



# Surface water management

*A review of the opportunities and challenges*

Full report

May 2023

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## Foreword

The Association of SuDS Authorities (ASA) and Local Government Flood and Coastal Erosion Risk Management (FCERM) Technical Advisory Group are grateful for everyone who has taken the time to respond to the survey in 2022 and participate in the focus groups to develop this critical review on surface water management for Risk Management Authorities, undertaken by CIWEM.

It has been 13 years since the Flood and Water Management Act created Risk Management Authorities (RMAs) and clarified roles and responsibilities. All of these organisations have evolved and changed in that time.

We acknowledge the work that has been achieved, particularly at a strategic level by the Environment Agency such as the National Flood and Coastal Risk Management Strategy published in 2020 and the Roadmap published in 2022.

However, further work is needed, and we would welcome an urgency in progressing this.

The Climate Change Committee's latest progress report on adapting to climate change highlighted the urgency of taking action now. We are already seeing increased intense rain storms that our infrastructure is not designed to cope with. There are more people at risk from surface water flooding than any other source and the National Infrastructure Commission (NIC) report "Reducing the risk of surface water flooding" published last November highlighted how that risk is growing: *"Without action, we think that by 2055, up to 295,000 further properties could be put at high risk"*.

There has been progress in relation to sustainable drainage by Defra in considering the implementation of SuDS Approval Bodies and Schedule 3 of the Flood and Water Management Act. We welcome the conversations about the landscape for delivering SuDS that this has generated. It is clear there is much work still needed to understand how we are performing to create the necessary resource for SuDS implementation, scaling up delivery to keep pace with the increasing risks and opportunities.

Effective engagement, funding and resources remain a challenge for all, but we believe there are better and more cost-effective ways for Government to improve and invest in surface water management. Alignment to reduce the number of plans to make them more collaborative and crosscutting will help us to more effectively deliver with the funding we have - creating better places for people and wildlife.

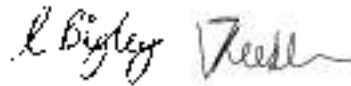
The NIC priority recommendation is a focus on the management and maintenance of surface water assets and infrastructure. We need to urgently ensure that sufficient funding is available to enable RMAs to do this.

We must engage and collaborate more effectively, so we can continue to innovate and adapt to challenges, but most importantly so that we can put our communities at risk at the heart of everything we do.

We welcomed the recent opportunity to discuss the findings of this report with Defra and the Environment Agency and hope that this is the start of further collaboration to address these challenges and opportunities in the future.



**Vicky Boorman, on behalf of FCERM TAG**



**Laura Bigley and Vikki Keeble, Co-chairs of ASA**

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## 1. Executive summary

### Background

A survey and two focus groups were undertaken as part of a project to provide **a review of the opportunities and challenges relating to surface water management**. CIWEM was asked to undertake the work by the Association of SuDS Authorities (ASA), the Local Government Flood and Coastal Erosion Risk Management Technical Advisors Group Water (LG FCERM TAG) and the London Drainage Engineers Group (LODEG).

The survey collected responses over a 10 week period in the summer of 2022. The key objectives of the survey were to:

- Explore how Risk Management Authorities (RMAs), as defined by the Flood and Water Management Act (FWMA) 2010, are delivering their RMA responsibilities with a particular focus on:
  - Cooperation and collaboration
  - Funding
  - Capacity and skills
- Understand the challenges RMAs are facing, their approaches to overcome them and requirements to effectively fulfil their responsibilities.

The survey was intended for all RMAs, though the focus was primarily local authorities and water companies. It received 89 responses. The largest number of responses were from those working in a Lead Local Flood Authority (LLFA) at a Unitary level (49%), followed by those working in a LLFA at a County level (23%). 70 respondents were from RMAs working in local government, and 8 from different Water and Sewerage Companies (WaSCs).

The level of response means that the results should be regarded as a snapshot of the views of this particular group of respondents, rather than the full RMA community of local government. However, the responses do broadly align with other reviews, particularly the 2020 David Jenkins review (Defra, 2020).

The survey was augmented by information and discussion held with two separate focus groups representing local government RMAs and WaSCs. These provided an opportunity to explore the three main themes in more detail.

At the end of each main section of this report recommendations have been developed based on the quantitative and qualitative responses from the survey, discussions with the focus groups and the funders for this review. Where possible the recommendations have been structured to present those that can be delivered in the short to medium term, say two years, and those that are longer-term and complex potentially requiring significant changes in legislation, regulations and/or funding.

Despite surface water flooding being the most common flood risk in England (NIC, 2022) it remains the Cinderella of flooding sources. Surface water management in England is not consistently coordinated or supported and is not allocated sufficient funds. With the likelihood of more extreme rainfall, climate change and urbanisation we face greater risks of

surface flooding. It is therefore essential that government provides leadership to tackle the persistent challenges being faced by flood Risk Management Authorities (RMAs.)

Evidence obtained through this review suggests the Environment Agency's FCERM Road Map may not adequately focus on surface management to balance surface water flood risk with the other flood sources. While recent government reviews on surface water management have been welcomed by RMAs the urgency with which surface water management needs to be tackled means that the pace of change and communication on progress needs to be improved.

With Defra's Storm overflows discharge reduction plan and the announcement in January 2023 that Schedule 3 of the Flood and Water Management Act 2010 will be implemented, it is timely for government to work with the RMAs and wider sector bodies to improve approaches to coordinate responsibilities, develop an enabling framework and make the allocation of funding more proportionate and efficient. CIWEM and those that commissioned the review welcome the opportunity to work with government to improve surface water management.

### **Size and shape of workforce**

When asked about the number of Full Time Equivalents (FTEs) working on the RMA role the most common responses were those with three, or less FTEs (36% when aggregated). Local government responses indicated that:

- Nearly half (46%) of the respondents have three, or less FTEs working on the RMA role;
- nearly half (45%) of respondents at county authorities have 10, or more FTEs, and
- nearly two thirds of unitary authorities have 3, or less FTEs (when aggregated).

### **Cooperation and collaboration**

There are a range of RMAs with different duties and responsibilities for managing surface water infrastructure. With the level of interdependencies and potential impact on flood risk management it's vital responsibilities are understood and coordinated.

### **Clarity of responsibilities**

Nearly two thirds of survey respondents (63%) suggested they were very clear of their own RMA responsibilities. However, this dropped to less than half (48%) of respondents that suggested the responsibilities of other RMAs were very clear.

Respondents were also asked to consider how clear other RMAs are about their own surface water management responsibilities. LLFAs were considered to have greatest clarity, although less than half (47%) of the respondents suggested they were very clear. The additional commentary suggested this was related to a lack of clarity at an operational level, particularly asset ownership and maintenance. Less than a third (31%) of respondents considered the Environment Agency were very clear on their role. Some of the commentary and discussion during the focus groups suggested this was due to insufficient oversight provided by the Agency.

## Coordination of responsibilities

Nearly two-thirds (60%) of respondents suggested that surface water management should be coordinated by one RMA and a significant majority (69%) of these suggested the LLFA was the most appropriate organisation to coordinate activities. Some respondents provided commentary to suggest there was confusion around what the Environment Agency's strategic overview meant for surface water management and whether they should be providing coordination and leadership.

Other specific areas respondents identified as needing better coordination included:

- **Cooperation and partnerships** – whilst RMAs have a duty to cooperate this duty is delivered inconsistently regionally and organisationally.
- **Asset registers** – it was recognised there was a legal requirement for LLFAs to have a register. However, it was remarked by many respondents that these are inconsistently developed and shared.
- **Data sharing** – many respondents suggested sharing asset information and data, particularly on flooded properties needed to be simpler and more consistent.
- **Flood investigations** – many respondents suggested investigations that involve multiple RMAs can be challenging to progress and secure remedial action.
- **Delivering Sustainable Drainage Systems (SuDS)** – delivering nature based solutions (NBS) like SuDS requires coordination between RMAs and different organisations for both retrofit and new developments.

## Collaboration

Respondents considered LLFAs (31%) and the Environment Agency (20%) as very effective, and subsequently the best collaborators. Conversely, National Highways, highway authorities WaSCs and IDBs were considered as the least effective at collaboration.

Just over a third (35%) of respondents suggested that existing approaches to support cooperation and collaboration were either effective, or very effective. The suggested challenges from respondents providing additional commentary focussed on:

- **Engagement** – uncertainties around roles, responsibilities and duties for surface water management, particularly for the Environment Agency and WaSCs, make engagement difficult.
- **Lack of resources** – while the benefits of partnerships were recognised, collaboration takes resources and many RMAs prioritise delivering their own statutory responsibilities.
- **Difficulty in identifying and obtaining funding** – alignment of funding streams (in terms of benefits and investment timescales) from different organisations is problematic and obtaining Grant in Aid funding is challenging for surface water projects.

Wildlife Trusts and River Trusts were the most common organisations respondents collaborated with. Despite the perceived challenges of existing approaches to support cooperation and collaboration it was encouraging that over two-thirds (67%) of respondents



have examples of good cooperation and collaboration with other organisations. These examples varied in terms of scale, level of formality and the outcomes achieved.

### Funding for surface water management

Just over half of the respondents (52%) said they had an allocated (ring fenced) budget for surface water management. However, less than half (41%) of these (21% of the full sample) have long term certainty on the budget. Respondents suggested insufficient budget and certainty contributed to poor staff resourcing, capital delivery and maintenance.

There was general agreement that RMAs receive insufficient funding to fully resource and undertake their duties and expectations, these included operations, maintenance and general staff resources in local government. Commentary on specific challenges include:

- **Alignment with potential funders** – identifying benefits for potential beneficiaries and aligning with their processes to secure funding is difficult. Securing funds from WaSCs was identified as particularly difficult as they focus on reducing surface water entering sewers rather than reducing flooding. Alignment with WaSC's investment cycles and managing uncertainties of price determinations was also considered challenging.
- **Complex and rigid requirements for funding applications** – the processes for applying for funding is considered to be too prescriptive with the need for extensive evidence and business cases too onerous.
- **Lack of understanding of surface water management** - processes for funding coastal and fluvial schemes are applied to surface water management schemes with insufficient appreciation of the different flooding characteristics and mitigation approaches.
- **Securing external funds** – it is challenging to obtain partnership funding for surface water management from external private sector non RMAs.

### RMA capacity and skills for surface water management

Just over half (54%) of the respondents do not consider they have a full complement of staff to deliver the RMA's surface water management responsibilities. There were significant differences between county and unitary LLFAs – with greater challenges experienced in unitary authorities (two thirds (68%) of unitary authorities said they were understaffed). It was suggested there is very little resilience of the workforce in LLFAs, with a few respondents raising concerns about staff 'burn out' and wellbeing.

A general lack of allocated and locally available funding means that salary and/or benefits packages within RMAs (particularly local government) were not competitive, or attractive and hampered recruitment. This, together with high workloads, stressful workplaces also means that retention of good staff is challenging.

Overall, around three quarters (74%) of respondents suggested it was either very challenging, or challenging to fill posts within their RMA to deliver surface water management. Many respondents suggested this was related to a lack of allocated funding, but many also referenced the varied skills required for effective surface water management and the requirement for local knowledge.

## **Capacity and skills for specific activities.**

Respondents suggested that they had greatest challenges providing capacity and skills related to the delivery of SuDS and Nature Based Solutions (NBS) (e.g. landscape, amenity, water quality, biodiversity and decarbonisation). This is likely to have implications for the implementation of Schedule 3 of the FWMA, retrofitting SuDS, biodiversity net gain (BNG) and net zero carbon ambitions.

### **Approaches to improve capacity**

Understandably 'recruiting new staff' was considered by respondents as the most common approach to improving capacity. This was followed by an approach to mentor staff from within their department and apprenticeships.

Accredited training, on the job training, sharing of resources and good practice were common suggestions when respondents proposed other approaches to improving capacity and resilience within their RMAs. One respondent suggested it may be beneficial to raise awareness of opportunities in surface water management in line with growing interests in climate change and green skills.

Nearly two-thirds of respondents (60%) suggested there was insufficient affordable and accessible training opportunities for RMAs on surface water management (typically relating to costs and time for travelling and attending the course). Many respondents suggested that accredited national, or regional training provision should be provided.

### **Approaches to improve skills and competency**

Very short (e.g. lunchtime) CPD sessions was the most common approach suggested to improve skills, followed with 'e-learning self-paced modular training courses' and 'short 1, or 2 day virtual/face-to-face training'.

Two-thirds (66%) of respondents suggested that mentoring (e.g. personal support/advice) was either effective, or very effective approaches for improving competency and skills. This was closely followed by slightly less (62%) finding blended learning (e.g. e-learning and virtual/face-to-face training) effective or very effective.

Respondents clearly considered that improvements to funding, training and certification would support capacity and skills for surface water management.

## **Conclusions**

Recent reviews of surface water management undertaken by David Jenkins (Defra, 2020), the National Infrastructure Commission (2022) and this work clearly identify significant challenges for the management of surface water in England. These are most severely felt by LLFAs and highway authorities where in many instances the lack of government leadership, coordination, and access to appropriate funding is at the root cause of the problem. This means RMAs can struggle to embrace good asset management, effectively maintain and deliver surface water management infrastructure, collaborate with other RMAs and retain and recruit staff.

The frameworks for coordination and funding within surface water management can act as a hindrance, rather than an enabler for good outcomes. Where these challenges are overcome this is primarily down to individual champions within RMAs fostering good relationships and partnerships, as well as them taking a more entrepreneurial approach to funding and delivery.

This work has identified significant and persistent challenges in surface water management and has also provided a series of recommendations for consideration by the government, Environment Agency, RMAs and professional bodies.

Recognising the historic and endemic problems identified, CIWEM and the organisations funding this review request greater political leadership in the prioritisation of surface water management. CIWEM, together with its membership and partners is in a strong position to support better surface water management.

## 2. Background

Engagement comprising a survey and focus groups were undertaken as part of a project to provide **a review of the opportunities and challenges relating to surface water management**. CIWEM was asked to undertake the work by the Association of SuDS Authorities (ASA), the Local Government Flood and Coastal Erosion Risk Management Technical Advisors Group Water (LG FCERM TAG) and London Drainage Engineers Group (LODEG), It was funded by ASA and the LG FCERM TAG.

This independent review was undertaken to better understand the potential opportunities and challenges faced by English Risk Management Authorities (RMAs) in relation to surface water management and provide recommendations for improvements.

This review complements the activities undertaken by Defra (particularly the [2020 Jenkins Review](#)), the Environment Agency (EA) and the National Infrastructure Commission (NIC) ([Reducing the risk of surface water flooding 2022](#)). The survey was focused on RMAs (as listed in the Flood and Water Management Act 2010, FWMA) involved in delivering surface water management in England.

The survey was developed in Google Forms and collected responses from 27 June to 9 September 2022. The specific objectives of the survey were to:

1. Engage with RMAs to understand the potential opportunities and challenges for surface water management.
2. Explore how RMAs are delivering their RMA responsibilities with a particular focus on:
  - a. Cooperation and collaboration
  - b. Funding
  - c. Capacity and skills
3. Understand the challenges RMAs are facing and their approaches to overcome them.
4. Understand more about RMA requirements and priorities to effectively fulfil their responsibilities.

The survey included 67 quantitative and qualitative questions and completion time was between 30 and 60 minutes. 89 responses were received. A copy of the survey can be found in Appendix 1, together with a breakdown of those organisations that contributed Appendix 2.

This level of response means that the results presented should not be taken to be more widely representative of the views of all RMAs, or those working in local government. Rather, they are an indicative snapshot of the views of this particular group of respondents. However, the responses broadly align with other reviews, particularly the 2020 David Jenkins review (Defra, 2020).

Where figures are used to represent the response, the number of respondents who answered are in brackets in the captions. Where the response rate is low (less than 50), care should be taken when interpreting percentages, as small differences can seem magnified. Some of the results are broken specifically into local government responses. Presenting the results in this way enables the results to be framed in the context of organisation size and availability of funding.

