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Internal Drainage Board Beneficiaries and Performance Indicators

Final report FD2659

January 2015

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A report of research carried out by Risk & Policy Analysis, on behalf of the Department for Environment, Farming and Rural Affairs

Research contractor: Risk & Policy Analysis in Association with Environment System Ltd and Resources Strategic Change Facilitators

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Executive Summary

Introduction and Objectives

Internal Drainage Boards (IDBs) are local public bodies responsible for land drainage in areas of special drainage need. Their main focus historically was drainage of agricultural land, but they have evolved to play a much wider role, contributing to flood risk management for homes, businesses and infrastructure, and protecting and enhancing biodiversity. However, there is currently no consistent method for assessing the benefits that IDB activities provide. Furthermore, although individual IDBs may report aspects of their performance, there is no set list of indicators which IDBs can use to demonstrate the value of their work to the local community or to their ratepayers. Thus, this research aimed to establish methods and tools to enable IDBs to identify the beneficiaries of their work. It also considered how these benefits could be quantified, thus improving the line of sight between income and expenditure.

The objectives of the research were:

- Objective 1: to develop tools or methods to identify the range of beneficiaries of IDB activity, and quantify (quantitatively wherever possible or qualitatively if not) those benefits in order to support IDBs in providing relevant information to local communities and to help inform further policy development on IDB boundaries and setting up new IDBs; and
- Objective 2: to develop a set of indicators to help IDBs demonstrate the value they provide to local communities and others, and to help achieve greater accountability and efficiency. Also, to establish whether local communities could benchmark IDBs against other bodies of similar size and/or performing similar roles.

Methods

Work on Objective 1 followed an iterative approach whereby a draft spreadsheet tool was developed and then continually revised following comments. An initial list of beneficiary categories (e.g. residential properties, infrastructure, biodiversity) provided the framework for the tool. Consultation with IDBs identified the most relevant beneficiary categories; those relevant to all IDBs were deemed “core” categories, whilst those important to some but not all IDBs were labelled as “optional” categories. A draft assessment worksheet was then developed for each of the beneficiary categories. These worksheets were combined with summary sheets to form the draft spreadsheet tool. Methods for assessing the monetary value of the benefits were adapted from the Multi-Coloured Manual or developed by the study team with input from the steering group as appropriate. Six case study IDBs from different areas were used to test the spreadsheet tool. GIS data on IDB boundaries were combined with data on habitats, land use, floodzones, etc. to identify assets which were in IDB districts and which were likely to be benefiting from IDB activities. Consideration was also given to the beneficiary groups by whom the benefits would be felt (e.g. local residents would benefit from protecting residential property). Comments on the results, layout of the tool and methods used were taken into account to develop and refine the approach to enable the production of the final tool.

The approach to meeting objective 2 involved several aspects including:

- Identifying indicators already used by IDBs and other relevant organisations in this country and others (e.g. Netherlands);
- Holding discussions with individual IDBs and other relevant stakeholders about indicators they use and/or think would be helpful;
- Holding a workshop for interested stakeholders to consider all suggestions identified thus far. Attendees had the opportunity to suggest further potential indicators, as well as prioritise the suggestions which they thought were best. Attendees also considered the ways in which the most popular indicators could be measured;
- Bringing together all indicator suggestions and comments and identifying which ones could realistically be put in place (using criteria such as whether data are likely to be available). This long list of potential indicators was sent to IDBs for comment;
- Re-running the whole analysis with the comments received. The revised list of indicators was then sent out again for comment; and
- Re-doing the indicator analysis to produce a final list of potential indicators bearing in mind all comments received to date.

Findings for Objective 1 (spreadsheet tool)

The spreadsheet tool enables the estimation of the benefits provided by an individual IDB. Figures are not provided here since the results are specific to each IDB and cannot be considered cumulatively. As would be expected, the extent to which each beneficiary benefits is dependent on the type of IDB (e.g. predominantly agricultural IDBs have a high proportion of their overall benefits allocated to farmers/landowners). However, it is important to note that there are often also benefits to wider society, for example, through the presence of transport infrastructure (including motorways, mainline railways, etc.). Service providers may benefit considerably where IDBs help manage the flood risk to power stations, whilst local authorities also appear as significant beneficiaries in most of the case study IDBs. There may be dis-benefits to wider society where maintenance of drier habitats provides decreased carbon storage in comparison to wetter habitats. However, for all of the sample IDBs the overall benefits were much greater than the dis-benefits. Where impacts cannot be monetised, attempts have been made to qualitatively describe the benefits. In general, benefits deemed to be large in magnitude also appear to be signficant. This is not unexpected since very significant benefits (defined as affecting all or almost all assets) are more likely to having a big impact on those affected assets. Care should be taken when interpreting the results since they are based on assumptions and subject to data availability.

Findings for Objective 2 (indicators)

There are 25 indicators in the final list. However, not all of these are likely to be relevant to every IDB; the varying characteristics of drainage districts means that it is not possible to use a one size fits all approach. Five indicators requiring yes/no responses could be included on the IDB1 Form thus providing added value. The other indicators fall into four categories:

- Management of board and board activities;
- Performance in relation to food production;
- Performance in relation to reduction of waterlogging and flood risk to assets; and
- Performance in relation to the environment.

They have been further grouped into indicators which could be used in the short term (10 indicators), and those which require further development so may not be ready for

use until the medium term. Use of the indicators is expected to be voluntary but care should be taken when comparing indicators reported by different IDBs, since differences in performance may reflect factors other than IDB management (e.g. geography, hydrology, land use). Grouping of IDBs into similar types (e.g. pumped, gravity drained) could provide the basis for comparisons to be made, although there may be uncertainties and anomalies at the outset where there are only data over a short time period.

Next steps and further work

Following on from this research, further trialling and testing of the spreadsheet tool is being carried out, prior to it being available for all IDBs to use to identify and estimate the extent of the benefits they provide. Work is also underway to further develop and trial the indicators to ensure that they can be reported consistently and IDBs can use them (on a voluntary basis) to monitor their performance over time. The trial includes both the yes/no style indicators and those requiring more detailed answers (e.g. a range of figures) which could be reported by individual IDBs as relevant.

Contents

1. Introduction

1.1 Background

Internal Drainage Boards (IDBs) are local public bodies responsible for land drainage in areas of special drainage need. Their main focus historically was drainage of agricultural land, but they have evolved to play a much wider role, contributing to flood risk management, and protecting and enhancing biodiversity. The majority of IDB work takes place under the Land Drainage Act 1991 (amended 1994), with IDBs having permissive powers to secure drainage and water level management, and also to implement flood risk management on watercourses which are not classed as main rivers (JBA, 2006). In addition, as part of their duties under the Land Drainage Act, IDBs have to submit an annual report form called the IDB1.

In recent years, several reviews of IDBs have been undertaken. These have included:

- a 2006 review by JBA which made recommendations on organisational arrangements for IDBs (see JBA, 2006);
- a January 2010 update of the JBA review. This was undertaken by Entec and identified several findings in relation to administrative and maintenance costs, the ability of IDBs to deal with information requests and the extent to which IDBs have websites (see Entec, 2010a); and
- a December 2010 report by Entec which extended the IDB review. This report considered the role and function of IDBs mainly through using case studies (see Entec, 2010b).

Since the first of these reviews, the number of IDBs has reduced. Many smaller boards have amalgamated to form bigger organisations covering larger areas in order to improve their effectiveness and secure the benefits of efficiencies of scale. The Flood and Water Management Act 2010 introduced a number of additional powers and responsibilities for IDBs such as a duty to act consistently with the national and local flood risk strategies; a duty to co-operate with other risk management authorities; and the ability to undertake functions on behalf of other flood risk management authorities. The Act also included a provision to allow IDBs to work in consortia. The perception of IDBs is also changing from bodies responsible for drainage of agricultural land to organisations that have a much wider role to play. Indeed, the enhancement of the role of local organisations such as IDBs fits with the Government's localism agenda.

However, although IDBs currently provide a range of benefits to different stakeholders and interest groups, there is no one approach for identifying the nature and extent of these benefits. Individual IDBs or groups of IDBs may have their own methods for reporting outputs and measuring progress against objectives, but there is no set list of categories on which all IDBs report, with the exception of the IDB1 form. Since this latter mainly deals with financial information, it does not really assist beneficiaries or those providing funding to IDBs when looking at an IDB's performance. The lack of a consistent method for recording benefits means that IDBs may not necessarily be able to demonstrate the value of their work to the local community in the catchment, or even to their ratepayers in the district. If IDBs could identify the benefits of their activities, and also compare their performance with that

of other organisations, this could open up further opportunities for cooperation and delegation, thus helping to improve the overall cost-effectiveness of activities such as flood risk management. It could also bring benefits for other aspects of IDB work including maintenance and improvement of biodiversity.

This study therefore intends to assist IDBs with identifying the benefits that their activities provide. It will also enable them to show the value of their work to local communities and others, thus ensuring that they are fully accountable.

1.2 Aims and Objectives

The aim of this research is to establish methods and tools to enable IDBs to identify the range of beneficiaries of their work, to quantify the benefits they provide and improve the line of sight between income and expenditure. The objectives as given in the specifications are:

- Objective 1: to develop tools or methods to identify the range of beneficiaries of IDB activity, and quantify (quantitatively wherever possible or qualitatively if not) those benefits in order to support IDBs in providing relevant information to local communities and to help inform further policy development on IDB boundaries and setting up new IDBs; and

- Objective 2: to develop a set of indicators to help IDBs demonstrate the value they provide to local communities and others, and to help achieve greater accountability and efficiency. Also, to establish whether local communities could benchmark IDBs against other bodies of similar size and/or performing similar roles.

1.3 Structure of this Report

This Final Report summarises the findings of the study showing how the objectives have been met. The remainder of this report is organised as follows:

- Section 2 details the work undertaken to achieve Objective 1. This includes identification of beneficiaries and also consideration of how to measure the benefits from IDB activities;
- Section 3 describes the findings in relation to Objective 2 and proposes a set of performance indicators that could be used by IDBs;
- Section 4 provides recommendations and next steps; and
- Section 5 sets out the references.

