gov.uk/research/planning/122070.aspx

Other Data Sets

Short title	Net cost to business of Defra's regulations	Benefit to Cost ratio of Defra's regulations
Technical definition	Direct costs to business less direct benefits to business. The figure is an estimated average annual cost for the next 10 years, based on regulatory stock in the year shown.	The benefit to cost ratio associated with Defra's regulation. For example, a ratio of 2:1 means that for every £1 spend, £2 benefit will be realised by society (mainly economic benefits to business and the public and environmental and health benefits). The amount is based on Defra's regulatory stock in the stated year. This indicator is based on estimates of costs and benefits where available.
Rationale	Reducing unnecessary burdens of regulation is a core priority for the Coalition Government. This indicator can be used to assess progress against this goal.	Reducing unnecessary burdens of regulation is a core priority for the Coalition Government. This indicator can be used to track the value added by Defra's regulation.
Formula	Direct costs to business less direct benefits to business. The figure is an estimated average annual cost for the next 10 years, based on regulatory stock in the year shown. Please see Table 1 in the report "The Costs and Benefits of Defra's Regulatory Stock". The report is available from the Defra website: http://tinyurl.com/cscdrtn	Available, monetised benefits divided by available, monetised costs where estimates for both benefits and costs are available for regulations. Please see Table 1 in the report "The Costs and Benefits of Defra's Regulatory Stock". The report is available from the Defra website: http://tinyurl.com/cscdrtn
Start date	2011	2011
Latest data	Refer to Quarterly Data Summary for latest data	Refer to Quarterly Data Summary for latest data
Good performance (optional)	-	Benefits increase relative to costs
Behavioural impact	Without appreciating the benefit of regulation, reducing costs could be a perverse incentive to overall performance. The cost:benefit ratio paired with this indicator mitigates this.	No risk of perverse incentives.
Comparability	Not comparable to any other indicator.	Not comparable to any other indicator.

Short title	Net cost to business of Defra's regulations	Benefit to Cost ratio of Defra's regulations
Collection frequency	Annual	Annual
Time lag	Based on report published in August.	Based on report published in August.
Data source	Economic data from across the Department compiled in "The Costs and Benefits of Defra's Regulatory Stock" report, which is available from the Defra website: http://tinyurl.com/cscdrtn	Economic data from across the Department compiled in "The Costs and Benefits of Defra's Regulatory Stock" report, which is available from the Defra website: http://tinyurl.com/cscdrtn
Type of data	Economic estimate	Economic estimate
Robustness and data limitations	Not all the costs and benefits of Defra regulations are currently available or monetised. More information on costs is currently available than information on benefits. Defra is working to widen its' coverage and improve the accuracy of its' assessments. This indicator is taken from the report "The Costs and Benefits of Defra's Regulatory Stock", which should be read to understand the assumptions and limitations of this indicator. The report is available from the Defra website: http://tinyurl.com/cscdrtn	The ratio is based on Defra's regulatory stock in the stated year. This indicator is based on estimates of costs and benefits. The indicator is wider than "Other Data set 1: Net cost to Business", in that the scope is the full range of costs and benefits associated with the policy. However, not all the costs and benefits of Defra regulations are currently available or monetised. This ratio only includes those regulations for which estimates have been made of both costs and benefits. The assessment currently has fuller estimates for costs than benefits so a focus of work is now on improving the assessment of benefits. Defra is working to widen its' coverage and improve the accuracy of its' assessment. This indicator is taken from the report "The Costs and Benefits of Defra's Regulatory Stock", which should be read to understand the assumptions and limitations of this indicator. The report is available from the Defra website: http://tinyurl.com/cscdrtn
Collecting organisation	Defra	Defra
Return format	£	Cost: Benefit ratio
Geographical coverage	UK	UK
How indicator can be broken down	Indicator can be broken down by policy area - see original report http://tinyurl.com/cscdrtn	Indicator can be broken down by policy area - see original report http://tinyurl.com/cscdrtn
Further guidance	Please see "The Costs and Benefits of Defra's Regulatory Stock", which should be read to understand the assumptions and limitations of this indicator. The report is available from the Defra website: http://tinyurl.com/cscdrtn	Please see "The Costs and Benefits of Defra's Regulatory Stock", which should be read to understand the assumptions and limitations of this indicator. The report is available from the Defra website: http://tinyurl.com/cscdrtn