Where respondents provided qualitative comments, these were analysed using manual interpretation and summarisation complemented by NVivo qualitative data analysis. The qualitative analysis was undertaken with support from Elizabeth Lawson (Newcastle University), Peter Melville-Shreeve (University of Exeter) and Sarah Cotterill (University College Dublin).

Two focus groups were held separately with six representatives from Water and Sewerage Companies (WaSCs) and local government RMAs in December 2022. The local government focus group comprised representatives from county councils, a unitary authority, a highway authority, a combined authority, representing both the lead local flood authority and highway authority RMA roles. The focus groups were structured to provide further context around collaboration, funding and capacity and skills within their specific RMAs.

We also want to acknowledge the valuable input and feedback from Steve Cook (Arcadis), Hannah Coogan and Emily Clarke (Binnies) as well as representatives from the Environment Agency. We also want to thank Laura Bigley, (ASA) and Vicky Boorman (LG FCERM TAG and LODEG) for commissioning the work and their input and advice.

### **3. Respondents to the survey**

The survey was intended for RMAs, primarily local authorities and water companies. It was widely promoted by CIWEM, ASA, LG FCERM TAG, Water UK's Surface Water Management Network, CIRIA, the Association of Drainage Authorities (ADA) and the ADEPT Flood and Water Management Group.

#### **Type of RMA and the functions provided**

The survey received 89 responses from English RMAs. Two thirds (66%) of these were submitted from an organisational perspective (which may include a consolidated response from many individuals within an organisation).

By far the largest number of responses were from those working in a Lead Local Flood Authority (LLFA) at a Unitary level (49%), closely followed by those working in a LLFA at a County level (23%). 70 respondents were from RMAs working in local government, and 8 from different Water and Sewerage Companies.

Disappointingly, despite attempts to engage with them there was a very low response from those working in highway authorities and National Highways. Respondent composition is represented in Figure 3-1.

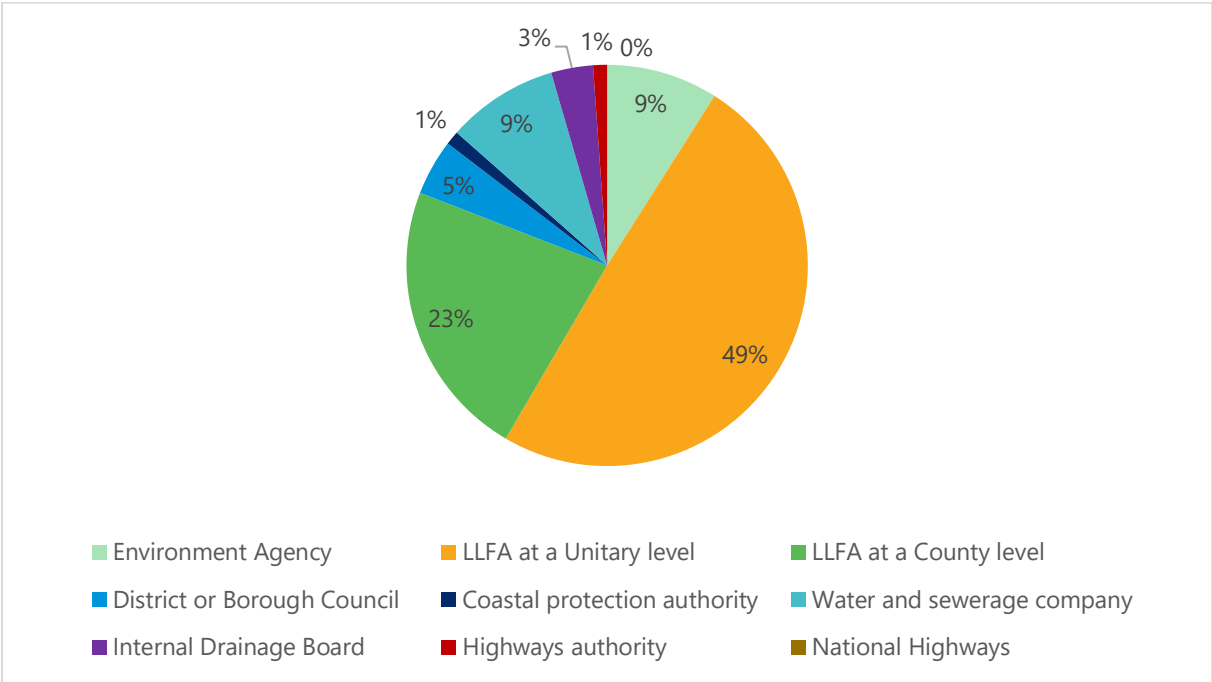


Figure 3-1 Type of Risk Management Authority (Q3, 89 responses)

When asked about the functions provided within their RMA (question 4), unsurprisingly 'Flood risk management' was the most common response (77 respondents). This was followed by 'Flood investigations (Section19 etc)' and 'Strategy and Policy' (each with 66 respondents) then 'Design' (61 respondents). See Figure 3-2 for further detail.

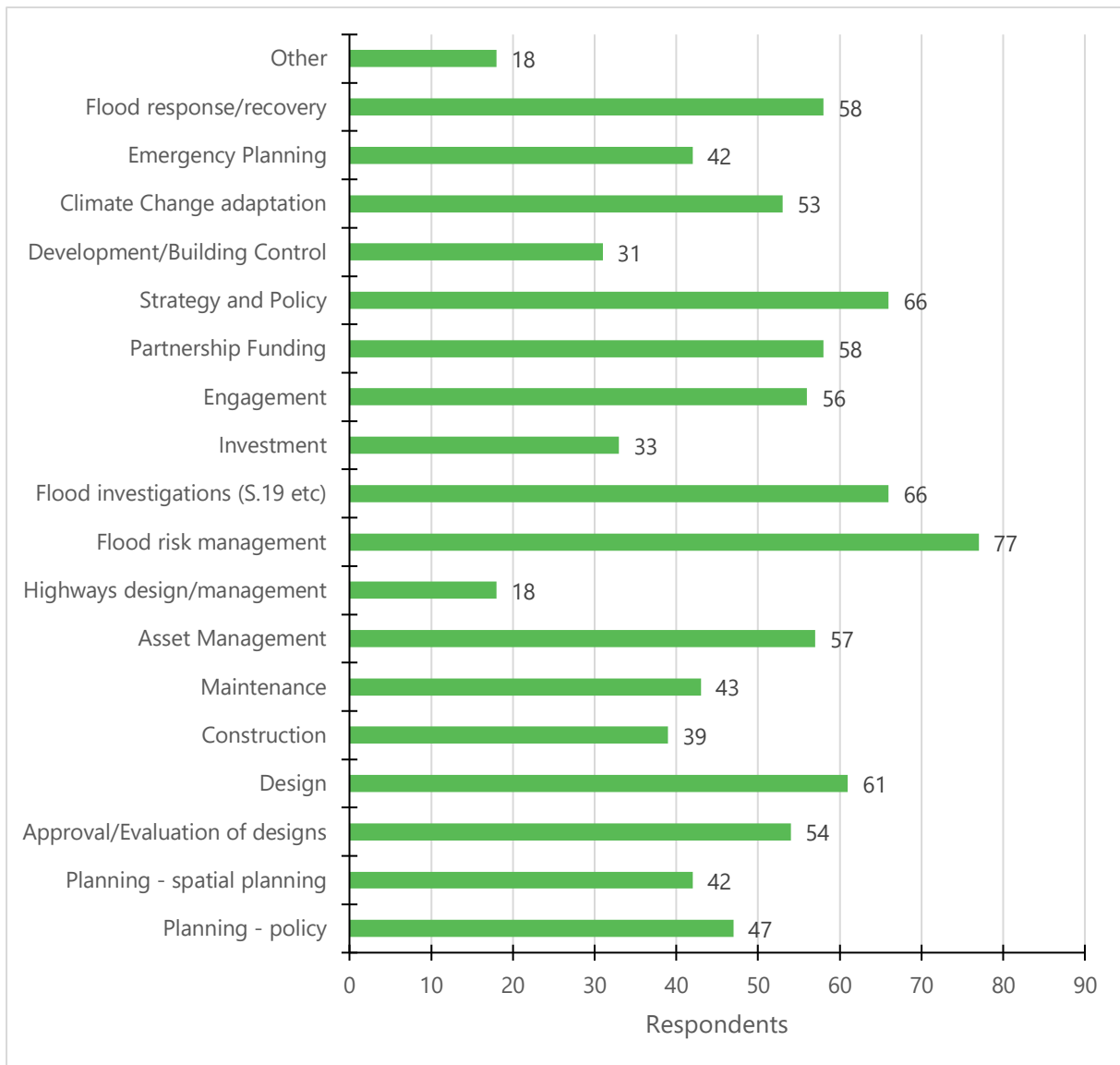


Figure 3-2 Functions provided in RMAs (Q4, 89 responses)

The 'Other' functions suggested by respondents included the 'strategic overview on surface water management' and 'pipeline planning', both submitted by the Environment Agency. A common additional function suggested by LLFA respondents was providing the 'statutory consultee role for planning' and consenting and enforcement for watercourses and land drainage. A WaSC respondent suggested the management of sewer flooding.

### Size and shape of the workforce

When asked about the number of FTEs working on the RMA role (question 5) over a quarter of the respondents suggested they have 10 or more FTEs working on the RMA role. These responses were predominantly from the Environment Agency and WaSCs. However, the most common responses were those with three, or less FTEs (36% when aggregated). Figure 3-3 shows the complete sample of 89 respondents and Figure 3-4 shows analysis of local government (70 respondents).

The number of Full Time Equivalents (FTEs) working on the RMA role is likely to be reflective of a number of different factors including the spatial area covered, catchment characteristics,

sources of flooding and associated flood risk, condition of surface water management assets as well as potential funding and structure within the RMA.

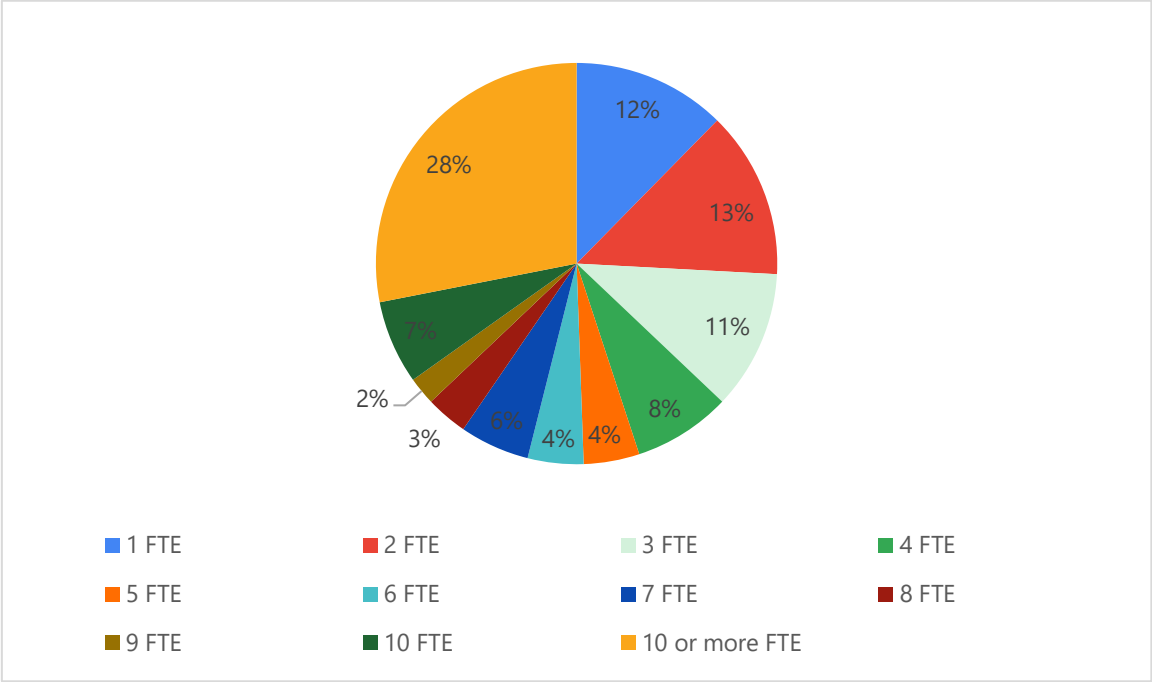


Figure 3-3 Number of FTE employees working on the RMA role (Q5, 89 responses)

When looking at responses from local government (Figure 3-4) nearly half (46% when aggregated) of the respondents have three, or less FTEs working on the RMA role, with nearly a fifth (17%) of respondents with 10 or more FTEs working in the RMA role.

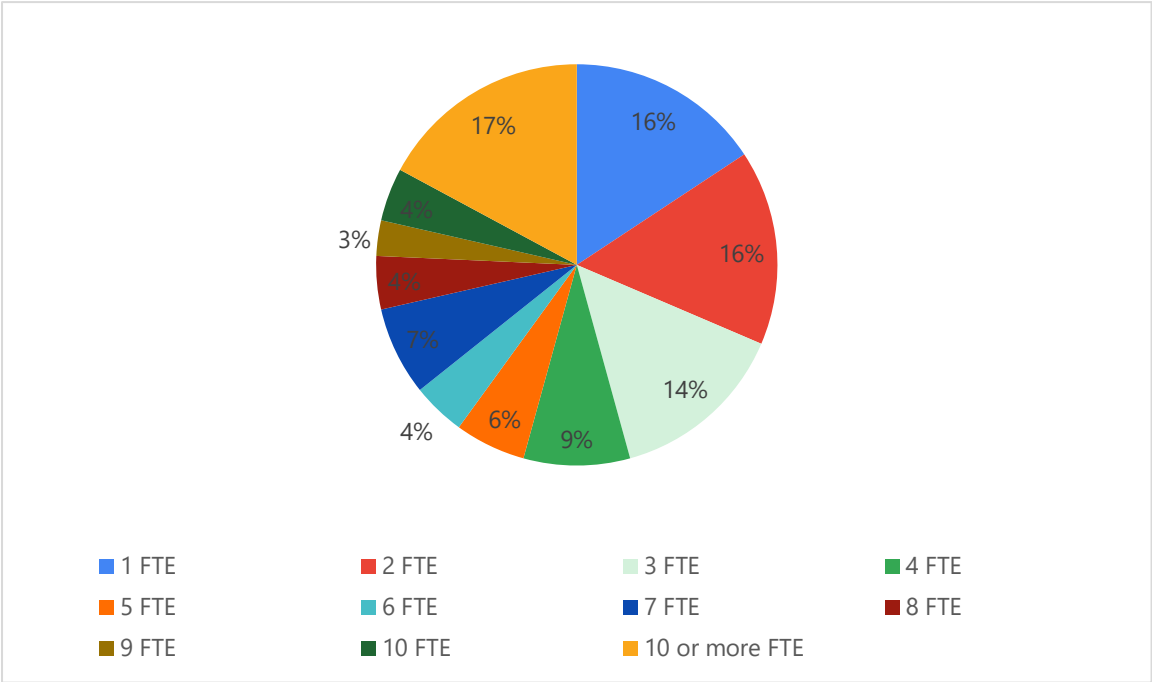


Figure 3-4 Number of FTE employees working on the RMA role from local government (Q5, 70 responses)

There was quite a significant difference in the responses for county and unitary authorities these are presented in Figure 3-5 and Figure 3-6. Within county authorities (Figure 3-5)

nearly half (45%) had 10 or more FTEs working in the RMA role, with results suggesting counties have more working on the RMA role.