In addition, there is a number of annexes to support this report. These provide the detailed process and approaches that have been followed to derive the findings:

- Annexes 1 lists members of the IDB TAG who have contributed to the study;
- Annexes 2 and 3 summarise responses to engagement with IDBs and others, including a summary of questionnaire responses;
- Annexes 4 to 6 provide supporting information on how the benefits assessment toolkit has been developed, tested and applied, as well as guidance for future users; and

- Annexes 7 to 11 cover work on indicators and benchmarking, including a summary of the review of possible indicators, suggestions from the workshop and how these have been analysed.

2 Meeting Objective 1

2.1 Overview

To meet Objective 1, the study involved the following, as identified in the specifications:

- identification of individual land and property boundaries, landowners, occupiers, land uses, land classification, wildlife/habitats, and infrastructure within IDB areas;
- assessment of the types and extent of benefits which the beneficiaries may receive;
- identification of any beneficiaries which may fall outside the IDB districts;
- development of appropriate tools or methodologies to help IDBs appraise and quantify the benefits which the various beneficiaries receive;
- 'road testing' the toolkit with six sample IDBs; and
- highlighting any challenges which IDBs may have in undertaking a similar appraisal and identify ways to enable IDBs to provide relevant information to the public whilst minimising burdens.

The sections below describe the approaches used and the outcomes of each of these activities, organised into the processes that have been undertaken to ensure that the best evidence base has been used.

2.2 Stakeholder involvement

For this study, stakeholders can be divided into the following four groups:

- Project Board: this is comprised of Defra, Environment Agency and Natural England;
- Technical Advisory Group (TAG): this includes the Association of Drainage Authorities (ADA), representatives from local authorities and Regional Flood and Coastal Committees (RFCCs), Royal Society for the Protection of Birds (RSPB), National Farmers Union (NFU), Country Land and Business Association (CLA), and the Local Government Association (LGA);
- IDBs: this includes all IDBs and IDB consortia; and
- beneficiaries: comprising local authorities, parish councils, landowners, etc.

All of the above groups have been invited to comment on the study by providing their ideas, comments and feedback at various stages and on various outputs. Table 2.1 summarises the main opportunities for involvement in activities needed to meet Objective 1.

Table 2.1: Opportunities for stakeholder involvement

Opportunity	Groups invited	Level of response
Stakeholder discussion platform	Project Board IDBs	Reasonable level of response but use of the platform for discussion was low. As a

Table 2.1: Opportunities for stakeholder involvement		
Opportunity	**Groups invited**	**Level of response**
		result, it was decided to email documents to stakeholders directly for comment instead. Information provided is summarised in Annex 2
Questionnaire on benefit categories	Project Board IDBs	Response rate of around 40% (see Annex 3 for a detailed analysis of responses)
Involvement in trialling benefits assessment toolkit	IDBs	IDBs were invited to volunteer to be involved. The volunteers were then added to by inviting specific IDBs that would enable a wide range of different land uses (urban, environment) to be covered in the trial
Meeting on benefits assessment spreadsheet	Project Board TAG IDBs	Good. The meeting was attended by 13 individuals and allowed time for discussion of key issues
Invitation to comment on outputs of benefits assessment toolkit	IDBs	Copies of the benefits assessment spreadsheet were sent to all IDBs that requested them. Few comments were received
Invitation to comment on outputs of benefits assessment toolkit	Beneficiaries	A summary of the study objectives, the aim of the benefits assessment toolkit, and approach to indicators were circulated to beneficiaries (by the sample IDBs themselves, or RPA). Very few comments were received
Invitation to comment on updated outputs and long list of indicators	Local authorities	A summary of the study's findings to date was sent to Local Authorities through the LGA. No comments were received. Additional requests were sent to specific Local Authorities. Comments received have been incorporated into the final versions of the outputs
Invitation to comment on guidance on the benefits assessment spreadsheet, and long list of possible indicators	TAG IDBs	All comments received have been incorporated, although these were limited in number

2.3 The benefit categories

The proposed list of benefit categories for use in the benefit assessment is provided in Table 2.2 (the approach used to develop this final list of categories is given in Annex 4). The categories are divided into three different types:

1. Managing nature and resources (similar to regulating services when using ecosystem services terminology);
2. Production of goods and services (similar to provisioning services); and
3. Social, cultural and employment benefits (similar to cultural services with the addition of two categories to capture the number of jobs supported).

Note that there may be several goods provided within each category. For example, the category entitled 'waterlogging, drought, flooding and erosion' covers risk to residential properties, business properties, social infrastructure, utilities infrastructure and transport infrastructure (including roads and railways).

A further issue is adaptation to climate change. Although IDBs undertake activities relevant to adaptation, the process of adapting is not considered as a separate benefit category. Instead, adaptation actions can be picked up in terms of the impacts that they might have on the benefit categories and beneficiary groups.

Table 2.2: The Benefit Categories					
Managing nature and resources		**Production of goods and services**		**Social, cultural and employment benefits**	
Core	**Optional**	**Core**	**Optional**	**Core**	**Optional**
Waterlogging, drought, flooding, erosion	Control of invasive species	Production of grown food	Collection of natural food	Health and wellbeing of people	Heritage values
Carbon sequestration and storage	Water quality	Biodiversity	Energy (where energy is for use outside IDB)	Health and well-being of community	Knowledge and education
			Production of timber, fibre, aggregates, peat, etc.	Level of involvement in decision-making	Recreation and tourism
			Water supply (where water is for use outside IDB)	Landscape character	Jobs directly/ indirectly provided by IDB

2.4 Data sources

Table 2.3 provides a summary of the approaches, including data sources for the core categories, with Table 2.4 summarising similar data for the optional categories. The tables also show the goods provided by each benefit category, which are the basis for measurement of the benefits. The table focuses on data sources that should be freely available to IDBs (either from publicly available datasets or through the Public Sector Mapping Agreement).

Table 2.3: Potential data availability for the Core Benefit Categories		
Core benefit categories	**Goods provided by benefit category**	**Potential source(s) of data**
Managing nature and resources		
Carbon sequestration and storage	Area and type of habitat sequestering carbon	Area of land, type of habitat Requires a basic landcover map
Waterlogging, flooding, erosion	Properties and assets at risk: - residential - business - social infrastructure (hospitals, schools, care homes, etc.) - emergency services - utilities infrastructure - transport infrastructure	GIS (area at risk, assets with postcodes) OS maps (notable assets) National Property Dataset AddressBase (through PSMA) Neighbourhood Statistics Data.gov.uk Valuation Office Agency Local Authority data Utility companies Websites (Land registry, Zoopla, Hometrack) National Rail (rail network, timetables)
Production of goods and services		
Production of grown food	Crops produced, livestock and livestock products	GIS (land use map) Agricultural statistics MAGIC.defra.gov.uk
Biodiversity	Number/quality of different types of	MAGIC.defra.gov.uk

Table 2.3: Potential data availability for the Core Benefit Categories		
Core benefit categories	**Goods provided by benefit category**	**Potential source(s) of data**
	habitat Species richness Designated sites/locally and nationally important habitats/species	Nature on the map Environmental stewardship agreements Local Biological Record Centres National Biodiversity Network Gateway Natural England (agri-environment payments, designated sites)
Social, cultural and employment benefits		
Health and wellbeing of people	Physical, mental, social and spiritual wellbeing (includes stress e.g. due to flooding)	GIS (population at risk) Neighbourhood Statistics
Health and well-being of community(ies)	Perceptions about safety Fears about the future of the community Aspirations for the future	GIS (population at risk) Neighbourhood Statistics OS maps (notable assets)
Level of involvement in decision-making	Level of involvement in decision making in relation to IDB activities	Membership of Board
Landscape character	Designated/notable landscape	MAGIC.defra.gov.uk

Table 2.4: Potential data availability for the Optional Categories		
Optional benefit categories	**Goods provided by benefit category**	**Potential source(s) of data**
Managing nature and resources		
Control of and invasive species	Number/area of invasive species controlled	Species present
Water quality	Waterbody status (WFD)	WFD Status Reasons for failure Geology (BGS 1:625,000 scale)
Production of goods and services		
Collection of natural food	Area available for hunting/shooting or collecting wild food	GIS (land use map) Agricultural statistics MAGIC.defra.gov.uk
Production of energy	KWh produced KWh transmitted through IDB areas	Potential hydropower opportunity Location of power stations, power lines, sub-stations, etc. National Grid (electricity, gas pipelines) Eastern Power networks (substation map)
Production of timber, fibre, aggregates, peat, etc.	Quantity and type of products obtained Area available for harvesting Quantity of peat obtained	Area of land (by land use) MAGIC.defra.gov.uk
Water supply	Whether abstraction occurs/could occur	Catchment Abstraction Management Strategies (CAMS)
Social, cultural and employment benefits		
Heritage values	Number of heritage sites (listed buildings, scheduled ancient monuments, etc.)	Sites (number, type) English Heritage
Knowledge and education	Education	Use of area

Table 2.4: Potential data availability for the Optional Categories		
Optional benefit categories	**Goods provided by benefit category**	**Potential source(s) of data**
Aesthetic appreciation and inspiration	Aesthetic enjoyment Inspiration gained from nature	Use of area
Recreation and tourism	Number of recreation visits Access for recreation	MAGIC.defra.gov.uk Footpaths (length) Attractions – postcodes required to map points
Jobs supported directly/indirectly	Paid employment by IDB	Number of employees (from IDB data/websites) Multipliers (for indirect jobs, e.g. work contracted out)

2.5 Identification of beneficiaries

Some people benefiting from IDB activities do so directly, whereas others receive indirect or knock-on benefits. Some of the beneficiaries contribute directly towards IDB funds whilst others contribute indirectly. In the latter case, they may not be aware of their contribution (for example, beneficiaries paying council tax where the local authority has to pay a special levy to the IDB). This has implications for accountability and also communication of IDB work to the local community, for example, where beneficiaries may not realise they are benefiting from IDB activities. Although this project is not considering the way in which IDBs are funded, exploring the links between who pays and who benefits is important for improving the line of sight between income and expenditure. Beneficiaries can therefore be divided into three types according to the way in which they benefit. These three categories are:

- **direct beneficiaries** are people, assets or species who directly benefit from the service or good being provided within the IDB district. Direct beneficiaries are the first asset, good or person affected by IDB activities. Where these beneficiaries own agricultural land, they will be paying drainage rates straight to the IDB, and thus are likely to be aware of at least some of the benefits of IDB activities. Residential and commercial properties within the drainage district are covered by the special levy, which is paid by the relevant local authority.