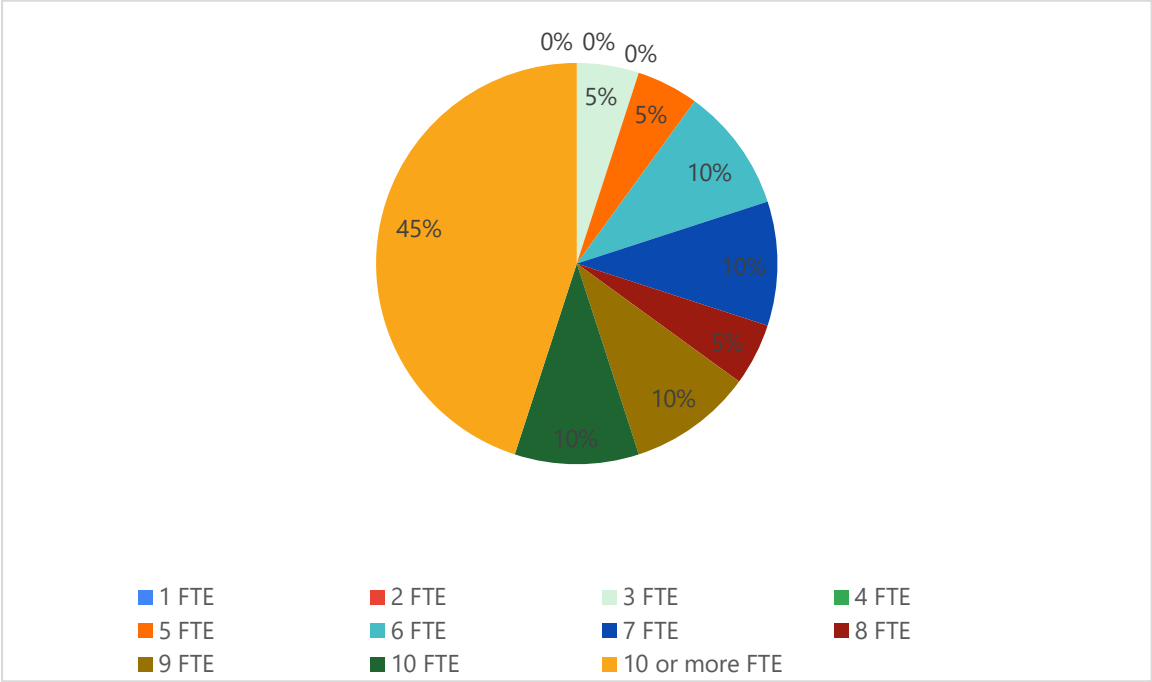


Figure 3-5 Number of FTE employees working on the RMA role from County LLFAs (Q5, 20 responses)

Within unitary authorities (Figure 3-6) nearly two thirds (58%) of respondents have three, or less FTEs working on the RMA role.

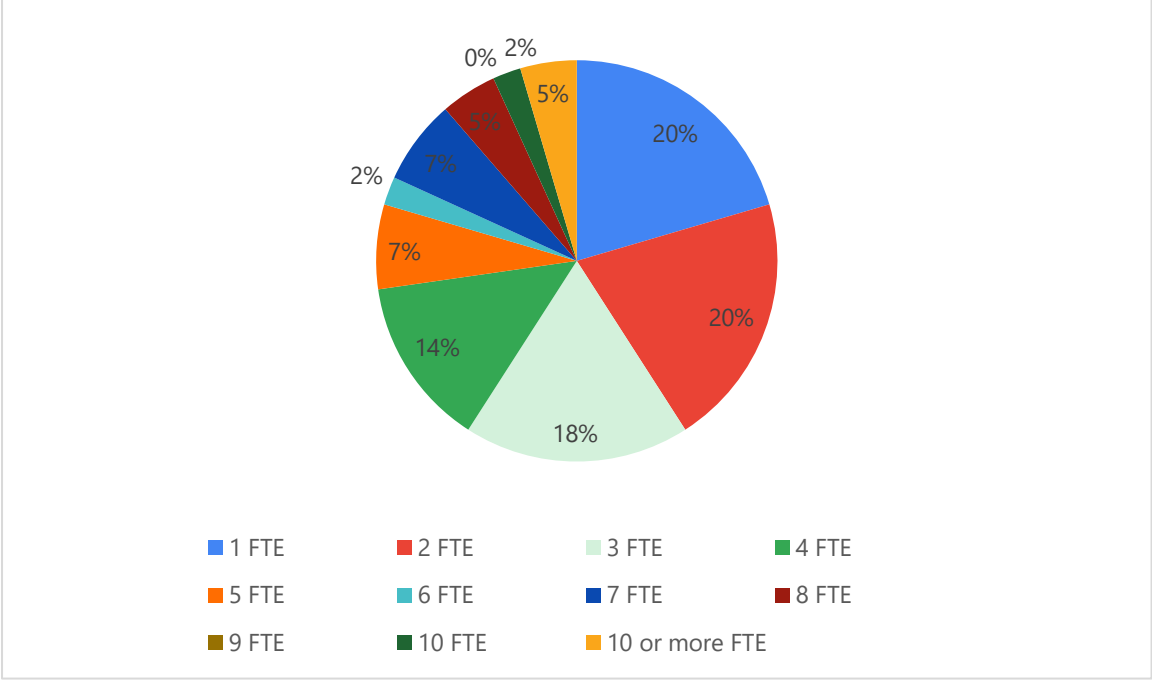


Figure 3-6 Number of FTE employees working on the RMA role from Unitary LLFAs (Q5, 44 responses)

Respondents were asked to estimate the percentage of FTE’s working on the RMA role fulfilled by consultants (question 6) nearly half (49%) of the respondents suggest 0 – 10%,



with significantly smaller proportions (14 – 15%) suggesting consultants fulfilled 20 – 30% and 10 – 20% of roles respectively. See Figure 3-7 for more detail.

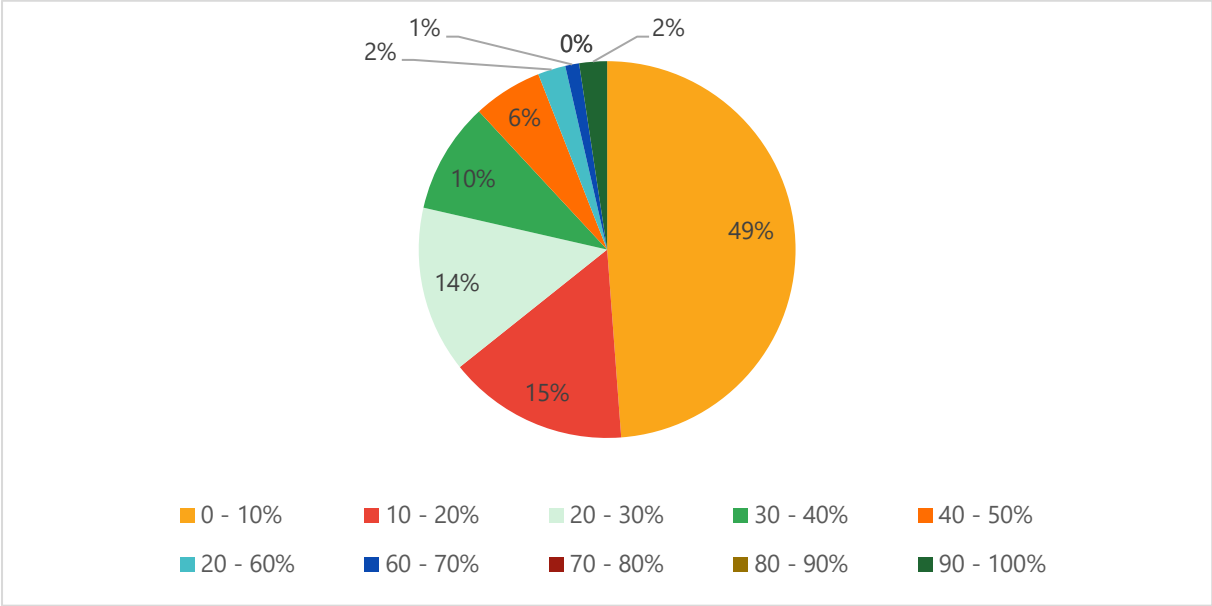


Figure 3-7 Estimate of proportion of FTE's working on the RMA role fulfilled by consultants (Q6, 84 responses)

In hindsight, it may have been useful to explore the number of RMA that had no consultants fulfilling that role.

Respondents were asked to estimate the proportion of staff with different levels of experience of surface water management (question 7). Nearly half (45%) of the respondents suggested staff in their RMA had more than 4 years' experience, and nearly a third (30%) suggested their staff had 0 – 2 years' experience. This response may reflect the FWMA being implemented in 2010 with subsequent opportunities for developing and sharing experience. The challenge also relates to how the experience is distributed amongst RMAs, which is discussed further in section 6. See Figure 3-8 for more detail.

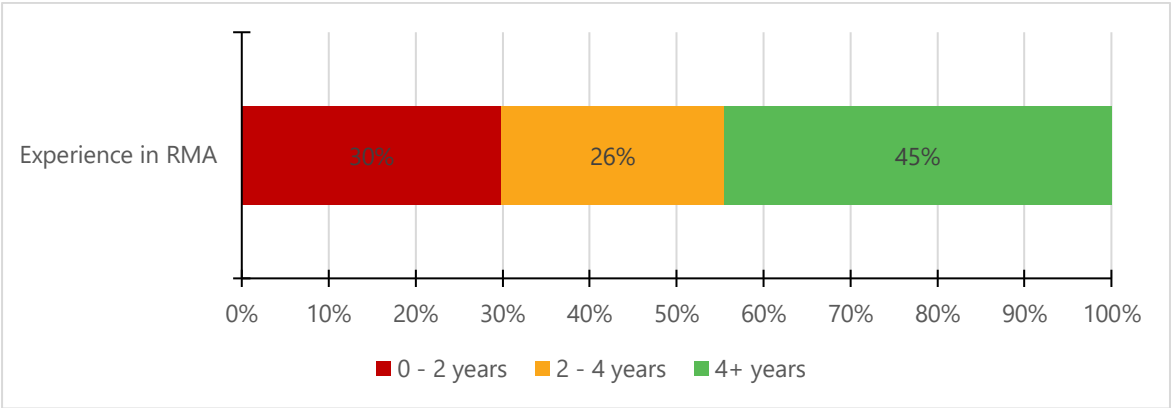


Figure 3-8 Experience of staff with experience of surface water management (Q7, 87 responses)

**4. Cooperation and collaboration**

All RMAs have a duty to cooperate (FWMA, Section 13) and collaborate when managing flood risk and the benefits of partnership working are increasingly recognised. Commentary

offered as part of this review suggests that the quality of collaboration across the country is inconsistent, varying geographically and between individual RMAs.

The National FCERM Strategy (Environment Agency, 2020) flags cooperation, partnership working and information sharing as vital measures to improve flood risk management overall. The FCERM Strategy and associated road maps do not report on progress against the different sources of flooding. It was suggested this makes it difficult to establish a picture specifically for surface water management and understand the different levels of investment and resource required to facilitate collaboration.

The efficacy of collaboration and partnership working was explored by Defra (2020) in the Jenkins review with recommendations relating to partnership arrangements, particularly interfaces with Regional Flood Coastal Committees (RFCCs). Jenkins also recommended that more guidance should be provided on establishing and maintaining partnerships.

Engagement and collaboration are key ways to reduce fragmentation and improve the coordination of surface water management. There are several different plans and approaches being delivered by the various RMAs involved in managing surface water e.g. Drainage and Wastewater Management Plans (DWMPs), Local Flood Risk Management Strategies (LFRMS). To make these and other such plans effective, the requirement and associated resource burden for collaboration from RMAs is high. As a consequence, many respondents disliked the prospect of additional plans, with a handful suggesting it would be useful to consolidate existing plans.

The survey explored RMA understanding of surface water management roles and responsibilities and who should undertake coordination of activities. The responses provided relate to their understanding of the roles and responsibilities, rather than those stated within legislation and regulations. Views on collaboration with other RMAs, on a range of activities were also explored as well as how it can be improved.

### Clarity on responsibilities for surface water management

Survey respondents were asked to rate the clarity of their own RMA’s surface water management responsibilities (question 8). Nearly two thirds (63%) suggested they were very clear. See Figure 4-1 for detail.

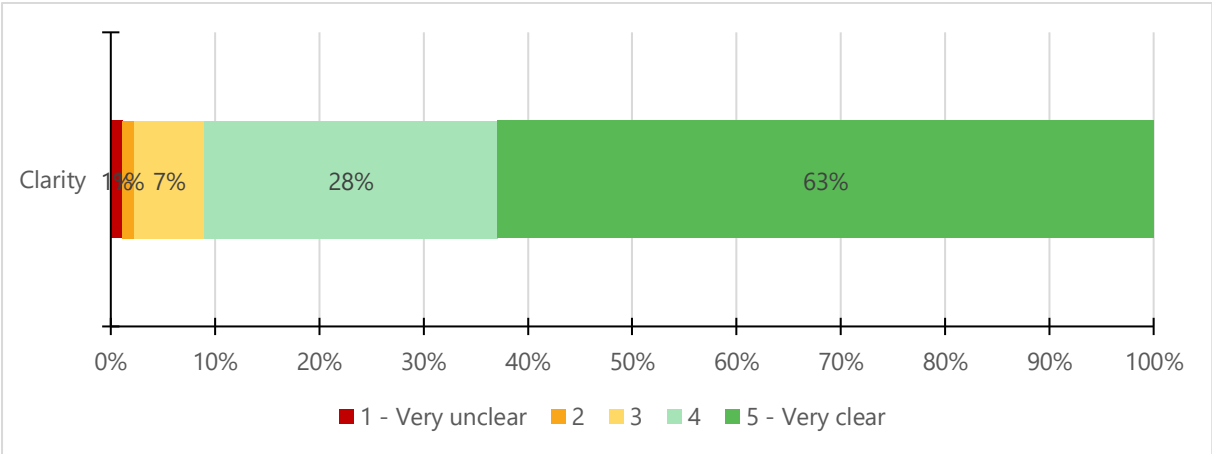


Figure 4-1 Extent to which respondents are clear on the surface water management responsibilities for their own RMA (Q8, 89 responses)

Respondents were slightly less confident when asked to rate the clarity of surface water management responsibilities for other RMA's (question 9). Nearly half (48%) of respondents suggested they were very clear. See Figure 4-2 for detail.

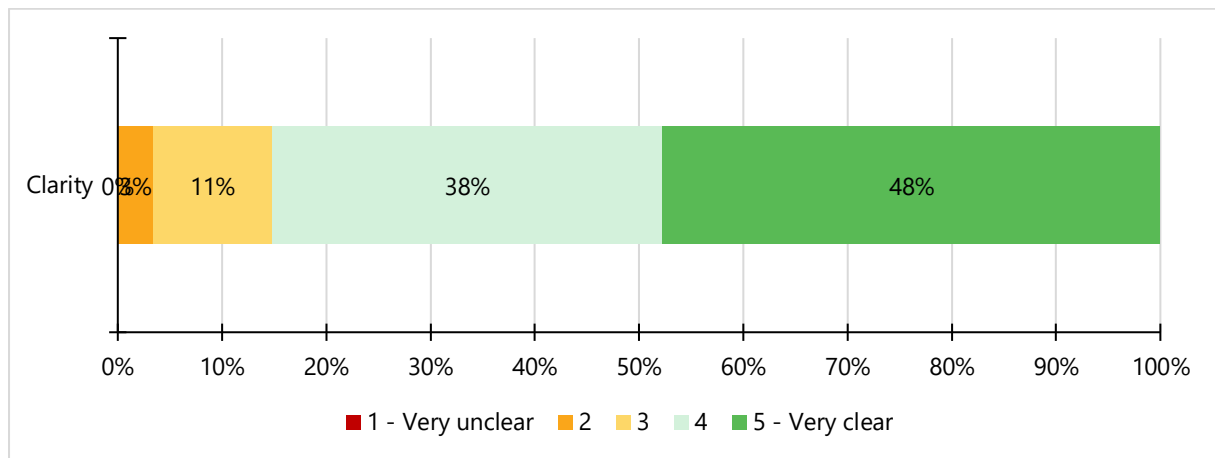


Figure 4-2 Extent to which respondents are clear on the surface water management responsibilities for other RMA's (Q9, 89 responses)

Respondents were asked to consider how clear other RMA's are about their own responsibilities for managing surface water. LLFAs were thought to have greatest clarity, with nearly half (47%) suggesting they were very clear. This was closely followed by Internal Drainage boards (33%) and the Environment Agency (31%) which may link to commentary from a few respondents on welcoming clarification on the Environment Agency's Strategic Overview role.

Of those considered to be unclear of their responsibilities, highway authorities were predominantly thought to be very unclear, or unclear (31%). See Figure 4-3 for more a more detailed breakdown.

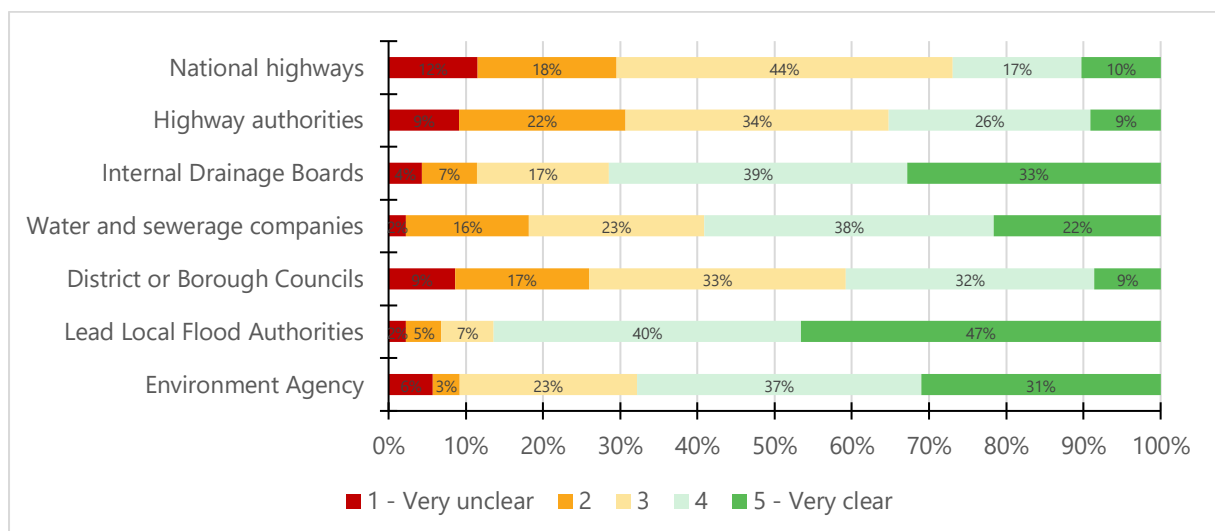


Figure 4-3 Clarity of other RMA's about their own surface water management responsibilities (Q10, 87 responses)

The commentary provided by respondents for question 11 focussed on uncertainty around asset ownership, the behaviours and the willingness of RMA's to maintain their own assets. It was suggested by a few respondents that responsibilities may be understood at a high level,

but not clear at an operational level, particularly when it comes to specific issues or assets as it becomes more nuanced and complicated. This was considered to create inconsistency in understanding between RMAs, potentially exacerbated by geographically patchy appreciation of their RMA roles and responsibilities.

A respondent suggested responsibilities can be blurred by individuals having shared responsibilities (e.g. between a highway authority or LLFA). Another respondent suggested the uncertainty around responsibilities creates inertia in terms of delivery, particularly around the interactions of sewer and surface water flooding.

A small number of respondents suggested that the Environment Agency does not have a consistent approach to surface water management (e.g. designation of Critical Drainage Areas) and other RMA respondents commented they are unclear what the EA's 'Strategic Overview' means in practice with regard to surface water management.

The local government focus groups discussed the EA's 'Strategic Overview' as they suggested there was potential tension between their national role and local delivery as an RMA. Both the WaSC and local government focus groups believed that the Environment Agency also prioritised other flooding risks (i.e. fluvial and coastal flooding) over surface water management, as this was considered the responsibility of LLFAs. However prioritisation was inconsistent as in some instances the EA recognises the impact of surface water management in their Strategic Overview and the long term benefits it delivers for community resilience.

Interactions with those managing highway assets (at a local and national level) were suggested to be problematic by a few survey respondents and those involved in focus groups. A few respondents related challenges to the interaction of assets owned and managed by different RMAs and the variety of standards that RMAs are working to. Some respondents suggested that highway authorities were not aware of the surface water impacts of their assets and as runoff is often discharged to sewers highway flooding was often not prioritised. Other respondents highlighted that highway authorities and to some extent those working in District and Borough Council were not able to effectively engage on surface water management due to a lack of resources or appropriate knowledge and skills.

### **Coordination of surface water management**

Nearly two-thirds (60%) of respondents suggested that surface water management should be coordinated by one RMA (question 12). See Figure 4-4. Discussions with the local government focus group suggested that a single organisation coordinating surface water management should provide greater clarity and have the appropriate powers to convene other RMAs and enable delivery.

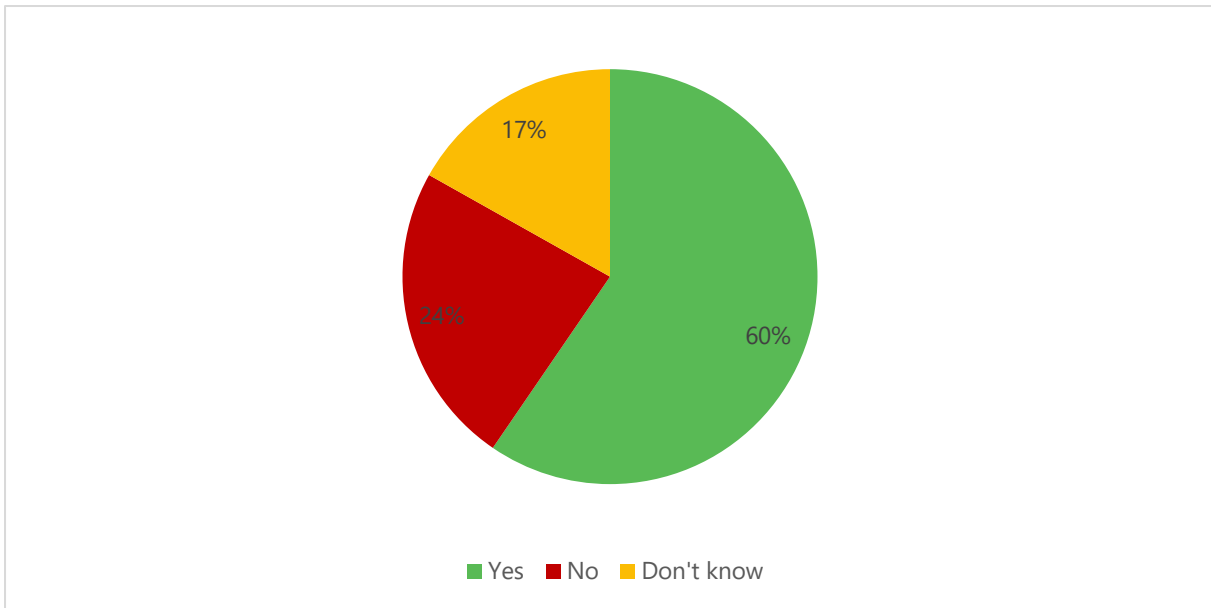


Figure 4-4 Should surface water management be coordinated by one RMA (Q12, 89 respondents)

When those that suggested surface water management should be coordinated by one RMA a significant majority (69%) suggested the LLFA as the most appropriate (question 13). This was then followed by a range of 'other' suggestions (12%) such as an independent body, or greater coordination where roles can be split depending on the nature of the infrastructure (e.g. the rural/urban split, asset type). A tenth (10%) of respondents suggested that the Environment Agency should coordinate surface water management. See Figure 4-5 for more detail.

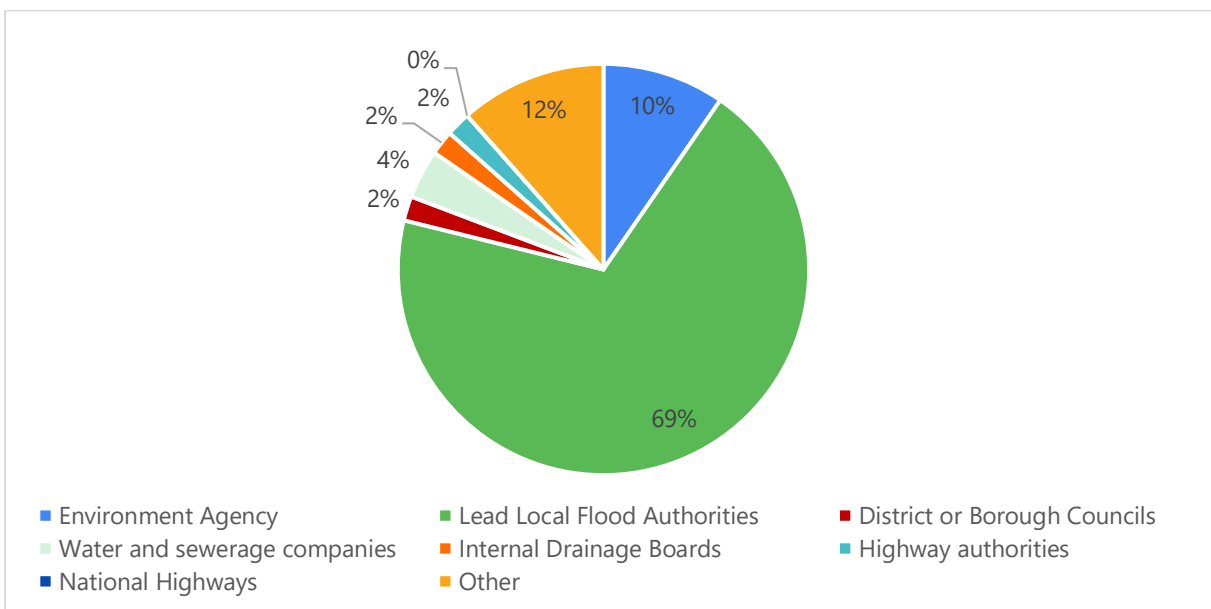


Figure 4-5 If surface water management should be coordinated by one RMA, who should undertake this coordination. (Q13, 52 responses)

The WaSCs during the focus group discussion highlighted that fragmentation of surface water management by different RMAs caused challenges for everyone. It was also suggested by the focus groups and some respondents that there are considerable disparities in how the

different types of RMAs operate regionally, and sometimes internally (i.e. not all LLFAs and WaSCs behave the same).

When discussing coordination the local government focus group suggested that surface water management should be better coordinated at a local level by an improved understanding of the catchment, RMA objectives, their priorities and available funding sources. Leadership is required from government to make this happen.

The survey provided commentary around other organisations that could coordinate surface water management (question 14) suggestions centred on the need for an organisation to coordinate responsibilities and activities of LLFAs and WaSCs as there is overlap and confusion between these organisations at a local level.

This was suggested to potentially be context specific, in rural areas land drainage is a significant responsibility (relevant for IDBs) and in urban areas the LLFA is likely to have a more important contribution.

A few respondents suggested a new independent regional body (not influenced by politics or profit) that could work in partnership with local organisations to provide coordination. One respondent also made it clear that no more organisations should be created given the wide range of responsible bodies already with a surface water management role.

The local government focus group highlighted the need for accountability and scrutiny of all RMAs, particularly the organisation coordinating surface water management. While it may be possible for the EA to deliver the coordination, measures need to be in place to ensure better accountability. The focus groups suggested that LLFAs are already held to account through established scrutiny processes.

Many respondents (62) provided commentary on the activities that need coordinating (question 15). It was suggested by a few respondents that coordination should be undertaken strategically with a holistic catchment approach, as they cross different borders, assets and is influenced by numerous standards.

A few respondents recognised that different RMAs contribute to and lead various plans that have potential overlap such as Strategic Flood Risk Assessments (SFRAs), DWMPs, Flood Risk Management Plans (FRMPs), and River Basement Management Plans (RBMPS) that need to be coordinated to produce a more holistic, climate resilient plan for the communities and the environment they serve.

The WaSC focus group did not welcome the potential introduction of additional plans (as suggested by the NIC (2022)). However, they suggested that with the development of the next cycle of the DWMPs it could be beneficial to explore how they could be used to support improved coordination and collaboration by developing a shared prioritised programme. The WaSCs recognised DWMPs are already quite broad in their scope and would need to be more integrative. Engagement with LLFAs would be key, but there could be opportunities to deliver multiple environmental outcomes and contribute to numerous national policy aspirations.

Other areas of activity that respondents suggested required coordination included:

- **Cooperation and partnership** – It was remarked that RMAs have a duty to cooperate (with the FCERM Strategy Roadmap describing the activities that require coordination), however this is delivered inconsistently. This cooperation was highlighted as necessary to ensure that RMAs effectively manage all flood risks. A WaSC response was confident that DWMPs could develop a more collaborative approach to wastewater management, river quality health and pollution. It was also suggested that integration of flood risk from sewers and surface water needed to be undertaken. Some respondents (from Lincolnshire) were comfortable that coordination can be delivered through their established partnership delivered in 2010.
- **Asset management** – many respondents highlighted the need to develop and where appropriate share asset registers amongst the relevant RMAs. A few respondents suggested that greater clarity and guidance is required on the development of registers and responsibilities for maintaining assets, particularly where there are interdependencies.

Challenges were identified around LLFAs being unable to vest certain surface water management assets and being reliant on other RMAs, - particularly, highway authorities and WaSCs.

- **Data sharing** – many respondents suggested this should be simpler, particularly sharing information on assets and properties flooded.
- **Surface water mapping and modelling** – the dependency on the Environment Agency for surface water flood maps was highlighted by a number of respondents. However, a few respondents suggested that if LLFAs are appropriately resourced they are potentially well placed to manage the data and records ensuring surface water flood risk maps are robust. It was remarked that modelling of surface water risk is complicated and that data needs to be shared between the different RMAs to ensure the maps and modelling are robust.
- **Flood investigations** – some respondents suggested that flood investigations should be key in identifying who coordinates activities. Several respondents explained that Section 19 flood investigations that involve multiple RMAs can be challenging, particularly ensuring that agreed actions are delivered. A few respondents also suggested that better coordination is required during emergencies.
- **Delivering Sustainable Drainage Systems** – Delivering Nature Based Solutions (NBS) like Sustainable Drainage Systems (SuDS) were suggested to require coordination in terms of the interaction between the LLFA and Local Planning Authority for new build and retrofit (particularly for larger scale, catchment-based approaches). Many respondents go on to highlight concerns about the delivery of SuDS, both for new developments and retrofitting.

While not strictly related to coordination when discussing representation of RMAs the local government focus group suggested that more needs to be done to ensure RMAs and other infrastructure and asset owners are actively engaged and represented in national FCERM discussions, e.g. the FCERM Strategy. In particular, more care needs to be taken to ensure

that the concerns of RMAs (particularly LLFAs) are considered by government and better represented by Environment Agency in discussions with government.

**Collaboration**

The WaSC focus group was clear that cooperation, collaboration and partnerships are essential as no single RMA can effectively manage surface water on their own. Recognising this, respondents were asked to rate their collaboration with other RMAs on surface water management (question 16). Respondents considered LLFAs as the most effective collaborators with nearly a third (31%) of respondents considering them as very effective, this was followed by the Environment Agency (20%). National Highways were considered as the least effective at collaboration with 18% identifying them as being very ineffective, followed by highways authorities (10%) and WaSCs (10%). See Figure 4-6 for more detail on the responses.