- **indirect beneficiaries** are people who indirectly benefit from the asset or good being provided within the IDB district, perhaps by visiting an asset or being a consumer of a good. Thus, they use assets and goods provided in the district. The indirect beneficiaries form the second link in the chain. They are often located within the wider IDB catchment, but they may be within the IDB district too. Where indirect beneficiaries are located within the district, they may contribute to the IDB through drainage rates or the local authority special levy, however, where they are located outside of the district, they may contribute indirectly through council taxes or taxes to central government. Indirect beneficiaries may not necessarily be aware of the benefits that they are receiving simply because they are not the first link in the chain. In addition, they may not regularly see IDB related activities, particularly if they do not live or work in the IDB district. Such indirect beneficiaries could include those using the emergency services that are stationed within the IDB district, or those consuming food that has been grown in the district. This potential lack of awareness has implications for IDBs in terms of communicating the benefits of their work.

- **induced beneficiaries** are people who do not directly use the asset or good provided within the IDB district themselves, but benefit from its existence. Induced beneficiaries are the third link and occur outside the catchment. They benefit from the existence of goods or assets within the IDB district although they do not use these goods themselves. They do not pay the IDB directly to receive these benefits since their location outside the district means that they are not covered by drainage rates. However, they may make an indirect contribution through the local authority or through taxes to central government. Induced beneficiaries are therefore likely to be unaware of IDB activities and the resultant benefits because they lack a direct link to them.

Figure 2.1 provides examples of the three different types of beneficiary (direct, indirect and induced) for three different types of benefit. This diagram is intended to give examples to help illustrate the definitions of direct, indirect and induced benefit given above.

2.6 The toolkit

The approach to assessing benefits is based on identifying the difference between the current situation (i.e. the IDB in place and undertaking its activities) and a baseline that assumes that the IDB stops all activities. Guidance covering use of the benefits assessment spreadsheet is provided in Annex 5. This describes how to assess the benefits for each category, and what information needs to be included for both the baseline and current situation.

The baseline

Given that IDBs have existed for many years, the baseline has to be an imagined situation. If all IDBs stopped functioning, it would take time for areas to adjust and habitats to change. For example, without pumping, a wet meadow might become a reedbed, and a reedbed might become a pond. However, this change would not happen overnight, but could take several years as new species moved in and older ones were lost. In order to use the baseline in the context of this study, it is necessary to assume that the impacts of not having an IDB present are felt immediately, i.e. houses and businesses at risk of flooding are overwhelmed, agricultural land is no longer suitable for production (since it may be too wet or too dry) and habitats are lost. Although this may seem like an extreme case, given that IDBs have been in existence for many years, there are no data sources that can be used to recreate the original condition of the landscape prior to the formation of IDBs and any other water management work that might have taken place.

This means that the baseline is similar to the 'do-nothing' situation used for FCERM (Flood and Coastal Erosion Risk Management) economic appraisals. It is suggested that the approach be simplified to ignore time (as noted above, assuming the impacts of not having an IDB are felt immediately). This simplification will make it easier to assess the monetary benefits of IDBs since there will be no need to discount gradual changes in benefit over time. This simplification is considered to be proportionate since any increase in uncertainty from ignoring time is likely to be balanced by the stream of assumptions that would have to be made to describe gradual changes over time and the way that this affects future damages (or benefits).

Induced: people using health services outside the IDB area (decreased pressure on services if people within the area are not stressed by worry	***Induced***: benefits unlikely unless a high proportion of the nation's supply of that particular crop is produced in the IDB district, such that

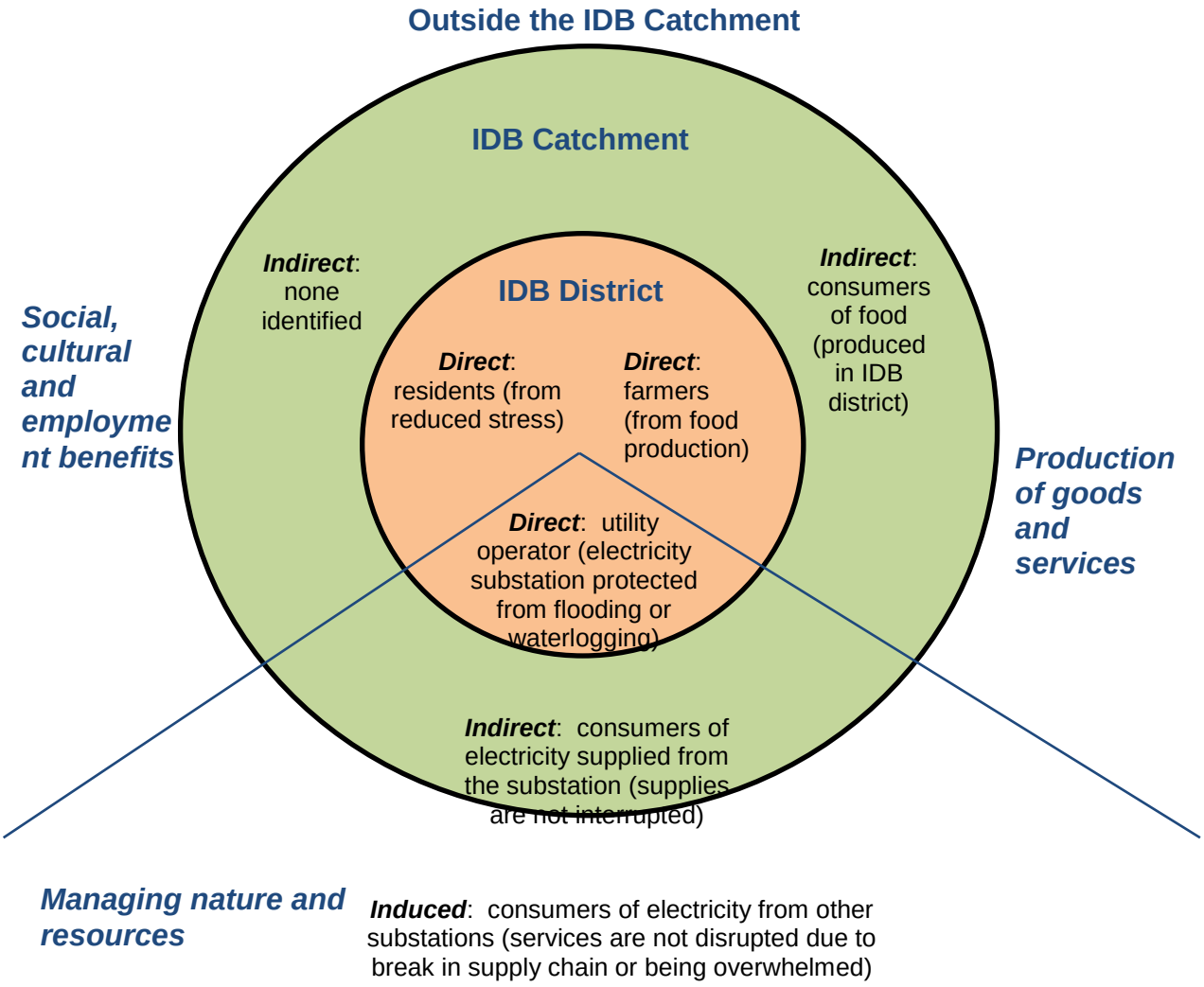

Figure 2.1: Schematic diagram showing example direct, indirect and induced beneficiaries (this diagram provides an indication of the types of beneficiary and their location in relation to the IDB district and catchment. It does not show all beneficiaries or all benefit categories. The actual situation varies by IDB. Boundaries between direct, indirect and induced beneficiaries may be blurred or overlap)

The current situation

Assessment of the current scenario will give an indication of the benefits provided by IDBs when compared with the baseline scenario. There are two possible approaches to estimating the benefits of IDBs using the current scenario:

- assessment of static benefits: this is a current scenario that is taken as a snapshot of the situation as it is now. As with the baseline, this scenario ignores time, with no account taken of potential future changes. This will enable annual benefits to be estimated. It is this scenario that has been used when testing the spreadsheet for the six sample IDBs. The results are provided in Annex 6.

- assessment of changing benefits: this is a current scenario that predicts how water levels might change into the future such that the risk of waterlogging or flooding

changes. This scenario would be most useful when looking at climate change and how that might affect IDB activities and the benefits that they generate. This scenario could be used where there is a need to look at the impacts of climate change, so that the benefits of adaptation can be determined.

Measuring the difference between the baseline and the current situation

Table 2.5 indicates the three potential levels of detail (low, moderate and high) along with the different extents to which quantification can occur (none, some and monetisation). It also indicates which tools could be used for each level.

Table 2.5: Measuring the difference between the baseline and the current situation

Quantification \ Detail		Low	Moderate	High
None	**Baseline**	Qualitative description of impacts	Qualitative description of impacts tailored to specific IDB for most important categories	Qualitative description of impacts tailored to specific IDB for all categories
	Current situation	Qualitative description of benefits of key IDB activities and indication of direction of change	Qualitative description of benefits (tailored to specific IDB for most important categories) and indication of direction of change	Qualitative description of benefits (tailored to specific IDB for all categories), indication of direction of change and likely significance
	Tools	*Based on existing knowledge within the IDB (staff input, published documents, etc.)*	*Additional information from other available sources (including GIS/mapping, reports, plans, etc.) for location of assets*	*New information from site visits, investigations, engagement, etc.*
Some	**Baseline**	Numbers, types, etc. affected	Numbers, types, etc. affected for the most significant/important categories only	Numbers, types, etc. affected for all relevant categories
	Current situation	Numbers, types, etc. benefiting and indication of direction of change	Numbers, types, etc. benefiting for the most significant/important categories only and indication of direction of change	Numbers, types, etc. benefiting for all relevant categories, indication of direction of change and likely significance
	Tools	*Based on existing knowledge within the IDB on number, area, size, etc. of assets*	*Additional information from available other sources (including GIS/mapping, reports, plans, etc.) to measure and quantify number, area, size, etc. of assets*	*New information from site visits, investigations, engagement, etc. used to measure and quantify number, area, size, etc. of assets*
Monetisation	**Baseline**	Monetary value of impacts (e.g. damages) for categories quantified using default numbers	Monetary value of impacts (e.g. damages) quantified using numbers calculated specifically for IDB for most significant categories	Monetary value of impacts (e.g. damages) quantified using numbers calculated specifically for IDB for all relevant categories
	Current situation	Monetary value of benefits (e.g. damages avoided) for categories quantified using default numbers	Monetary value of benefits (e.g. damages avoided) quantified using numbers calculated specifically for IDB for most significant categories	Monetary value of benefits (e.g. damages avoided) quantified using numbers calculated specifically for IDB for all relevant categories

Table 2.5: Measuring the difference between the baseline and the current situation				
Quantification / Detail		Low	Moderate	High
	Tools	*Default/average values (e.g. weighted average annual damages)*	*Readily available benefit transfer values (e.g. Multi-Coloured Manual, EVEE Handbook[1])*	*Specially developed values (case study specific)*

Disaggregating IDB benefits from Environment Agency benefits

In most cases, the baseline assumption is that the IDB activities would stop but Environment Agency activities would continue. Therefore, there is no need to disaggregate IDB benefits from those attributable to the Environment Agency. It is important to remember though that this does not mean that the IDB could claim all of the benefits in a project appraisal. In those situations, there would be a need for all partners to agree how the benefits should be shared to avoid double counting were there to be subsequent projects that benefit the same area (or parts of the same area).

2.7 Testing the toolkit

The toolkit has been tested with six sample IDBs. Four of the sample IDBs were volunteers, through the questionnaire or stakeholder engagement platform. Two further IDBs were approached to be involved to ensure that different types of land use (especially urban and environmental) were adequately captured. The six sample IDBs were:

- Bedfordshire and River Ivel IDB;
- Black Sluice IDB;
- Lower Severn IDB;
- Norfolk Rivers IDB;
- North Level District IDB; and
- Ouse and Humber DB.

The toolkit has been applied to each of the sample IDBs and the results compared to assess whether the different magnitude of types of assets are reflected in the benefit estimates. Table 2.6 provides a summary of the results. The table shows that the largest beneficiaries are typically local authorities[2], farmers/landowners and service providers. Farmers/landowners see the largest proportion of the benefits where the proportion of the total District area that is agricultural land is highest, such as in Black Sluice IDB (farmers/landowners receive 55% of the total benefits and proportion of agricultural land at 93%) and Ouse and Humber DB (famers/landowners at 43% and proportion of agricultural land at 95%).

[1] EVEE (The Economic Valuation of Environmental Effects) Handbook is a supporting document to the Flood and Coastal Erosion Risk Management Appraisal Guidance and can be downloaded from: http://publications.environment-agency.gov.uk/PDF/GEHO0310BSFH-E-E.pdf

[2] Benefit categories allocated to local authorities include any assets which may be owned or operated by local authorities (e.g. schools), as well as services which local authorities may use (e.g. utilities, road and rail network) or be partly reponsible for (e.g. recreation facilities).

Table 2.6: Summary of key results for six sample IDBs						
Criteria	**IDB**					
	Bedfordshire and River Ivel IDB	**Black Sluice IDB**	**Lower Severn IDB**	**Norfolk Rivers IDB**	**North Level District IDB**	**Ouse and Humber DB**
% benefits by beneficiary						
Local residents[3]	16%	5%	15%	20%	14%	11%
Local businesses	9%	2%	6%	6%	7%	5%
Farmers/landowners	20%	55%	9%	17%	32%	43%
Local Authorities	22%	12%	26%	23%	14%	14%
Service providers	18%	22%	28%	17%	18%	17%
Wider society	12%	3%	13%	15%	10%	7%
Wider businesses	3%	1%	3%	2%	5%	3%
Total benefits	£30m	£23m	£31m	£26m	£76m	£33m
Total damages	£3m	£12m	£1.9m	£1.6m	£10m	£11m
EA benefits	£65m	£27m	£62m	£66m	-	£87m
Uncertainty	High	High	High	High	High	High
% agricultural land	84%	93%	66%	73%	87%	95%
Qualitative benefits (those categories for which benefits could not be quantified)						
% Large, very significant	12%	18%	11%	4%	7%	18%
% Large, significant	17%	14%	19%	0%	21%	11%
Notes: Significant and very significant relates to where all, almost all or the great majority of assets within a category would be affected. Large relates to where there is a big impact on the assets that are affected						

Table 2.6 also shows that the assumptions made on the proportion of above ground versus below ground activities mean that a significant proportion of the total benefits are allocated to the Environment Agency (with the exception of North Level, where there are no Environment Agency assets, hence no work undertaken by the Environment Agency). Any adjustment to the percentages allocated to above or below ground benefits would have a significant effect on the distribution of benefits between the IDB and the Environment Agency. There was little available evidence on which to base the percentages applied under the default assumptions, other than the experience of the Project Steering Group. Collection of further evidence on what these proportions should be, and how they might vary across IDBs could help to reduce the level of uncertainty.

[3] Benefit categories allocated to local residents include assets owned by residents (e.g. residential properties), services used by residents (e.g. emergency services, utilities, transport network) and also social, cultural and employment categories such as health and wellbeing of individuals and the community, landscape character, recreation facilities and jobs.

The overall uncertainty associated with the quantitative benefits is high. This is because default assumptions have been used in almost all cases. The only exception is road transport benefits for Bedfordshire and River Ivel IDB. Here, traffic count data were used to improve the reliability of the road benefits given the importance of the affected roads (including the M1 and A1).
Not all of the benefit categories can be quantified in monetary terms. Table 2.6 also summarises the extent to which significant or very significant/large benefits are expected that are not included in the monetary totals. Significant and very significant relates to where all, almost all or the great majority of assets within a category would be affected, while large relates to where there is a big impact on the assets that are affected. The table shows that the qualitative benefits suggest that the quantified benefits are under-estimated for Black Sluice, Lower Severn, Ouse and Humber, Bedfordshire and Ivel, and North Level, but may only be slightly under-estimated for Norfolk Rivers. Further information on the qualitative and quantitative assessments can be found in Annex 6.

2.8 Key uncertainties within the toolkit

The guidance that accompanies the benefits assessment spreadsheet describes the main sources of uncertainty within the approach to quantifying benefits for each benefit category. These include the following key sources, with specific uncertainties associated with each category provided in the guidance in Annex 5:

- The area or proportion of assets at risk for each probability level (where these vary from 100% to 0.1%) is based on the typical distribution of assets across the country as a whole. The assumptions are taken from the Multi-Coloured Handbook[4]. Since IDBs tend to be located in lower-lying areas, the implication of this uncertainty is that a lower percentage of assets is allocated to the higher probabilities than may actually be the case. Therefore, the benefits of IDB activities may be under-estimated by using these default assumptions.

- Impacts are divided into two different types: permanent losses, where there is a need to rebuild, relocate or write-off an asset and occasional losses, where damages are based on Weighted Average Annual Damages (WAAD) from the Multi-Coloured Handbook or willingness to pay values. Although WAAD are acknowledged as being uncertain in the Multi-Coloured Handbook (as it is suggested that they be used 'where an appraiser has little or no understanding of potential flood depths and return periods'), the greatest uncertainty lies with the permanent losses. This is because there was very little evidence on which to base the rebuild/relocation costs for many of the categories. In some cases, the rebuild/relocation costs may be over-estimated; in others they may be under-estimated. The specific nature of the assets at risk may need to be taken into account when determining the implications of this uncertainty.

- As permanent damages are based on rebuild/relocation costs or write-off values, they need to be converted to annual values so they are consistent with the WAADs used for the occasional losses. This conversion is undertaken using an annualisation factor, which requires an assumption to be made for each benefit category as to an

[4] The Multi-Coloured Handbook, produced by the Flood Hazard Research Centre at Middlesex University, provides techniques and information for flood and coastal erosion risk management appraisal. Many of the default data used within the benefits assessment spreadsheet have been sourced from the Handbook.

appropriate ‘life’ for the assets at risk. The default assumptions take into account the likely lifetime of the specific assets within each category and therefore vary across categories. For agricultural land and biodiversity, the life is assumed to be 20 years while for many non-residential properties, 25 years is used. If the life of the assets were longer than assumed, then the annual damages would be over-estimated. Conversely, if the lifetimes were shorter, then the benefits would be under-estimated.

- To reflect that assets would not be new when they are affected by flooding or waterlogging, a depreciation factor is applied. A consistent assumption of 50% is applied to all benefit categories. This adjustment has the effect of reducing the permanent damages. A default of 50% was used to reflect that, on average, it can be assumed that assets are halfway through their projected life.

- Willingness to pay values are used for those benefit categories that reflect activities, such as recreation and tourism, and heritage. The values used within the spreadsheet have been selected as they are considered to be the most transferable to the type of impacts expected from flooding and/or waterlogging. However there is always uncertainty associated with using a value elicited for a specific change in a specific location to the types of impacts and locations associated with IDBs. Some of the values are used to give an indication of the typical level of damages that might occur; especially heritage where a paucity of available willingness to pay values means that there is considerable uncertainty. Similarly, the value used for recreation and tourism is taken from a US study. As such, it may be considered more uncertain than if an appropriate value had been available from a study in the UK.