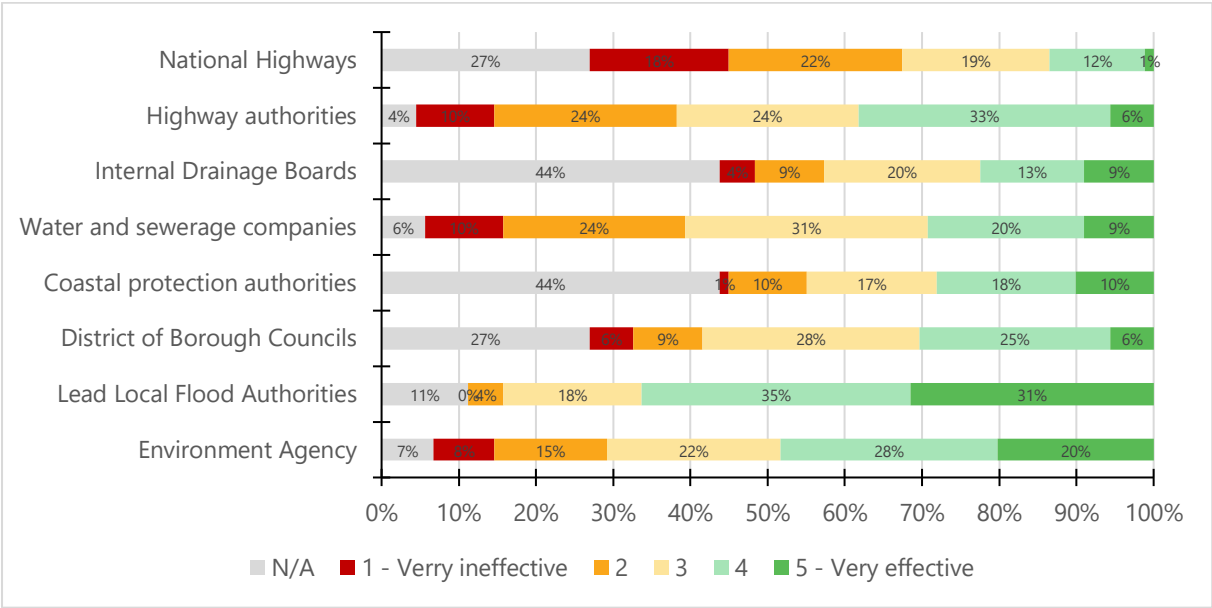


Figure 4-6 Rating collaboration with RMAs on surface water management (Q16, 89 responses)

Respondents were asked to rate their collaboration with other organisations on surface water management (question 17). Regional Flood and Coastal Committees (RFCCs) were considered as the most effective at collaboration with a quarter (25%) of respondents considering them very effective. This was followed by the Local Planning Authority with a fifth (20%) of respondents considering them very effective. Riparian landowners were more commonly (20%) identified as being very ineffective at collaboration, followed by Natural England (19%) and Land manager/farmers (17%). See Figure 4-7 for more detail on the responses.



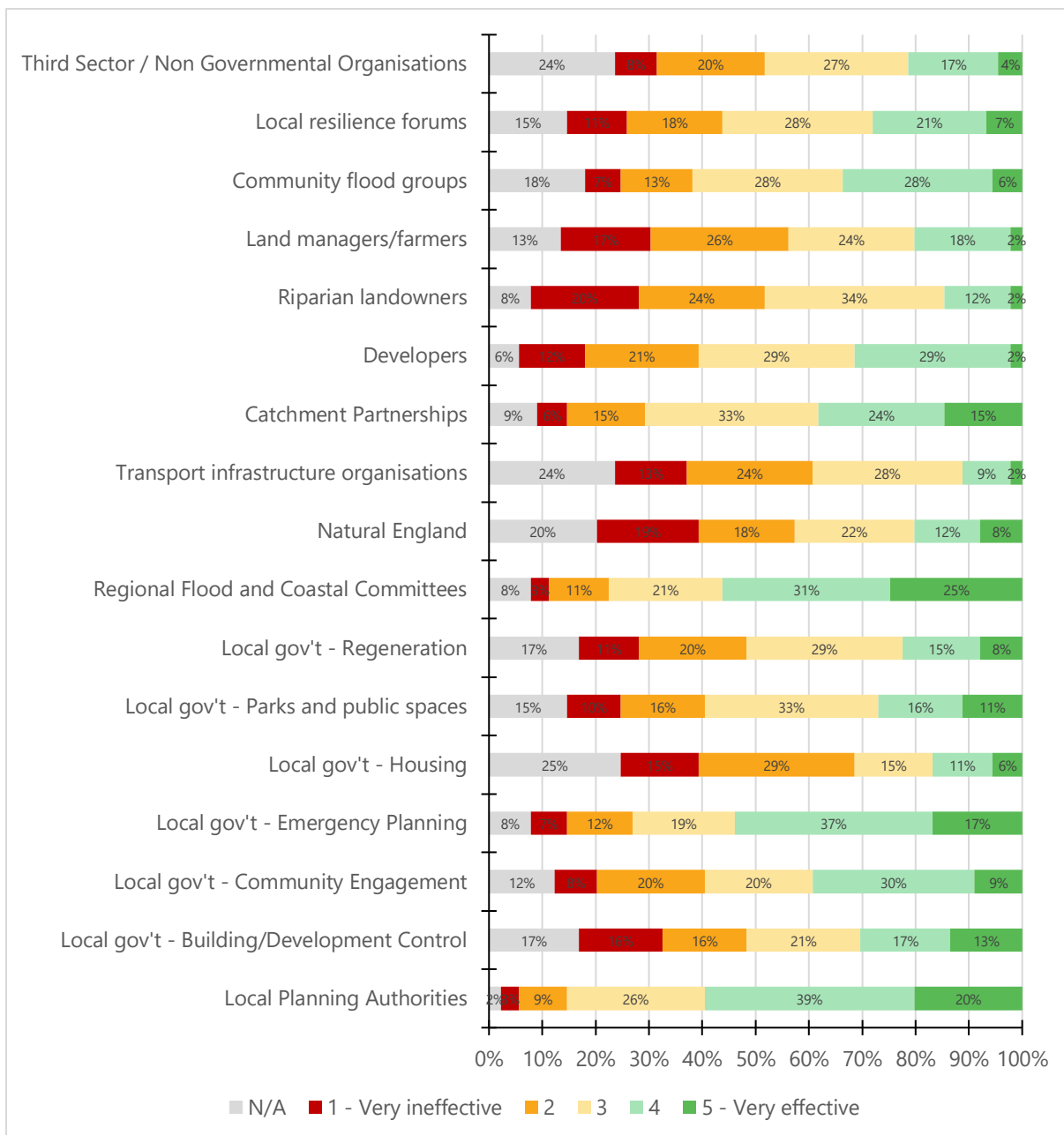


Figure 4-7 Rating collaboration with other organisations on surface water management (Q17, 89 responses)

When discussing cooperation and collaboration the WaSCs in their focus group suggested there was a variety of definitions for collaboration and partnership within FCERM and it is important to establish a shared understanding and expectation amongst different RMAs. For example, some WaSCs have Outcome Delivery Incentives (ODIs) that actively encourage partnerships, but the level of prescription varies between companies.

The WaSC focus group also recognised that low level cooperation between RMAs is an effective foundation for trusting relationships that underpin collaboration. This could include being flexible and responsive to request from partners, but the WaSCs recognised this does depend on resources being available.

Respondents were asked to identify who they have a formalised partnership agreement with (e.g. a Memorandum of Understanding) to support surface water management with an RMA

(question 18). LLFAs were identified as the most common RMA to have an agreement with (35 respondents), this was followed by the Environment Agency (28 respondents) and WaSCs (20 respondents). See Figure 4-8 for the full breakdown.

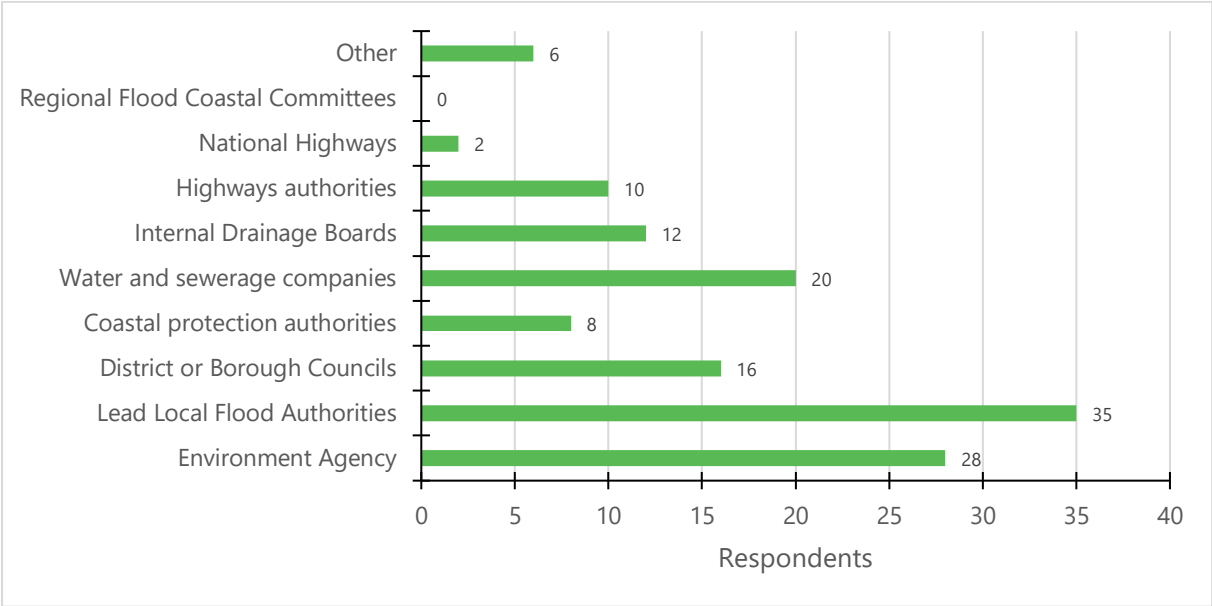


Figure 4-8 RMAs with partnership agreements (Q18, 53 respondents)

Respondents when providing detail on agreements (question 19) were positive about the role of partnerships to support local collaboration. Many respondents provided examples of agreements that varied in scale and the level of formality and complexity to formalise cooperation. Many of the respondents remarked about the considerable effort it can take for the agreements to be established and developed.

The variety of agreements suggested were between numerous RMAs, varieties include:

- Between LLFAs and neighbouring LLFAs
- Between LLFAs and Environment Agency
- Between LLFAs and Internal Drainage Boards (IDB)
- Between LLFAs and WaSCs
- Inter-agency agreements between IDB, LLFA, Environment Agency and WaSC
- Between LLFAs and Catchment Partnerships

The purpose and the outcomes of the agreements varied, ranging from data sharing to regional partnership agreements where Partnership Funding is provided for capital delivery. The Living With Water (<https://livingwithwater.co.uk>) project led by Yorkshire Water is an example of a formal partnership with established Terms of Reference, a formal senior board and legal agreements for joint funded capital schemes. It was highlighted as good practice by many of the partners involved.

There are also examples where IDBs and LLFAs collaborate on consenting for ordinary watercourses and support is provided around planning approvals. There are also Service Level Agreements between different LLFAs to provide support for planning and emergency planning activities.

**Good practice – Living With Water**  
 This project led by Yorkshire Water is an example of a formal partnership between a WaSC, local authority and other organisations with an established Terms of Reference, a formal senior board and legal agreements for joint funded capital schemes.

Other potential funders such as the Department for Education are establishing partnership agreements to deliver SuDS in schools.

Named partnerships include:

- Living with Water (led by Yorkshire Water)
- Northumbria Integrated Drainage Partnership (led by Northumbrian Water)
- Suffolk Flood Risk Management Partnership
- Norfolk Strategic Flood Alliance
- Thames Surface Water Partnership
- Connected by Water – South Yorkshire Partnership
- Climate Resilient Schools – led by the Greater London Authority with Thames Water
- Sub-Regional Flood and Coastal Erosion Risk Management Partnerships under the North West Regional Flood and Coastal Committee.

Respondents were asked to consider the effectiveness of the existing approach to support cooperation and collaboration (question 20). Around half (51%) of them were non-committal on a response. However, just over a third (35%) of respondents suggested that existing approaches to support cooperation and collaboration were either effective, or very effective. See Figure 4-9 for a breakdown of the results.

These results may reflect that fact that it can be beneficial, but difficult to develop formal approaches to support cooperation and collaboration.

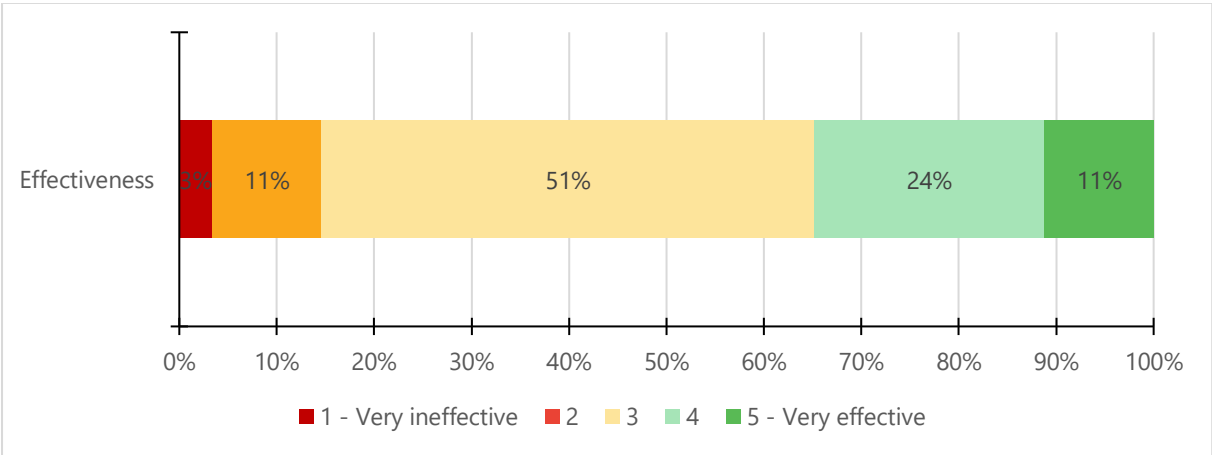


Figure 4-9 Effectiveness of existing approach for supporting cooperation and collaboration (Q20, 89 responses)

The commentary expanding on the effectiveness of approaches for cooperation and collaboration (question 21) primarily provided background to the challenges. Commentary included:

- **Lack of resources** – From the responses it seemed RMAs have differing levels of available resources and commitment. There may be high levels of support for collaboration, however due to lack of resources RMAs understandably tend to focus on their own statutory responsibilities to the detriment of collaboration even though this would be beneficial.

Commentary suggested successful partnerships tend to be driven by individuals passionate to deliver outcomes. The importance of having dedicated resources to enable collaboration and having a named contact was also emphasised by both the local government and WaSC focus groups.

- **Difficulties in identifying and obtaining funding** – a number of respondents suggested that while there are pockets of funding for surface water (capital projects) it is difficult to identify and align funding streams. In addition differences in the application process and timescales for funding particularly for WaSCs (Ofwat) and LLFAs (Grant in Aid, GiA) is challenging. There are also difficulties in obtaining GiA funding for surface water schemes when compared to fluvial or coastal flooding.
- **Engagement** – a respondent suggested lack of clarity within the EA's Strategic Overview does not support collaboration. A few respondents highlighted that each RMA undertakes their statutory role and there is little collaboration on surface water management. Within new development, this is complicated by the Right to Connect, and WaSCs are not statutory consultees in the development planning process (this may change with the implementation of Schedule 3 (FWMA, 2010)). Data sharing between RMAs was suggested by a few respondents as being problematic.

Commentary from respondents suggested that effective collaboration was based on effective communication, regular meetings and working on shared projects. It was also remarked that it was beneficial for a shared understanding of objectives, priorities and agreed targets.

Both the local government and WaSC focus groups identified the need to have a named contact within all RMAs to support consistent engagement, cooperation and collaboration (not just within an LLFA as per recommendation 1 of the Jenkins review). Both groups also highlighted the value of having established, effective and enjoyable relationships between individuals at different RMAs to support effective collaboration.

Respondents were asked how effectively sources of flooding (and associated responsibilities) are identified to complete a flood investigation and take remedial action (following a flooding event) (question 22). A large proportion of respondents (40%) were non-committal, and nearly a third (30%) thought resolution was either well, or very well resolved. The results are shown in Figure 4-10.