- The approach to assessing carbon, designated biodiversity and non-designated biodiversity benefits is based on a projected change in land use. This requires some speculation as to what the land use would be under the baseline of no IDB activities. Since the baseline would often result in much wetter conditions, there may be benefits under the baseline compared with the current scenario. As a result, these impacts are often recorded as damages (negative benefits). To ensure that current management of land and watercourses that is undertaken to enhance biodiversity is appropriately considered, the non-designated biodiversity benefits are based on a simple scoring system. Otherwise, there is a risk that management for biodiversity purposes would not be reflected in the quantitative assessment. A scoring system is used as there are few willingness to pay values that reflect the types of land use change that might take place between the baseline and current situation. This means that there is considerable uncertainty associated with the non-designated biodiversity benefits (or damages) in particular.

The impact of double counting is minimised by clearly differentiating the assets into the categories, with the guidance including definitions of what is included within each category. The values used to estimate the damages have been carefully selected to minimise the risk of double counting. This is most important where willingness to pay values have been used as it is not always clear which benefits were taken into consideration when the willingness to pay values were elicited. For example, willingness to pay values for recreation and tourism benefits may capture elements of the biodiversity or heritage benefits. To minimise this risk, the values used have been selected so they are specific to the category in question (as in the case of recreation and tourism). Furthermore, assets that could be captured under more than one category are only included once (e.g. a heritage asset could also be included under recreation and tourism). This could under-estimate the benefits since the choice of a value that only captures the value of a visit and does not capture the

heritage aspect could miss some of the benefits. However, it is considered more appropriate to take a slightly conservative approach and minimise the risk of double counting. In addition, any action to try to pick apart willingness to pay values to tease out recreation aspects from biodiversity and from heritage would probably introduce further uncertainties. Such action is unlikely to be proportionate, especially if it needs to be undertaken by IDBs depending on how many overlapping benefits they are likely to have.

2.9 Issues that IDBs may face when applying the toolkit

Although the benefits assessment spreadsheet has been designed to be completed relatively quickly through the inclusion of default assumptions and default data wherever possible, IDBs may find some areas more difficult than others to complete. The main issues are likely to include:

- Uptake and use of the toolkit may require someone with an interest in, or familiarity with spreadsheets. The full toolkit comprises guidance, data sources, and potential use of GIS to support completion of the benefits assessment spreadsheet. The spreadsheet itself is comprised of 35 worksheets, so it may take IDBs some time to familiarise themselves with the process and determine where to begin. The guidance (Annex 5 to this report) should help with this by introducing the spreadsheet and highlighting key data sources. There are also six sample applications of the spreadsheet for the six sample IDBs that can be used as examples to follow. In addition, a slide pack has been prepared that provides an introduction to the toolkit, focusing in particular on the spreadsheet to help IDBs become familiar with it.

- Identification of the number of assets at risk and the probability level to which they should be allocated. The allocation of assets to the change in probability of impacts between the baseline and current situation is the main determinant of the level of benefits that are estimated. The spreadsheet allows an IDB to enter the total number of assets for each benefit category and uses a simple calculator to assign these assets across the various probability levels. Thus, even without detailed modelling, IDBs are still able to obtain estimated benefits. Yet it is important to note that the default probabilities are based on typical asset distributions for the country as a whole. So, the results may not accurately reflect the actual risks of the assets within the district. However, expert opinion and knowledge of those involved in the IDB can be used to update the default assumptions to make them more applicable the IDB concerned.

- Although the recommendation is to replace the default estimates wherever possible, it is unlikely that an IDB will find readily available data to do so. However, it is anticipated that there will be ample local knowledge within the IDB which can be used to reflect the specific nature of the district.

- Determining how the results are going to be used so that they suit the needs of the IDB's ratepayers and also fit with their wider objectives. Although the benefits spreadsheet produces tables and graphs indicating the estimated benefits along with information on who is benefiting, IDBs will still need to determine the best way of communicating these results to their stakeholders. Putting information on an IDB's website helps ensure that it is accessible to those who may be interested.

- Sensitivities of the calculations. Changing the risk levels to which different assets (e.g. residential properties, business properties) are allocated results in different

benefits. However, the sensitivity of the different categories has not been tested during this study. Entering assets under one risk level as opposed to under another level could have a significant impact on the results if a large number of assets were affected. IDBs will need to use their judgement to decide which risk levels are most realistic for their districts. They may also want to test the extent to which the results alter if assets are moved up or down a risk level.(Note that the sensitivity testing is occurring in the trial stage.)

3. Meeting Objective 2

3.1 Overview

To meet Objective 2, the study involved the following, as identified in the specifications:

- identification of a list of easy-to-use and cost-effective indicators or measures that IDBs could use to demonstrate the value of their operations to local communities and others. This includes identifying information already available to IDBs (through IDB1 returns and other sources) to minimise the burden on IDBs in terms of data collection;

- a review of the current requirements of the IDB1 forms, establish the value this provides to IDBs, Defra, CLG, Local Authorities and local communities and consider the information it would be beneficial to continue to collect. This includes consideration of information that could be included in the IDB1 form to support the application of performance indicators, including whether indicators could be included in the form;

- consideration of the extent to which the indicators are sufficiently flexible to take account of IDBs' varying topography, geography and hydraulic boundaries including testing possible indicators with user groups to assess their value and user friendliness. Taking account of feedback, an assessment of barriers to uptake and how these might be addressed;

- consideration of whether there are benchmarks by which indicators could be assessed, including assessment against other public bodies of similar sizes and financial turnovers to IDBs, e.g. Town and Parish Councils and organisations performing similar roles, e.g. the Environment Agency for FCERM or District Councils in their drainage capacity; and

- recommend suitable indicators, the format in which these could be provided and how these could be communicated to local communities.

The sections below describe the approaches used and outcomes of each of these activities, organised into the processes that have been undertaken to ensure that the best evidence base has been used.

3.2 Stakeholder involvement

The same four stakeholder groups have been involved as for Objective 1 (Project Board, TAG, IDBs and beneficiaries). Table 3.1 shows where additional engagement activities have been undertaken to seek the views of these groups on ideas for indicators and feedback on the proposed indicators.

Table 3.1: Opportunities for stakeholder involvement		
Opportunity	**Groups invited**	**Level of response**
Workshop on indicators	Project Board TAG IDBs	Good. The workshop was attended by 26 individuals and resulted in generation of ideas of indicators as well as a general structure into which those indicators should fit
Invitation to comment on updated outputs and long list of indicators	Local authorities	A summary of the study's findings to date was sent to Local Authorities through the LGA. No comments were received. Additional requests were sent to specific Local Authorities
Invitation to comment on guidance on the benefits assessment spreadsheet, and long list of possible indicators	TAG IDBs	Limited response (3 IDBs, 3 Local Authorities). The indicators were revised incorporating these comments, and a further opportunity was given to TAG and IDBs to comment. A further 3 IDBs, 1 Local Authority and 2 TAG members responded.

It should be noted that although many IDB representatives attended the workshop on indicators, the feedback (from IDBs, local authorities, the IDB TAG, etc.) received on subsequent revisions of the long list of indicators was relatively limited. This affected the extent to which progress could be made on developing indicators that would be seen as useful and valuable.

3.3 The suggested indicators

3.3.1 Basis for identifying and short-listing indicators

A comprehensive long-list of indicators was developed based on:

- a review of indicators used in other fields (see Annex 10 for more details);
- a review of indicators used in other countries (see Annex 10);
- ideas proposed through discussions with IDBs;
- ideas proposed at the indicator workshop (see Annex 7 for a summary of the workshop); and
- additional ideas and suggestions from comments on suggested indicators.

This resulted in a long-list of 124 suggestions for indicators or factors that could be captured within indicators. Each of these suggestions has been assessed against the following criteria:

- rating assigned at the IDB workshop (this relates to importance of the measure and is given as High, Medium or Low);
- identification of how the suggestion could be measured and the data required to convert it to an indicator;
- the timeframe that is likely to be needed before the indicator could be taken-up (a sub-set of suggestions from the workshop were assigned timescale ratings of short-term, medium-term and long-term. Each of these terms was defined at the workshop. The timescale ratings have been extended to cover all 124 suggestions);

- the views of stakeholders on the suggestion (where provided, not all 124 suggestions have views from stakeholders);
- likely issues with the indicator (including the potential for mis-interpretation or where the available data might not allow measurement of the factors that are of most importance in terms of reporting against the indicator); and
- based on the above a recommendation of whether to consider the indicator further or to screen it out.

The full assessment of all 124 suggestions can be found in Annex 8. The assessment resulted in 76 suggestions being identified as worthy of additional consideration. Some of these were combined as the suggestions were very similar, resulting in 67 suggestions that were taken forwards.

3.3.2 Grouping suggestions into categories

Many of the suggestions cover similar types of issue and were grouped together. In total, 15 categories were identified, they are:

- use of water for irrigation;
- impacts on agricultural land;
- maintenance of drains, watercourses, pumping stations, etc.;
- compliance with the Water Framework Directive (WFD);
- invasive species;
- overall environmental performance;
- habitat management, improvement and creation;
- problems and incidents;
- compliance with financial and audit requirements;
- collection of rates;
- flood and waterlogging risk;
- staff;
- outside factors;
- time taken for completion of work and tasks; and
- accountability.

These categories were considered against the indicator framework that was developed by one group at the workshop. This group recognised that there was a need for an overarching framework into which the indicators needed to sit. They identified three main types of driver: national drivers, county drivers and local (parish, community) drivers. Each of the detailed drivers under these headings was allocated to the above list of categories as a check to make sure that they could all be captured. All the drivers could be picked up under one of the headings, so it is assumed that the spread of short-listed suggestions is sufficiently comprehensive.

Each of the short-listed suggestions was then considered in more detail against the following criteria, this formed the basis for determining which could be taken forwards now, which might need further development and which could be dropped:

- data that are likely to be available now;
- time and resources that would be required to use the indicator based on current data availability;
- additional data or processes (e.g. consistent definitions) that would be needed;

- the implication of the need for additional data or processes and the time and resources needed to use the indicator; and
- recommendation of whether the indicator:
    - can be proposed now;
    - needs to be developed further; or
    - should be dropped.

The result of this assessment was the identification of a short-list of 55 potential indicators, of which 27 could be proposed now (as little additional information would need to be collected or actions undertaken to further develop the indicator) and 28 that would need to be developed further. The next stage was to assess whether these indicators are likely to measure performance, and to identify which of the short-listed indicators could be better captured under another indicator or could be misleading. This resulted in 25 indicators being taken forwards for further consideration.

3.3.3 The short list of potential indicators

Each of the potential indicators will need a reporting mechanism to capture information being produced by IDBs. The simplest method for doing this may be through the development of a reporting template that IDBs can complete. To make the reporting template easier to follow, it is suggested that the 25 potential indicators be grouped into the following headings:

- Management of Board and Board activities (8 indicators);
- Performance in relation to food production (5 indicators)[5];
- Performance in relation to reduction of waterlogging and flood risk to assets (5 indicators); and
- Performance in relation to the environment (7 indicators).

Table 3.2 provides the short list of potential indicators grouped under these four headings. Note that where indicators are closely related, they are merged together in one row within the table.

[5] Note that initially, this group contained six potential indicators. However, one of the indicators related to the movement of assets and land out of significant risk. It was therefore deemed more appropriate to put this indicator into the category “Performance in relation to reduction of waterlogging and flood risk to assets”.

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Management of the board and board activities				
Compliance of IDB with audit requirements	Compliance with the requirements of the external audit	Could have yes/no response; Potential for inclusion on IDB1 form	Enables trends in compliance to be assessed	Determine whether it is worth having an indicator if IDBs are obliged to comply with external audit requirements
	Compliance with the requirements of any transparency code issued under the powers introduced via the Local Audit and Accountability Bill	Could have yes/no response; Potential for inclusion on IDB1 form	Enables trends in compliance to be assessed	Determine whether it is worth having an indicator if a duty to comply with a transparency code becomes a legal requirement with which IDBs have to comply (the proposals are currently being considered by Parliament)
Health and Safety	Number of incidents/accidents and time off due to injury (sustained at work), with causes and lessons learnt (where available) in year	Number of incidents/accidents; Time off as a result; Lessons learnt	Takes health and safety into account; May be useful for individual IDBs to assess trends (but could be difficult to compare across IDBs because of underlying differences in type of area covered, size, etc.)	Identify which data IDBs already record about incidents/ accidents; determine what additional recording/reporting might be useful
	Staff morale	Difficult to see how staff morale could be measured at this point; possibly requires development of survey. This would record qualitative information, identifying issues such as 'opinions count', 'how happy they are in their job', 'opportunities for personal development', etc.	Coverage of staff morale would probably be useful for individual IDBs to assess trends (but could be difficult to compare across IDBs because of underlying differences in type of area covered, size, etc.)	Determine whether survey could be developed to cover staff morale, or whether it is more appropriate to focus on issues for which data already exist

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Partnership working	Does the IDB actively seek to work with partner organisations to deliver its objectives and wider objectives to the benefit of the local area?	Could have yes/no response; Potential for inclusion on IDB1 form	Helps assess whether partnership working is increasing, also to identify where there is more/less partnership working	Determine whether a yes/no type question is appropriate and captures sufficient information
Management of board	Percentage attendance at board meetings	Based on attendance figures over one year by different types of board member (ratepayer, LA member, etc.)	May be useful for individual IDBs to assess trends; also helps show how the level of importance which different organisations attach to attendance at board meetings; may be difficult to compare across IDBs because of underlying differences in make-up of board (e.g. number of local authority members, proportion of funding from special levy, type of catchment served, etc.)	Identify if any figures are collected currently; determine the best way in which figures could be collected and reported
	• Evaluation of performance by District and Unitary Councils, covering two indicator areas: time taken to deal with information requests • partnership working (working on behalf of other risk management authorities or contributing to joint projects)	Would likely require survey of local authorities; would probably result in qualitative and quantitative information so could be more difficult to analyse and compare year on year	May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences (e.g. size of IDB)	Determine whether development of a survey is realistic, or if the indicators should use information which is already available

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Performance in relation to food production				
Receipt of drainage rates	Proportion of drainage rates paid within three months of issue date (as proxy for performance of IDBs)	Use information from IDB accounts	May be useful for individual IDB to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine if indicator is appropriate given that there is a legal requirement to pay drainage rates; identify whether IDBs already collate figures on non-payment within three months of issue
Drought and water management planning	Drought/water management plan/planning, percentage of outcomes/actions achieved	Could have yes/no response for existence of plan, along with percentage of actions carried out each year	May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine extent to which drought planning occurs; also whether a yes/no type indicator would be appropriate; consider if identifying the proportion of actions taken or outcomes achieved would be useful or just reflect weather conditions
Availability of water	Period of no restriction divided by total period of drought, with the aim being 100%	Time (days) with restrictions placed on abstraction; Total number of days (e.g. by season/to reflect demand for water)	May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine which data are collected already during droughts; identify if these data could easily be converted into a percentage
	Any actions taken to increase water availability	Could record number and details of actions taken to increase water availability	Could be used to compare actions taken across different IDBs, for exchange of best practice	Determine if actions are already recorded; identify whether having a record of actions would be useful for planning for both farmers and the IDB
Waterlogging	Number of incidents of waterlogging, area of land affected and duration (days), with causes and lessons learnt (where available) in year	Identification of actions from existing water levels management plans, etc.	May be useful for comparing responses to weather events, for exchange of best practice	Determine extent to which information on incidents is already collected; identify standard way in which information could be presented (to facilitate comparison and learning)

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Performance in relation to reduction of waterlogging and flood risk to assets				
Penning level	Percentage of winter/summer penning level	Use information on target levels and compare with actual monitoring data	May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine extent to which water level data are already collected; also if percentages could be determined
Flood risk management strategy	Compliance with the local flood risk management strategy	Could have yes/no response; Potential for inclusion on IDB1 form	Takes compliance with flood risk requirements into account	Determine whether it is worth having a yes/no indicator if IDBs have a legal duty to comply
Flooding	Number of flood events in year, with causes and lessons learnt (where available)	Number of flood events; Causes of flood events; Description of actions taken	Useful for communities within IDB areas; May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine extent to which flood event data are already recorded
	Number of properties and area of land whose flood risk changes; Number of properties and areas of land moving out of significant flood risk	Likely to require modelling data	Useful for communities within IDB areas; May be useful for individual IDBs to assess trends; may be difficult to compare across IDBs because of underlying differences	Determine whether information on change in risk is readily available or requires modelling
Performance in relation to the environment				
WFD	Partnership working between the IDB and Environment Agency to help deliver Water Framework Directive measures; also proportion of WFD measures required in the second round of RBMPs which have been delivered in year and overall	Yes/no response; Also measures required [dependent on where the obligation to undertake the measures is coming from], action taken (including delivery)	Helps show whether IDBs are contributing to the move towards good status/potential	Determine whether information on WFD requirements is already recorded

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Invasive species	Actions or processes undertaken by the IDB to address invasive or non-native species	Presence or absence of actions or processes	Shows whether IDB district is affected by invasive species, and whether plans are in place to mitigate impacts (important for users of watercourses and also water level management)	Determine whether information on invasive species is recorded already, also whether actions are noted
Designated sites	Completion of SSSI (Site of Special Scientific Interest) remedies	Area with planned/required remedies; Number of remedies completed	Shows contribution of IDBs towards achievement of favourable status for SSSIs (but completion of remedies may require input of others so beyond IDB's control)	Consider whether it is appropriate to include an indicator where IDBs may be reliant on the actions of others; identify whether information on remedies is already recorded
Conservation and biodiversity	Compliance with conservation regulations (Habitats and Birds Directives, Wildlife and Countryside Act)	Could have yes/no response; Potential for inclusion on IDB1 form	Takes compliance with conservation and biodiversity regulations into account	Determine whether a yes/no question is appropriate and meaningful given that IDBs have to comply anyway; consider whether question needs to go further and ask whether the IDB is contributing to the conservation and enhancement of SSSIs. May be better to consider IDB's contribution to SSSI remedies
Locally important or BAP (Biodiversity Action Plan) species	Description of any activities undertaken to enhance any particular BAP species or locally important species	Actions required; Action taken, including delivery	Could be used to compare actions taken across different IDBs, for exchange of best practice	Determine whether this type of information is already recorded; it may be better to ask whether the IDB has published a Biodiversity Action Plan (BAP). This could then link directly to the England Biodiversity Strategy, as well as provide the opportunity to scrutinise an IDB's contribution to biodiversity

Table 3.2: The short list of potential indicators				
Area to be measured	**Potential terms to include in indicator**	**Potential for measurement**	**Rationale**	**Actions needed to convert to a performance indicator**
Working in accordance with the Drainage Channel Biodiversity Manual	Whether the IDB has evaluated its drainage network to manage a balance of biodiversity and flood conveyance, in line with the Drainage Channel Biodiversity Manual	Qualitative, linked to actions taken to balance biodiversity and water conveyance needs	Enables trends in activities in line with Drainage Channel Biodiversity Manual to be assessed	Determine extent of information which would need to be collected to be useful
General environmental performance	Use of an environmental audit report/scorecard to report on indicators and provide some detail behind them, covering: Partnership working between the IDB and Environment Agency to help deliver the Water Framework Directive measures (also, proportion of WFD measures required in the second round of RBMPs which have been delivered in year and overall); Actions or processes undertaken by the IDB to address invasive or non-native species; Completion of SSSI (Site of Special Scientific Interest) remedies; Description of any activities undertaken to enhance any particular BAP species or locally important species; and Whether the IDB has evaluated its drainage network to manage a balance of biodiversity and flood conveyance, in line with the Drainage Channel Biodiversity Manual	Covers all the different aspects mentioned by the individual areas above	Brings together all environmental type information but may want to push IDBs towards reporting on the Biodiversity Action Reporting System (BARS) website instead	Requires development of scorecard with all indicators, as well as consistent method of recording to enable comparisons between IDBs to be made (could encourage use of BARS for consistency)

3.4 Reporting on the indicators

3.4.1 Overview

The 25 indicators could require significant time and resources input. However, it is unlikely that all the indicators will be relevant to any one IDB. Although some indicators will be relevant to all IDBs (e.g. those relating to management of the board), other indicators will only be appropriate for some IDBs (e.g. indicator relating to penning levels). Thus, it is unlikely that an IDB would choose to report against all the indicators. Since the indicators are expected to be voluntary, an IDB could just report against those of most significance to them, or of greatest interest to the beneficiaries of the IDB activities.