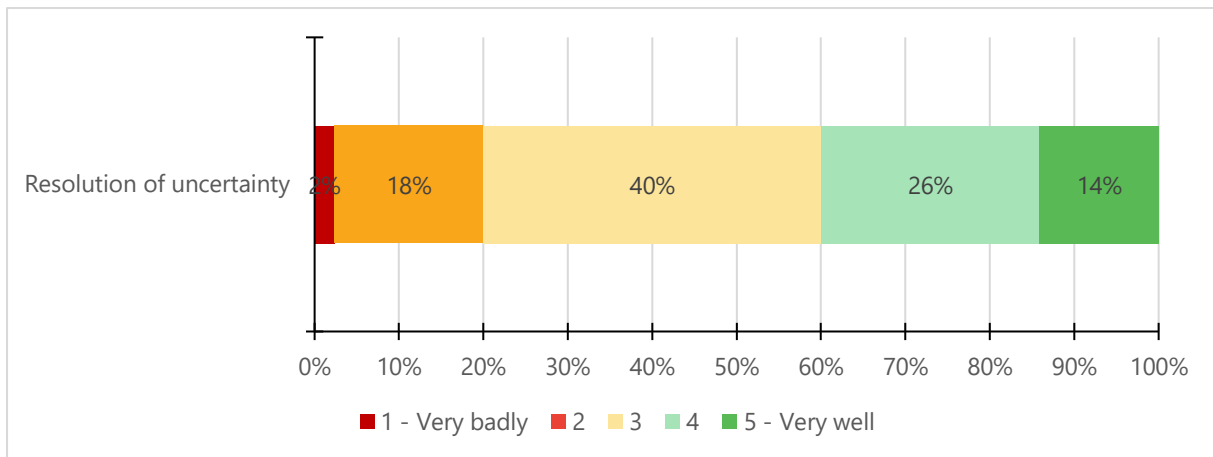


Figure 4-10 How was resolution of flooding sources and responsibility provided (Q22, 85 responses)

The commentary around resolving sources of flooding (question 23) focused on the coordination of Section 19 investigations, determining responsibilities and then delivering on the identified actions. The commentary for this question presents quite a mixed picture of how flood investigations are progressed, which potentially reflects inconsistency across the country.

A handful of respondents suggested they have an established approach for collecting data and undertaking Section 19 investigations. These enable effective input and collaboration from RMAs and allow an open discussion around responsibilities. Some respondents suggested that some RMAs try to dodge their responsibilities, whilst others suggested that a good investigation requires resources, and some RMAs are primarily focused on their own assets.

Some respondents explained that developing the report for the investigation is relatively straightforward. It is often more challenging to determine responsibility for funding and delivering improvements. Some respondents also explained that Section 19 of the FWMA cannot compel an RMA to take action.

Respondents when explaining what enables collaborative working (question 24) recognised the contribution of establishing enabling behaviours, effective communication, finding alignment, formalising responsibilities, systems to support collaboration and having sufficient resources. Further commentary includes:

- **Enabling behaviours** – leadership in developing an open and trusting environment was highlighted by many respondents to be key in enabling collaboration. Creating a safe forum for collaboration underpinned by respect and trust was also suggested as being important.
- **Effective communication** – clear and effective communication was considered by many respondents to be important. This was suggested to require regular and structured meetings to establish a shared understanding of partner responsibilities and setting a common vision.
- **Supporting collaboration** – several respondents suggested that understanding roles and responsibilities and associated objectives is key to underpinning collaboration. It

was also suggested that there should be consistent systems and approaches for sharing data and resources.

- **Finding funding alignment** – linked to effective communication respondents explained this will help recognise different drivers and funding regimes for different RMAs. The sharing and eventual alignment of goals and aspirations can help align investment and funding. Appreciating that different RMAs will have their own statutory constraints and funding requirements can be helpful. Many respondents suggested that establishing a shared understanding often requires sharing data and resources.
- **Formalising responsibilities** – ensuring there is an understanding of individual RMA responsibilities was considered important by many respondents. Establishing ownership and formalising an approach to deliver joint outcomes is key. Many respondents suggested this should influence a formalised partnership agreement, confirming roles and resources for partner organisations with a robust governance structure.
- **Resourcing** – having sufficient resources in RMAs to support collaboration was considered by a several respondents as being fundamental. The importance of having dedicated, experienced and passionate people to support collaboration and deliver projects was also highlighted.

Respondents were asked how effective collaboration with RMAs is on certain activities (question 25). Undertaking 'flood investigations (S.19)' with nearly half (43%) suggesting its either very effective, or effective was the most commonly regarded activity with the best collaboration. This was followed by 'partnership working', with nearly half (44%) suggesting its either very effective, or effective.

Conversely, nearly a half (47%) of respondents suggested that collaboration on 'asset recording and management' was either very ineffective, or ineffective. Likewise, nearly half (46%) of the respondents suggest that collaborating on 'general shared resources' was either ineffective, or very ineffective. Recognising some of the challenges facing surface water management it is important to also note that nearly half (45%) of respondents suggest that collaborating on 'retrofitting SuDS' is ineffective, or very ineffective.

Figure 4-11 provides the full breakdown.

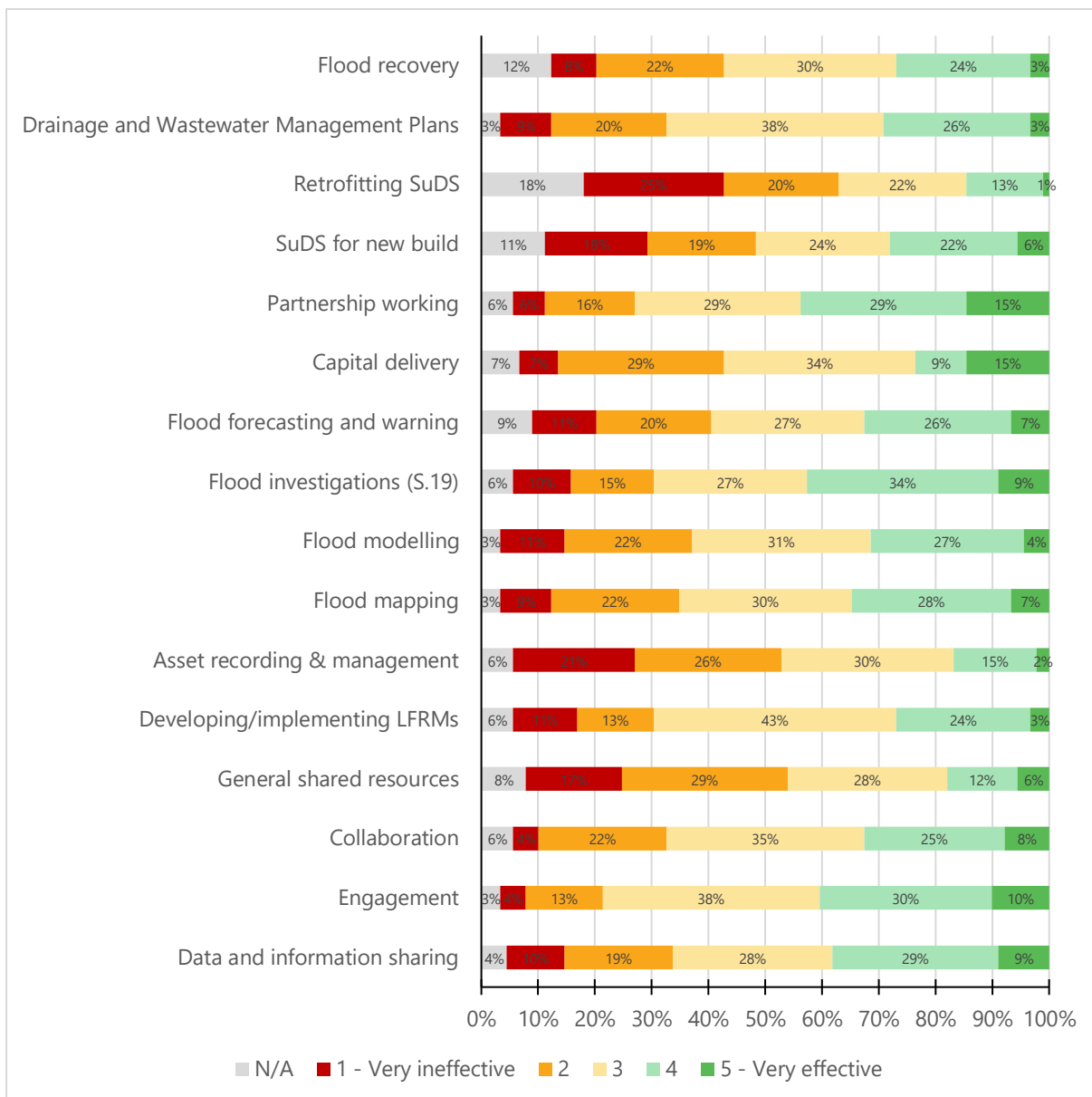


Figure 4-11 Effectiveness of collaboration for activities (Q25, 89 responses)

Explanatory commentary around collaboration on activities (question 26) focused on the challenges experienced by respondents. Effective collaboration was considered to be dependent on good communication and mature partnership arrangements or previous good working relationships where there was a willingness to support each other and share information.

Challenges of collaboration on activities tend to be focused on asset recording and data sharing, willingness to collaborate and lack of resources. The explanatory commentary is summarised as:

- Asset recording and data sharing** - there is a duty for LLFA's to have an asset register, but there's no requirement to update it. It was remarked that many RMAs have their own asset registers, but not all RMAs are aware of the information they have on the register, nor share them. Respondents from LLFAs and WaSCs mentioned there is also no consistent agreed approach for recording and sharing information.

Information is shared on an ad-hoc basis. A few respondents identified that sharing information for DWMPs and Surface Water Management Plans is a key challenge as is cooperation between WaSCs and LLFAs.

- **Willingness to collaborate** – a general reluctance to collaborate on activities was suggested by many respondents as being a challenge. Respondents went on to suggest some of this may be due to a strategic lack of coordination, potential funding and resource constraints, and notable differences in priorities. Respondents commented that while there is a Duty to Cooperate this sometimes does not deliver effective collaboration. A few LLFA respondents suggested it was challenging to obtain collaboration from some WaSCs and highway authorities (particularly on retrofitting SuDS).
- **Lack of resources** – a lack of resources was suggested by a few respondents to be a hurdle for collaboration. Some respondents recognised that there are resources offered by the Environment Agency to support LLFAs, however these are often not directed to work that actively helps the LLFA. A few respondents also suggested that a lack of resources means that RMAs are unable to take on additional responsibilities outside of their statutory requirements.

A few respondents also suggested retrofitting SuDS, and delivering multi-beneficial SuDS, particularly SuDS that help improve water quality is challenging to achieve collaboration on.

Both the local government and WaSC focus groups identified the need to improve relationships and engagement with highway authorities at national and local levels. It was recognised during the focus group meetings that local highway authorities (as part of general local government) face significant budgetary and resourcing challenges when delivering their duties. It was also remarked that, highway authorities tend to be risk averse and under resourced so this can often lead to a lack of support and engagement. That said, they do collaborate well when a flooding incident is being managed.

It was suggested that engineers responsible for highways and flooding use a different language and have diverse priorities, standards and approaches to asset management. More effort is required to establish a common language and a shared understanding of objectives, constraints and opportunities to develop more trusting relationships with highway authorities.

Where good examples of engagement with highway authorities exist, these tend to be built on established relationships driven by individuals making the effort to engage and both organisations taking the time to listen to identify opportunities to work together.

There were varied responses to the question around activities and organisations that respondents collaborated on, and with (question 27). The activities that respondents collaborated on ranged from strategic surface water management and programme development through to supporting RMAs on specific tasks. The activities included:

- Reviewing planning applications
- Watercourse maintenance
- Consenting
- Community engagement
- Natural Flood Management (NFM)
- SuDS delivery (retrofitting)



The organisations included:

- Canal and Rivers Trust
- Catchment Partnerships
- Charities
- Community groups
- Consultants
- Department for Education (SuDS)
- Homeowners
- Insurance companies
- Internal local authority departments
- Landowners
- National Flood Forum
- Other RMAs
- Parish Councils
- River Trusts
- Universities
- Utilities
- Wildlife trusts

Wildlife Trusts and River Trusts were the most common organisations respondents collaborated with.

Over two-thirds (67%) of respondents have examples of good cooperation and collaboration with other organisations (question 28).

Further commentary on examples of collaboration (question 29) reflected the variety of different organisations involved and the diversity of activities. There are a number of examples at different scales, with Regional Flood and Coastal Committees often suggested as well as a number of Flood Alleviation Schemes (that have involved partnerships). The collaborative projects have been summarised in Table 4-1 .

*Table 4-1 Examples of collaborative projects*

<b>Purpose</b>	<b>Detail</b>	<b>Further information</b>
Managing combined sources of flooding	Thames Water, Harrow Council and Brent Council exploring options to manage flooding from fluvial, surface water and sewer sources.	<a href="#">Flood and Coastal Resilience Innovation Programme</a>
Surface water management	A number of water companies have delivered partnership projects with RMAs.	<a href="#">Thames Water – smarter water catchments</a>
Removing rainfall/runoff from sewer system	Partnership with water companies to retrofit SuDS to remove runoff in sewers	<a href="#">Drainage and Wastewater Management Plans</a>
Integrated water/drainage management	Living With Water Project – integrated water management led by Yorkshire Water	<a href="http://www.livingwithwater.co.uk">http://www.livingwithwater.co.uk</a>
	Northumbria Integrated Drainage Partnership bringing 13 LLFAS together with the EA and Northumbrian Water to manage flood risk and promote sustainable drainage	
Generic flood partnerships	Numerous examples of partnership between RMAs and communities in line with the National FCERM Strategy.	

Purpose	Detail	Further information
	Lincolnshire has a variety of working relationships and joint action plans.	<a href="#">Lincolnshire Flood Risk Management</a>
	Partnerships between different LLFAs, Rivers Trusts, Wildlife Trusts and different Council functions (parks, highways)	
Catchment based projects	Cambridgeshire County Council, Huntingdonshire District Council, Natural England, EA looked at several sources of flood risk in St Neots and what could be done in the town centre and upstream with Natural Flood Management	
Shared services	Partnership between RMAs (Councils, IDBs) to provide support to different functions (planners, Developers)	
	Local Levy funded advisory posts to support the development of partnerships and schemes to manage surface water	Flood Advisors and Project Advisors

Nearly 90% of all respondents provided additional commentary around approaches to improve cooperation and collaboration for surface water management (question 30). Improving funding, regulation, enabling better collaboration, and resourcing seemed to be the most popular topics. The survey responses are summarised as:

- Funding** – it was remarked by respondents that there is greater focus on managing fluvial and coastal flood risk than surface water management. Challenges relating to accessibility of funding to support maintenance and responding to identified flooding problems (through Section19 reports) was raised by multiple respondents. Partnership funding was identified by many respondents as being problematic, particularly in relation to the process. Updating the FCERM Partnership Funding Calculator and enabling the strategic deployment of funding across a wide range of surface water management schemes was considered to be useful. One respondent suggested that it would be beneficial if all WaSCs directly allocated funding for Partnership Funding with local authorities.
- Regulation** – a few respondents suggested that the regulations around surface water management for many of the RMAs (highway authorities, LLFAs, WaSCs) is complex, inconsistent and misaligned. This is related to different standards for surface water management and approaches to mandating cooperation.
- Enabling better collaboration** – Despite the Jenkins Review recommendation and Environment Agency clarification in the FCERM Strategy, responses suggested that understanding asset ownership remains challenging. It was suggested it would be helpful for a definition, or guidance on collaboration between different organisations to ensure there is a shared understanding of responsibilities and potential to enable consistent levels of services to be established. It was also suggested collaboration

could be improved by better communication and sharing of data and modelling (particularly from WaSCs).

The myriad of plans (RBMPs, FRMPs, DWMPs, LFRMS) that have no follow-through and no consequences for non-delivery was regarded as an issue by a number of respondents. Several respondents suggested that many organisations are not aware of their responsibilities (particularly in terms of responding to flooding incidents).