Where indicators might provide a 'yes/no' answer, they could be captured within the data required in the IDB1 form, especially where they are related to national drivers (for example, audit requirements). However, any yes/no indicators included on the IDB1 would effectively become compulsory since this form has to be returned by each IDB every year. Some of the other indicator areas would need to be developed over time, so would be unlikely to become available until the medium-term.

3.4.2 Potential use of IDB 1 form for indicator reporting

The current IDB1 form or Annual Returns Form includes three sections which need to be completed by the IDB itself. The first (Section A) gives details about the IDB's accounts, which could be a useful basis for the indicators requiring cost information. The data currently requested include the amount of money obtained from rates and special levies, as well as funding from other sources. This information is likely to be useful to local authorities and local communities (in particular, drainage ratepayers) since it enables them to see the extent to which their IDB is funded by local contributions as opposed to external (e.g. government) funding. There are also boxes for details on maintenance and capital spending. Section B of the form covers internal governance in the form of 'yes/no' questions relating to the compliance with accounting procedures, as well as whether various High Level Targets have been satisfied (e.g. whether a Biodiversity Action Plan has been published). The form is then signed by the IDB (there is a declaration in Section C).

There are some overlaps between the list of potential 'yes/no' indicators and the IDB1 form, for example, 'Compliance with the requirements of any transparency code issued under powers introduced in the Local Audit and Accountability Bill' is likely to partially overlap with the IDB1 question 'Is your Board's website information current for 2013?' By adding further 'yes/no' indicators (as suggested in Table 3.2) to Section B of the IDB1 form, the document would be providing additional valuable information to those who view it. For example, the 'yes/no' indicator concerning compliance with the local flood risk management strategy is likely to be pertinent to local communities, in particular where landowners are paying drainage rates.

The potential indicators which could provide 'yes/no' questions and so are suggested for inclusion in the IDB1 form are:

- Compliance with the requirements of the external audit

- Compliance with the requirements of any transparency code issued under powers introduced in the Local Audit and Accountability Bill
- Does the board actively seek to work with partner organisations to deliver its objectives and wider objectives to the benefit of the local area?
- Compliance with the local flood risk management strategy
- Compliance with conservation regulations (Habitats and Birds Directives, Wildlife and Countryside Act)

Including these indicators on the form would make them mandatory. However, it should be considered whether it is useful to confirm compliance with legal requirements, for example, in terms of the external audit and also conservation regulations. It may be more appropriate to develop these indicators so that they provide more information. For example, as suggested in Table 3.2, there may be a need to ask a more specific question such as whether IDBs are contributing to the conservation and enhancement of SSSIs.

3.4.3 Measurement of other indicator areas

Excluding those that require a 'yes/no' answer or are based on a description of activities leaves 21 indicators (including one that also requires a 'yes/no' answer) that could be measured in some other way. Measurable indicators can be used to assess trends over time. Focusing on trends over time instead of on absolute values would enable IDBs with different topography, geography and hydraulic boundaries to be able to use and compare relevant indicators, since the indicators would be reflecting the change in response to management, rather than simply highlighting environmental differences. In addition, enabling IDBs to select local level indicators would ensure that only those that were suitable for the IDB district in question were reported against. This would avoid IDBs spending time and effort gathering data for an indicator that was not relevant to the geography or hydrology of the catchment, for example, the suggested indicator relating to water availability for irrigation may be less relevant to an IDB with a large urban area.

It is also useful to consider whether there are thresholds that reflect specific types of behaviour or outcomes.

3.5 The potential for benchmarking

Benchmarking enables organisations to measure and compare their performance with other organisations of a similar size and with a similar turnover. Comparisons between IDBs are likely to be problematic due to the huge variation between boards in terms of size, type of catchment, topography, level of funding, organisational structure and interactions with partners. However, use of indicators and in particular indicators providing information on trends will enable different IDBs to compare the changes in their performance over time. Although it is not envisaged that all IDBs will choose to report on the same local level indicators, where boards in the same region do select similar indicators, there will be the potential for comparisons once several years of data have been collected. Table 3.3 summarises the difficulties of comparing performance of different IDBs against the indicators. In most cases, this will make benchmarking unreliable and in almost all cases, it will be important to

have information on the underlying reasons behind any measurements associated with indicators to enable a fair assessment of performance to be made.

Indicators such as ‘percentage of drainage rates paid within three months of issue’, used as a proxy for contentment of drainage rate payers, could indicate differences in terms of satisfaction. However, there may be other underlying reasons associated with the ratepayers themselves that could affect payments that may not be associated with IDB performance.

The indicator related to partnership working could be used to identify trends and locations where more (and less) partnership working is taking place. This could provide an indication of whether additional partnership working needs to be undertaken. Indicators that require actions or best practices to be described could be used to identify where/which Boards are more proactive in developing best practice approaches. The information could also be useful to other Boards, to help encourage uptake of best practice more widely.

Where surveys need to be developed, such as for staff morale or evaluation by District and Unitary councils, the use of a nationally consistent survey could provide the basis for some benchmarking to take place. However, a nationally consistent survey may need to be very generic to cover all the circumstances of all IDBs and risks missing some of the major benefits. It is likely that some local modifications may need to be made to surveys so they are relevant to the Board in question. This may be particularly true for smaller boards. Therefore, development of a survey may not be realistic given time and resource constraints. There may consequently be a need to concentrate on indicators for which information is readily available.

Overall, the ability to benchmark performance across all IDBs is likely to be limited. However, there may be opportunities to group IDBs into those that are more similar to see whether this could provide useful information. Size, location, whether the IDB is pumped or gravity drained, whether the IDB receives highland water, etc. are all factors likely to affect the extent to which meaningful comparisons can be drawn. It may be necessary to compare indicators reported by IDBs to assess whether benchmarking on a ‘similarity’ basis is indeed informative. Focusing on trends over time, rather than on the absolute values, could also help enable IDBs to compare their performance with other, similar boards. Such comparisons may be useful as they would reflect the response to changes in management, rather than just highlighting environmental and organisational differences.

Considering benchmarking with other organisations, there is the potential for the short listed indicators under the area of Management of Board and Board Activities to be compared with results from other sectors. The indicators included in this area are likely to be more generally applicable since they could be relevant to any organisation that has staff and interacts with the general public. For example, indicators relating to payment of drainage rates (or similar), staff morale and evaluation of performance could be applicable to councils (assuming they follow the same surveying methods). It may also be possible to compare performance in relation to the environment with other organisations that have similar duties to deliver actions, measures or remedies.

Table 3.3 provides an overview of four types of organisation, which have similarities to IDBs, either in terms of their structure or their responsibilities. Parish or town councils are similar in that they are generally relatively small organisations, but they have the power to raise funds from those living in the area. Furthermore, they are subject to similar types of reporting requirements, for example, the preparation of records and accounts for audit. However, as for IDBs, although additional information on the council and its activities may well be in the public domain, the extent to which such information is viewed and/or considered by local stakeholders paying the parish precept is likely to be relatively limited (unless individuals are interested in a particular aspect, e.g. the outcome of a planning decision).

Although larger bodies such as district councils and Lead Local Flood Authorities (LLFAs) may appear dissimilar to IDBs, they share some of their areas of concern in terms of flood risk management. LLFAs have specific responsibilities defined by law (in particular, the Flood and Water Management Act 2010) in terms of what they have to report. Since LLFAs are all upper tier authorities, with similar responsibilities (e.g. to produce a local flood risk management strategy) comparisons between the outputs from different LLFAs are likely to be valid. However, it is unlikely that any sort of comparison between LLFAs and IDBs would be worthwhile, given the differing reporting requirements, budgets and organisation sizes. The same points would likely be raised in objection when considering general comparisons between the performance of the Environment Agency and IDBs. Despite this, it might be feasible to compare Environment Agency and IDB performance in terms of the handling of actual flooding/potential flooding incidents in a defined catchment. For example, similarities and differences in lessons learnt could be compared to see if the same types of issue tended to be raised, or if the different organisations had different issues. Straightforward performance comparisons are, however, likely to be inappropriate when considering organisations which are significantly larger than IDBs.

3.6 Communicating the indicators to local communities

Local communities could be made aware of the possible indicators through their publication in the public domain, possibly through IDB and local authority Internet sites and documents. Indicators with national drivers could automatically be published by all IDBs, whilst local communities (potentially through parish and town councils) could be encouraged to consider which of the local indicators would be of greatest value to them and be able to request this information from the IDBs. There is a risk with this approach that the IDBs would effectively have to report against all of the local indicators in addition to the national ones in case they receive a request for the information. However, not all of the local indicators are likely to be relevant to every IDB. This issue would need to be decided in advance by each individual board, prior to their first use of the indicators. Setting out the relevance of the different indicators along with allowing the local community to request information on these indicators would prevent IDBs from only using selected indicators which were seen as easy to report.