- **Resourcing** – capacity and skills of those working within RMAs was raised by respondents as a challenge particularly for project management and delivery. Some respondents suggested it would be useful to undertake a study to determine the burden that surface water management has placed on local authorities. Some respondents also suggested there are insufficient resources available to support collaboration (data sharing, etc.) and effective enforcement. There is also concern this will be exacerbated with the implementation of Schedule 3 of the FWMA.
- **New development and planning** – respondents highlighted the importance of LPAs, LLFAs and WaSCs (and to some extent the Environment Agency) effectively collaborating on planning of new development. Linked to this, some respondents highlighted the need for WaSCs to become statutory consultees for planning and for the Right to Connect (Section 106 of the Water Act) to be removed. This will be addressed with the implementation of Schedule 3.

The role of SuDS, improving developer awareness and strengthening regulation to enable multi-functional SuDS to be delivered was suggested. The implementation of Schedule 3 (of the FWMA) was requested by many respondents therefore the government announcement in January 2023 relating to its potential commencement will be widely welcomed.

## Conclusions

Nearly two thirds of respondents (63%) were very clear of their own RMA responsibilities. This dropped to less than half (48%) for others. Less than a third of respondents considered that the Environment Agency were very clear of their role, this was just under half or LLFAs.

Respondents suggested knowledge of responsibilities were organisationally and geographically inconsistent. Where challenges exist these were thought by respondents to originate from operational uncertainties around asset maintenance and ownership. The various plans relevant to surface water management were also thought by respondents and focus group participants to contribute to the confusion around responsibilities.

There are examples of good understanding and engagement in different parts of the country, showing that a joined-up, coordinated approach is possible. However the responses to our survey suggests that significant partnerships are likely to be more of an exception than a rule and considerable additional work is required to build better understanding and alignment.

Nearly two-thirds (60%) of respondents suggested that surface water management should be coordinated by one RMA, and of these a significant majority suggested that it should be coordinated by the LLFA.

The WaSC focus group was clear that cooperation, collaboration and partnership is essential as no single RMA can effectively manage surface water on their own. LLFAs were regarded as

effective collaborators. Engaging and collaborating with highway authorities (whether at a national or at a local level) was considered by many respondents to be challenging and they must be supported to improve this.

Establishing partnerships was recognised by respondents and focus groups as an approach to improve collaboration. Although challenges of engagement, resourcing collaboration and identifying and obtaining funding were recognised as obstacles for effective partnering and collaboration. Other suggested challenges that require improvement focused on inconsistencies such as:

- **Cooperation** – respondents suggested the duty to cooperate is delivered inconsistently.
- **Development of asset registers** – despite the value of sharing asset registers, respondents remarked these are inconstantly developed and shared.
- **Data sharing** – respondents commented that sharing asset information and data on flooded properties and assets can still be challenging and inconsistent.
- **Flood investigations** – commentary from respondents suggested these can be inconsistent and where Section 19 investigations involved multiple RMAs it can be challenging to secure remedial action.

Effective and regular communication, establishing trust, openness and respect were considered by respondents to be fundamental to supporting collaboration. Finding alignment on a vision, objectives and priorities, as well as formalising responsibilities were also considered beneficial to delivering effective partnerships.

## Recommendations to improve cooperation and collaboration

The recommendations have been structured to present those that the funders and CIWEM consider could potentially be delivered in the short to medium term, say within two years, and recommendations that may be longer-term that would require more complex change to deliver. These recommendations may require significant changes in legislation, regulations and/or funding.

All the recommendations to improve cooperation and collaboration have been considered to be deliverable within the next two years. The recommendations have been ordered to represent the potential ease of delivery.

### Short to medium term recommendations

1. **Government, Environment Agency and other RMAs – to improve engagement with and between all RMAs with surface water management responsibilities.**

Cooperation, collaboration and coordination can only effectively happen if there is good engagement with and between the RMAs. Commentary from survey respondents and discussions at focus groups suggested government and the Environment Agency need to improve their engagement with all RMAs (and their representative groups) managing surface water flood risk.

It is important for all national FCERM projects (i.e. the FCERM Strategy Action Plan, skills and capacity etc) include adequate representation from all RMAs to ensure inclusive approaches are adopted, the right behaviours are embraced and feedback

from other RMAs are robustly considered and, where appropriate actioned. All national FCERM initiatives should develop and make available a communications and engagement plan that clearly sets out how they will consistently and effectively engage with RMAs and their representative groups.

There are numerous organisations and groups working within the surface water management area. These should be actively involved and engaged with consideration given to their inclusivity. Some of these groups are subscription based, specific to geographical areas and RMA organisations, e.g. The Association of Directors of Environment, Economy, Planning and Transport (ADEPT), ASA. Organisations like CIWEM could assist with convening and engaging with the different groups across all RMAs.

Engagement with and between all RMAs would also be significantly improved if all RMAs shared appropriate points of contact within their own organisations (and where necessary local offices). This should not be limited to just LLFAs as recommended by the Jenkins Review (Defra, 2020). It should also be a statutory requirement for appropriate contacts to be identified, updated and shared across the RMA community. This review has highlighted the importance of developing open and trusting relationships between the different RMAs. This can only happen when there is clarity on who is responsible for surface water management within the RMA and communication and engagement is easy to establish.

2. **Government and the Environment Agency – to establish greater clarity on the Environment Agency’s Strategic Overview and what this means for surface water management.**

Aligned with the recommendation to improve leadership on surface water management, the commentary from the survey and discussions at the focus groups suggest that the Environment Agency’s Strategic Overview role in relation to surface water management needs to be clarified and better communicated. We understand from the Environment Agency that this engagement is forthcoming during the second half of 2023.

Many respondents from WaSCs and LLFAs through the survey and corroborated by discussions at focus groups explained they were concerned about the EA’s lack of focus on surface water management compared to other flood sources where the EA has a specific delivery role and more immediate access to information and resources. It is necessary to review and where required amend regulations as well as provide additional resources to enable the EA to more fully embrace the Strategic Overview role.

Transparency and accountability would be improved if the Environment Agency more effectively reported progress on the FCERM Strategy Roadmap actions, particularly for the different sources of flooding. This would help identify where surface water flood risk management lags behind progress with fluvial flooding and other flooding sources.

3. **Government – to provide greater leadership on surface water management.**

Government should establish a clear vision for surface water management with their expectations for reducing surface water flood risk being understood and actionable by all RMAs. Despite the Jenkins Review (Defra, 2020) and subsequent Defra updates

on surface water management (Defra, 2021) the survey results suggest there is still a need for greater clarity on responsibilities, roles and mechanisms for coordinating surface water management has yet to be fully understood by all RMAs. These challenges are not new, this review and the National Infrastructure Commission's *Reducing the risk of surface water flooding* report (NIC, 2022) highlight the lack of progress and further work is needed.

The required clarity goes beyond the definitions in the FWMA and Strategic Overview; cultural changes are required to ensure surface water management is inclusive of all RMAs. While Government should lead the development of the vision for surface water management it needs to be co-created, understood and embraced by all RMAs with responsibilities competently delivered by the appropriate RMA. It is important that the process is collaborative, progress with delivery is routinely reported and with the existing organisational and geographical inconsistencies it is likely that the vision for surface water management will require continuous reinforcement.

4. **Government and local government RMAs – to improve collaboration for the delivery of SuDS.**

The delivery of SuDS both on new developments and retrofitted into existing urban spaces is reliant on close collaboration of RMAs. With Defra's January 2023 announcement to implement Schedule 3 of FWMA in new developments SuDS should become mandatory. However, it will still be necessary to ensure that there is effective engagement between the SuDS Approval Body (SAB), the Local Planning Authority, the developer and other stakeholders like the highway authorities and WaSCs as necessary. Government should consider how effective engagement and collaboration, particularly between SAB approval and planning can be ensured when developing the statutory instruments, guidance and other processes necessary for Schedule 3. This challenges has been highlighted in Wales, where Schedule 3 was implemented in 2019.

With the development of DWMPs and Defra's Storm overflows discharge reduction plan (2022) there is considerable ambition to retrofit SuDS. WaSCs are likely to embark on significant investment to retrofit SuDS to help reduce the frequency of storm overflow sewage discharges and keep rainfall out of their sewers. It would be beneficial for Defra to explore what can be done to support collaboration and retrofitting SuDS, e.g. improving the funding process and the application of statutory SuDS standards to retrofit projects. This should maximise opportunities and deliver efficiencies around both surface water flooding and other policy aspirations, including biodiversity net gain, water quality and the reduction of storm overflows discharges.

5. **Government – to clarify and consolidate surface water management regulations, standards and plans.**

There are a variety of regulations, standards and plans that the different RMAs develop, contribute to and comply with. Survey respondents suggested that new legislation and plans have arguably not clarified responsibilities, harmonised performance standards, or reporting. The different processes and reporting requirements in the different plans (particularly Local Flood Risk Management Strategies (LFRMS) and Drainage and Waste Management Plans (DWMPs)) make it challenging to identify opportunities to reduce flooding risks and collaborate. In most

cases surface water management activities remain siloed and/or unintentionally duplicated.

As a minimum this could involve producing guidance, raising awareness, or providing training on relevant regulations, standards and plans. Defra is reviewing local flood risk management planning. This should consider the variety of plans covering surface water management, review clarity on roles, responsibilities, associated statutory powers and determine how these can be consolidated. The NIC report (NIC, 2022) recommends the replacement of Local Flood Risk Management Strategies with a single costed, joint plan (only in Flood Risk Areas) being developed.

The Environment Agency, Defra and Ofwat in 2022 published guiding principles (and priorities for DWMPs these will be updated to align with Defra's Water Plan. For the future the Environment Agency, Water UK and Ofwat are planning to engage and work with RMAs to better inform DWMPs and improve surface water management. However, DWMPs are not statutory for all RMAs.

WaSCs during the course of this review suggested that following the first cycle of DWMPs it may be appropriate to amend regulations and approaches to ensure DWMPs are more integrated and LLFAs are better engaged by making them statutory consultees where interactions are more explicit and funded. This may provide opportunities for the DWMP to become a more holistic surface water management plan (covering drainage, sewerage capacity, flooding and water quality). However, this process needs to be considerably more collaborative than the first cycles and LLFAs need to be properly resourced to engage.

This clarity should also improve the awareness and understanding of the drivers and responsibilities for highways to manage surface water. Highways form a significant proportion of impermeable surfaces in our towns and cities and highway authorities at national and local levels need to more effectively embrace climate resilience and adaptation. This includes managing drainage exceedance, delivering SuDS and increased capacity in their systems to support surface water management.

Highway authorities need to be appropriately engaged by other RMAs. Ensuring that the interdependencies of highway assets and the standards used with other flood risk management functions are understood would help reduce flood risk from their assets. However, collaboration could be improved by there being better drivers for highway authorities and associated funding to manage surface water on adopted highways.

Defra started a review of statutory powers and responsibilities associated with FCERM assets in 2021, this is due to finish in 2024. This will review current mechanisms and legal powers to ensure existing powers and responsibilities are clear and effective and expertise is shared. While a Project Steering Group that informs the project includes RMA representation it would be beneficial if an update on progress and interim reports were shared with the RMA community particularly as there is similar work progressing for the Defra Schedule 3 review.

6. **Government – to improve approaches to the collection and sharing of data and development of asset registers.**

Despite the requirements of the FWMA, data sharing between RMAs seems to be a perennial problem (particularly between WaSCs and LLFAs). Commentary from the survey suggests that in some instances poor engagement means data sharing does not happen, and when it does, it requires extensive knowledge of the information that is available. This process is resource intensive, and can generate inconsistent information and models creating problems for the RMA's involved.

Defra's 2018 *Surface Water Management Action Plan* (Action 4) states Defra would consider commencing EA and LLFA powers to enforce the provision of information. Defra in 2021 suggested they would review Action 4 and whether any further action is required. It would be beneficial to receive an update on this action and consider what can be done to improve data sharing. Options could include strengthening legislation and agreeing standards for data sharing, or developing a data sharing agreement for use between organisations (rather than having multiple ones for different types of data and purposes) and or developing an integrated GIS platform.

While there is legislation requiring LLFAs to develop asset registers there is no agreed process to support the development, updating and publishing of registers (guidance was last published in Defra's information [note on asset registers](#) in 2011 and recommendations from the Jenkins review). This can hinder delivery, increase the resources required to complete asset registers and inevitably leads to non-compliance with this key statutory duty. It also potentially miss-represents the number and condition of surface water management assets and the and costs of managing them.

The EA developed the Asset Information Management System (AIMS) to collect and present flood risk management assets from all RMAs. It would be beneficial if this could be reviewed to ensure that surface water management assets could be included and shared better. The Defra 2021 *Surface water management – government update* has identified that guidance on asset registers will be completed by December 2023. This needs to be delivered on time with engagement of all RMAs, particularly as asset registers should be a key component of the implementation of Schedule 3 of the Flood and Water Management Act and retrofitting of SuDS.

7. **LLFAs (facilitated by the Environment Agency and Government) – to improve the quality and consistency of flood investigations (Section 19 reports).**

RMAs recognise the value of Section 19 reports to the communities they serve. However, despite relevant BSI standards produced in 2017 (BS 85600:2017) there is significant variation in the content, structure and detail of these reports. Feedback during the review suggested that the lack of consistency around thresholds and approaches for reporting and no central collation of Section 19 reports means it is impossible to obtain a consistent and clear overview of flood risk, even across Flood Risk Areas, let alone a national picture of the challenges being faced. Improved consistency may also support easier sharing of good practice around flood risk mitigation.

The survey also highlighted a growing concern about how RMAs and emergency responders contribute to the development of Section 19 reports and undertake remedial action to manage flood risks. Defra's 2021 report *Surface water management*



– *government update* suggested guidance on Section 19 reports was being considered by the Local Government Association (LGA). Support should be provided to LGA to enable them to review the usefulness and accessibility of guidance on flood investigations and where appropriate facilitate greater standardisation.

## **5. Funding for RMAs on surface water management**

The effective delivery of surface water management is dependent on access to funding. Public sector funding is primarily provided and administered by central government departments and the Environment Agency with the RMAs allocated funds through a variety of approaches. Funding and resources are then allocated, prioritised and managed locally by RMAs. Private sector funding is ostensibly provided by WaSCs through their regulated investment planning processes.

In 2020 government announced a £5.2 billion capital investment programme for new flood and coastal defences to better protect 366,000 properties in England by 2027. This is primarily for capital investment in schemes protecting the largest number of residential properties, and not for operational maintenance activities or staff costs. Government also announced a £200 million fund to support innovative resilience projects such as SuDS and NBS.

It is well-reported that local government has had significant reductions in budgets and expenditure in recent years. Defra (2020) in the Jenkins review reported that access to funding is the most pressing challenge in relation to surface water management. More needs to be done to ensure that local authorities can access funds to deliver capital projects, particularly addressing challenges in securing funds for surface water management projects. There are also significant challenges around accessibility and availability of funding for maintenance and operation of surface water management assets (Defra, 2020).

Traditionally the bulk of capital funding is allocated to major fluvial or coastal flood risk management schemes. Experience has shown that using a funding process focussed on fluvial and coastal flood risk can make it challenging for smaller surface water management or natural flood management schemes to obtain the necessary funding.

Increasingly partnership funding is supporting the capital delivery of surface water management with the aspiration that non-public sector investment is also utilised. Consequently a number of reviews of funding sources and approaches for partnership funding have been undertaken. Jenkins (Defra, 2020) outlined a number of recommendations to improve the funding application process and approaches and was hopeful that changes to partnership funding rules would help reduce the challenges. These recommendations were accepted by Defra (Defra, 2021) which together with the FCERM Strategy (2020) outlined amendments to the partnership funding rules and process.

In 2020 changes were made to the partnership funding rules and the associated calculator this was also supported by changes the FCERM project appraisal manual and guide in 2022. However, responses from the survey and discussions at the focus groups suggests these changes have yet to materially improve the funding application process and accessibility to funding for surface water schemes. The National Strategy Roadmap (EA, 2022) committed to continuously improve investment guidance in line with government policy. This may suggest

that procedures and guidance can evolve to respond to the challenges flagged during this review. Also, more recently, the Environment Agency has improved resources through a SharePoint site to support FCERM projects with a focus on funding, appraisal guidance, developing business cases and getting approval.