Table 3.3: Performance reporting arrangements for organisations which have similar duties, powers or structures to IDBs		
Organisation	**Description and similarities to IDBs**	**Arrangements for reporting requirements**
Parish/Town council	Group of elected councillors and a chairman with discretionary powers and rights laid down by Parliament. Council may represent a few hundred people or >30,000 people. Budgets are potentially >£1million. Council has the right to raise money by precept, which is collected by the district council as part of council tax. Provision of services varies between councils and may include recreational facilities, notice boards, litter bins, allotments, etc. Councils are also able to influence and lobby in relation to local development. They have to hold an annual meeting and at least three other meetings each year (ACSeS, 2006). Similarities to IDBs therefore include: • Available budgets (dependent on size of council and IDB); • Power to raise money from those in the area; and • Existence of a council/committee which holds regular meetings to manage the business of the council, etc.	Much of the reporting and administrative requirements of a town/parish council are carried out by the clerk, who may be the only employee. The clerk's responsibilities include, amongst others (ACSeS, 2006): • giving clear advice to all council members; • ensuring that legal, statutory and other provisions affecting running of the council are followed; • monitoring and balancing the council's accounts and preparing records for audit; • preparing agendas and dealing with correspondence; and • managing premises and facilities owned/operated by the council. Parish/town councils are covered by The Code of Recommended Practice for Local Authorities on Data Transparency (DCLG, 2011a) where they have gross annual income or expenditure of at least £200,000. A Transparency Code for Smaller Public Bodies will apply to Parish/Town Councils with turnovers below £200,000 (note that following either code is not yet a legal requirement; the proposals are being considered by Parliament). Parish/town council governance documents including, for example, standing orders for meetings and conduct of council business, financial arrangements, members code of conduct, etc. should be reviewed annually to meet good governance standards (ACSeS, 2006)

Table 3.3: Performance reporting arrangements for organisations which have similar duties, powers or structures to IDBs		
Organisation	**Description and similarities to IDBs**	**Arrangements for reporting requirements**
District/ Borough Council	District and Borough councils are generally responsible for services including rubbish collection, recycling, council tax collection, housing and planning applications (GOV.UK, 2013). They have councillors who are elected for 4-year terms to represent the views of those in the area (GOV.UK, 2013). Councils have similar responsibilities to IDBs for undertaking flood prevention works on ordinary watercourses which are not in IDB districts (Local Government Ombudsman, 2013). They also have responsibility for local land use planning, in particular, the assessment of whether proposed a new development may increase flood risk or lead to flooding (Local Government Ombudsman, 2013)	GOV.UK provides brief information on the reporting requirements for councils in terms of what information they should provide and in what format: • DCLG has requested that councils publish information on expenditure on goods, services and contracts over £500; • Councils have to produce policy statements on staff pay; • Members of the public have 20 days each year to inspect a council's accounts; • There is a Code of recommended practice for local authorities on data transparency (note that this is not yet enforceable); • There is a Code of recommended practice on local authority publicity for councils in England. This covers cost effectiveness and notes that in relation to all publicity, local authorities should be able to confirm that consideration has been given to the value for money which is being achieved (DCLG, 2011b); and • The replacement of the Audit Commission with local arrangements means that local bodies will be able to appoint their own auditors. To ensure accountability of local government, there are several pieces of legislation including the Localism Act 2011, the Local Government Act 1972 (covering declaration of interests, publication of agendas, documents and reports) and the Local Government Act 2000 (providing members of the public with information held by local authority executives) (see GOV.UK)
Lead local flood authorities (LLFAs) (unitary authorities and county councils)	Formed under the Flood and Water Management Act 2010, LLFAs have lead responsibility for managing flood risk from surface water, groundwater and ordinary watercourses (Defra, 2013). Although generally much larger than IDBs (in terms of finances and members), LLFAs are similar to IDBs in that they play a role in managing flood risk. They will additionally be covered by the Local Audit and Accountability Bill (currently being considered by Parliament)	LLFAs are responsible for developing a local flood risk management strategy, which should set out the local organisations with responsibility for flood risk, and provide a plan for managing flood risk (Local Government Ombudsman, 2013). Management of surface water risk will build on the Flood Map for Surface Water made available to LLFAs and others by the Environment Agency (Environment Agency, 2013a). Section 21 of the Flood and Water Management Act requires LLFAs to maintain a register of structures and features that are likely to have a significant effect on flood risk in their area (Defra, 2013). The reporting duties of LLFAs additionally include investigating and reporting on flooding incidents in their areas where considered appropriate or necessary (Bedford Borough Council, 2013). Note that the requirements for district/borough councils (e.g. following codes of practice on data transparency and publicity, and appointment of auditors) are also applicable to larger authorities (e.g. county councils) who may have responsibilities as LLFAs

Table 3.3: Performance reporting arrangements for organisations which have similar duties, powers or structures to IDBs		
Organisation	**Description and similarities to IDBs**	**Arrangements for reporting requirements**
Environment Agency	The Environment Agency is an executive non-departmental public body with the principal aims of protecting and improving the environment, and promoting sustainable development (Environment Agency, 2013b). It is responsible for the delivery of sustainable flood and coastal erosion risk management across England (partly through the use of Grant in Aid, or GiA). This responsibility covers overseeing work carried out by others, for example, local authorities and IDBs. Inland, the Environment Agency's own powers to carry out flood defence works are restricted to main rivers (as designated in England by Defra). Responsibility for the regulation of ordinary watercourses lies with IDBs in IDB districts and LLFAs in other areas. However, at the coast, the Environment Agency has powers covering the strategic overview of sea defences and erosion	The Environment Agency itself, as a public body, publishes an annual report and accounts for each tax year. It also produces a range of reports and documents on flood risk in general, for example: • Managing flood and coastal erosion risk annual report (http://www.environment-agency.gov.uk/research/library/publications/144594.aspx); • Quarterly reports on progress towards achievement of the new outcome measures (the new framework was introduced in April 2011) (http://www.environment-agency.gov.uk/research/planning/122070.aspx); • Catchment Flood Management Plans, which provide an overview of flood risk; • Shoreline Management Plans, which indicate risks associated with coastal processes; • the national assessment of flood risk (see https://publications.environment-agency.gov.uk/ms/D7Qnnr); and • the Environment Agency flood map. Appraisals are undertaken by all Risk Management Authorities (RMAs) for individual schemes to determine the most cost-beneficial option and extent of Grant in Aid (GiA) funding available

Sources:

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Gov.UK (2013): Understand how your council works (https://www.gov.uk/understand-how-your-council-works/types-of-council)
Local Government Ombudsman (2013): Fact Sheet – En5 Complaints about flooding and land drainage issues, available at http://www.lgo.org.uk/

4. Recommendations and next steps

4.1 Recommendations

The main recommendations of this study in relation to Objective 1 are:

- the benefits assessment toolkit needs to be used by IDBs to assess whether it meets their needs within the time and resources that are available. A trial has been undertaken by the Environment Agency and showed that the spreadsheet could be completed relatively quickly to obtain an indication of the likely level of benefits, but there would be additional benefits of providing the opportunity for IDBs to use the toolkit before it is rolled out more widely; and
- the above trials need to incorporate sharing of the toolkit outputs with local authorities and communities, so that feedback can be provided on the relevance and presentation of the outputs.

Recommendations relevant to Objective 2 are:

- the short listed indicators need to be trialled by IDBs. As reporting against the indicators is expected to be voluntary, the split between those required in the IDB1 form (which will then be mandatory) and those that are reported in other ways, will need to be very clear;
- there will need to be discussions about the best way in which to communicate the indicators to the local community;
- there will also need to be discussions about the process used by IDBs to identify which indicators are likely to be most relevant to them;
- where IDBs have trialled similar local level indicators, there will be a need for comparisons to be drawn between these IDBs to help them achieve greater accountability and efficiency. For the national level 'yes/no' indicators, there is the possibility that all IDBs can be considered together (provided that these indicators feature on the IDB1 form and are thus mandatory); and
- where IDBs have trialled indicators, there may be the potential for benchmarking with other organisations and bodies of a similar size. Indicators relating to water management or environmental performance may have the potential for benchmarking with organisations which are not necessarily of a similar size, but may perform similar roles, for example, Lead Local Flood Authorities.

4.2 Next steps for assessing benefits and beneficiaries

The benefits assessment toolkit has been developed, applied to six sample IDBs and trialled by the Environment Agency. The spreadsheet has been developed as far as possible based on readily available data sources and shared with IDBs for their comments and use. RPA has taken every precaution to ensure that the toolkit is correct and provides usable results, but cannot be held responsible for any errors that arise following use by IDBs or others.

The next stage of the development of the benefits assessment toolkit is now underway. The spreadsheet has been presented at the ADA Demo in July 2013. Further work will involve a dissemination workshop, followed by another round of trialling of the spreadsheet by IDBs. Any issues raised during this trial will be collated to produce a document to assist IDBs in using the spreadsheet in the future.

The document could include any additional data sources identified by IDBs when trialling the spreadsheet. For example, the values for permanent damages are based on very limited evidence. If IDBs identified additional data when applying the toolkit, that could help improve the reliability of these data. There may also need to be further investigation into the way in which the benefits are allocated between IDBs and the Environment Agency. The situation will likely vary by location, thus IDBs using the spreadsheet may need to discuss their local setup and decide the extent of the benefits that can be allocated to the IDB's activities.

Feedback from beneficiaries (for example, local authorities subject to special levies) would also be useful in determining how helpful the information coming out of the toolkit is in assisting them with understanding how they benefit from the activities of IDBs.

4.3 Next steps for indicators and benchmarking

Few comments were received on the indicators from IDBs or TAG during two rounds of engagement. All the comments received have been taken into account in producing the proposed short list of indicator areas but there is no clear consensus that the list presented in this report is agreed by all IDBs.

The next stage of indicator development is therefore planned as follows:

- a workshop will be held to enable IDBs to discuss the indicator areas and identify the steps required to be able to launch the indicators (note that this occurred on the 16th September 2013);
- IDBs will be asked to trial the indicators;
- views on the usefulness of the indicators will be sought from local authorities and the LGA; and
- comments and issues from IDBs, ADA, local authorities and the LGA will be used to revise the indicators, identify any barriers to their uptake and determine how these could be addressed.

There may also be benefit in further liaison with Lead Local Flood Authorities to take account of any indicators that they may be developing and promoting through local flood risk management strategies. Taking account of these indicators could help reduce the risk of double reporting for IDBs and help to minimise additional time and resource burdens.

The extent to which benchmarking can be undertaken is likely to depend on which indicators IDBs choose to report against. There is a significant risk that benchmarking could be misleading unless IDBs are grouped into similar categories (e.g. pumped or gravity drained, large/medium/small IDBs) or the underlying reasons behind are taken into account. As a result, it is suggested that initial assessments be undertaken across IDBs that have underlying similarities to assess whether benchmarking is likely to be informative or not. Benchmarking with other organisations may need to be limited to the results of evaluation, although it may be possible to compare best practice activities. Information on best practice actions could also be used to help inform other boards and organisations of what could be achieved. This may be more valuable than benchmarking alone.

5. References

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Annexes (provided separately)