The FCERM Strategy also highlights the challenge and importance of securing non-public sector funding. Recognising the need for 'financially confident' people to secure funds. The Environment Agency recognises this an area that needs support and is developing a Community of Practice called 'Supporting Flood and Coast Projects' which focusses on funding and investment.

Surface water management is dependent on there being sufficient capital allocation and revenue spending to ensure that assets are properly maintained. It is therefore important that asset management is prioritised.

The survey explored whether RMAs had certainty on funding and whether it was sufficient for them to deliver against their plans. Views on funding sources and priorities were also sought, as well as progress with securing partnership funding.

### **Funding, availability and sources**

Resource funding for flood management in local authorities is provided via the local government settlement, as such this is not ringfenced. It is for the individual local authorities to set their local priorities and then allocate funds for flood risk and surface water management.

Respondents were quite evenly split when asked whether they had allocated (ringfenced) budget for surface water management (question 31), with 52% saying they had an allocated budget. This increased slightly when analysing local government responses with 56% saying they have an allocated budget for surface water management.

However, less than half (41%) of those that have an allocated budget have long term certainty on the budget with the remainder (59%) did not have certainty (question 32).

Respondents suggested this impacted staffing and delivery and maintenance of surface water management infrastructure (question 33). Commentary is summarised as:

- **Lack of delivery and maintenance** – many respondents provided commentary that suggested there is greater uncertainty without an allocated budget for surface water management where they have to bid for internal and external funds (along with other functions). The lack of certainty means that some studies and schemes are not delivered as they're not considered a statutory role and there is continuous pressure on resourcing maintenance and operations. Many respondents suggested that the consequences include inability to deliver statutory requirements and reduced service levels around gully cleansing causing blockages and potentially flooding. The lack of funds also means there's an inability to effectively strategically plan, collaborate and partner as many LLFAs are unable to leverage match/partnership funding from other stakeholders.
- **Poor staff resourcing** – some respondents suggested that a lack of allocated budget means that there is a focus on delivering the minimal statutory requirements and that

sometimes even this can be challenging. It was commented that this can result in staff involved in surface water management being 'stretched' with the risk of 'staff burnout', particularly if remits are increased. Many respondents commented it is difficult to recruit (afford) and retain staff with required skills. This is likely to be exacerbated with the introduction of Schedule 3 and new SuDS requirements.

Respondents were asked how sufficient funding was for surface water management activities (question 34). Respondents suggested that 'Local Flood Risk Management Strategies and Policy' was the best funded activity with a fifth (20%) suggesting it was sufficient, or 'more than sufficiently' funded. This was closely followed by 'Contributing to planning policy and other strategic plans' with a smaller proportion (16%) suggesting it was sufficient, or 'more than sufficiently' funded.

Activities that were considered as being insufficiently funded included 'operations and maintenance', 'general staff/resources' and 'asset management'. Figure 5-1 demonstrates the low proportion of responses that suggested funding was sufficient for many of their surface water management activities..

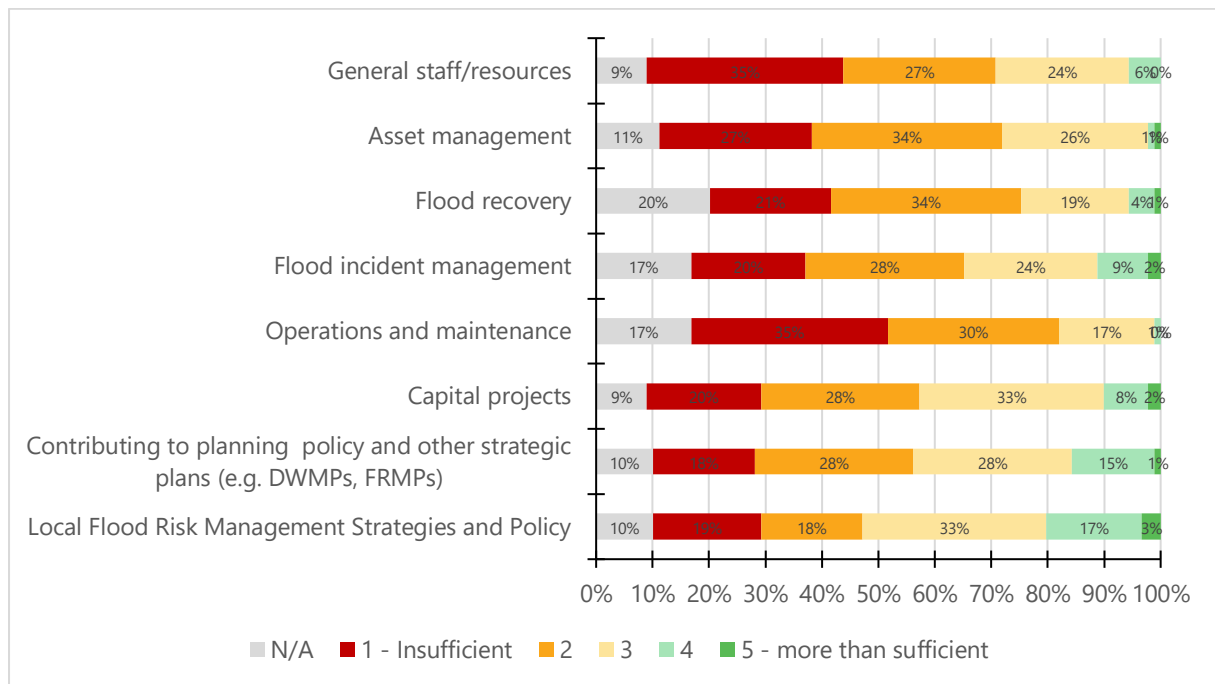


Figure 5-1 How sufficient is funding for the certain management activities (Q34, 89 responses)

Discussions with the focus groups strongly supported concerns around the availability of funding, particularly funding to support maintenance of surface water management assets.

When respondents were asked to explain why funding was insufficient (question 35) the majority of discussion was around the impact of overall funding which impacted asset management/maintenance and staff/resources.

- Funding allocation** – funding is challenging to obtain. It was remarked by a few respondents that obtaining funding for surface water management is particularly difficult (e.g. Grant in Aid and revenue funding). A few respondents suggested the

funding process (Partnership Funding Calculator) undervalues the benefits of surface water management schemes.

- **Asset management/maintenance** – many respondents remarked how difficult it was to obtain funds for asset management/maintenance of surface water management and local drainage assets. This was also linked to insufficient staff being available for asset management and maintenance. These difficulties would mean it's difficult to support the development and sharing of asset registers.
- **Staff/resources** – many respondents identified challenges in recruiting and retaining staff for surface water management responsibilities and delivering the activities listed in Figure 5-1.

Nearly a third (30%) of respondents receive 60 – 100% of their funds from internal RMA sources, and around a tenth (11%) of them received 60 – 100% of their funds from a water company. The next most common source was Flood Defence Grant in Aid (FDGiA) also known as Flood and Coastal Erosion Risk Management grant-in-aid (FCERM GiA) with under a tenth (7%) of respondents receiving 60 – 100% from GiA.

'Charitable trusts' were the least common sources of RMA funding for surface water management, as were 'other private sector contributions' and 'Business Improvement Districts'.

The full breakdown for estimation of proportion of funding sourced over the last year for RMA surface water management activities (question 36) can be found in Figure 5-2.

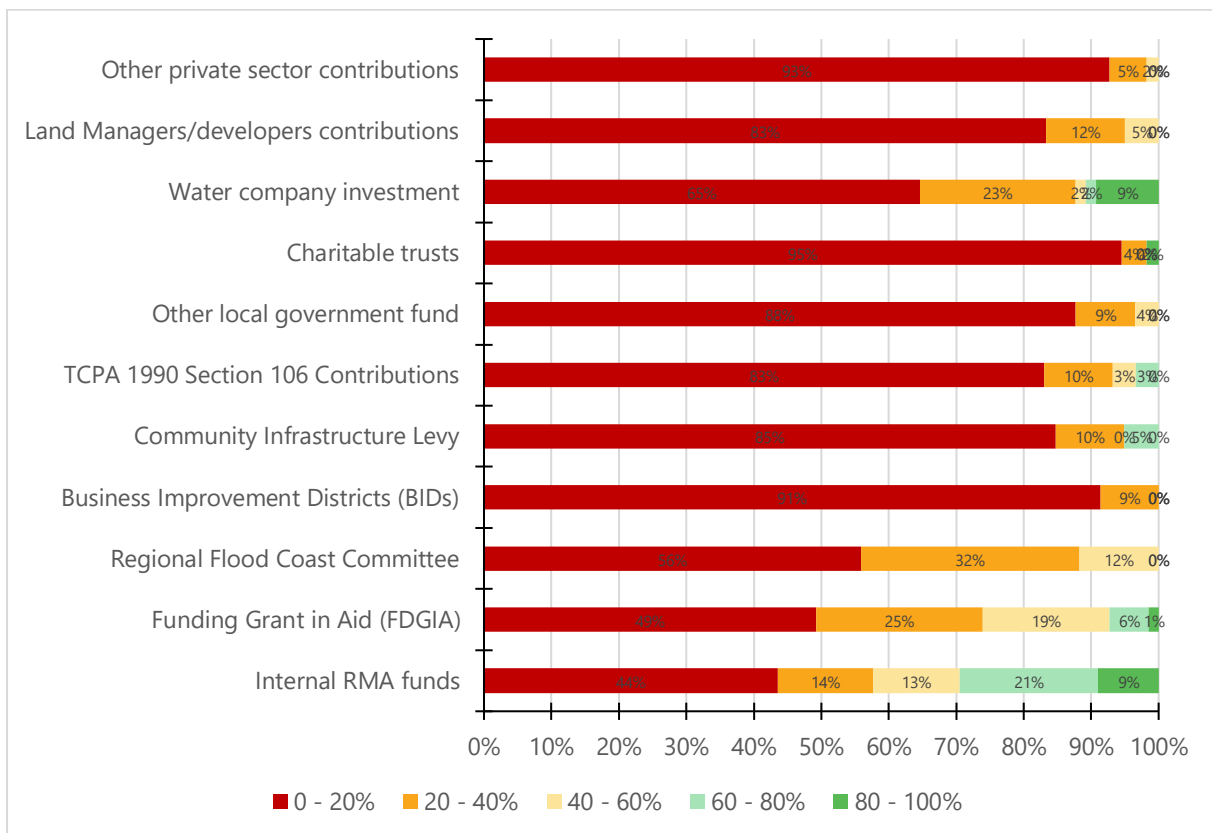


Figure 5-2 Sources of funding obtained for surface water management (Q36, 79 responses from the full sample)

When analysing the local government sector 'internal RMA funds' remain the most common funding source, closely followed by GiA, then the Community Infrastructure Levy and the Town and Country Planning Act 1990 Section 106 contributions. Funding from water company investment was less common with local government.

The breakdown of funds for those from the local government is presented in Figure 5-3.

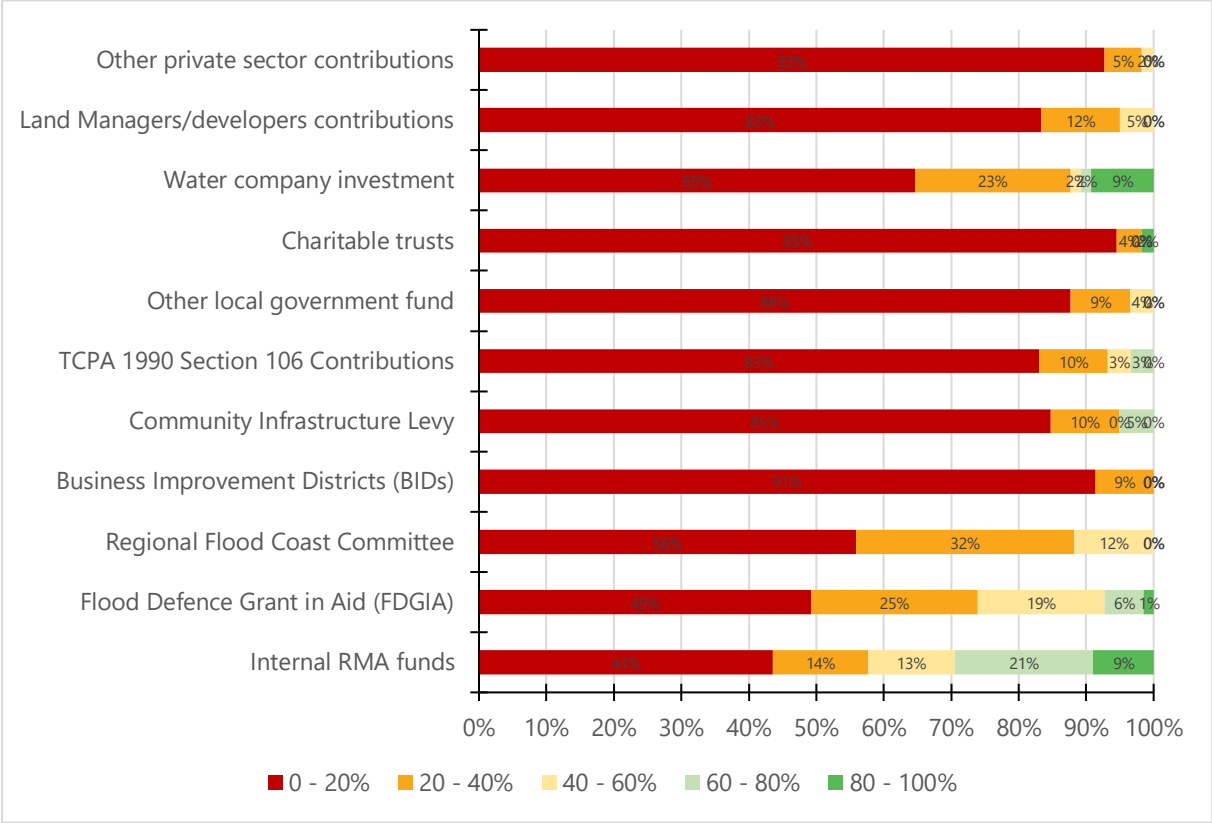


Figure 5-3 Sources of funding obtained for surface water management (Q36, 65 responses from the local government sample)

There was general agreement that there is insufficient accessible funding, whether it is public, or private sector to manage surface water flood risk effectively. Other funding sources suggested (question 37) include developer contributions, Flood and Coastal Resilience Innovation Programme funding, Green Recovery Funding and Combined Authorities. It was also mentioned that IDB's are primarily funded by Drainage and Special Levies as enabled by the Land Drainage Act 1991. Funding is also available from Departments for Education and Transport for surface water management (e.g. DfE's SuDS for schools and DfT's Challenge Fund). The commentary is summarised as:

- Funding application process** – respondents highlighted that there are strict requirements for funding. Grant in Aid, Local Levy, WaSC, and National Highways require long lead-in times and the establishment of detailed evidence and business cases. There are limited resources available to secure funding. It is difficult to secure Partnership Funding for surface water management.
- Local government** – some LLFA respondents made reference to limited availability of capital funding/budget being available. Grant in Aid and Local Levy were common sources of funding, although they're challenging to apply for.

- **Private funding** – many respondents suggested that identifying and securing external and private sources of funding outside of RMAs needs to be improved. Some respondents advised that other funding sources can be difficult to apply for, are often time-limited and do not align with partners' timescales.

### Funding priorities

Respondents were asked to indicate their top four priorities for funding within their RMA (question 38). Funding for 'general resources/staff' was clearly the most common first priority (35 respondents), followed by 'managing surface water' (11 respondents). 'Approving drainage solutions' was also identified as a funding priority.

Overall 'General resources/staff' received the most votes (for any priority), followed by 'managing surface water' and 'flood investigation'. Funding for 'flood recovery', 'collaboration on non-statutory activities' and 'flood mapping' received the least votes.

See Figure 5-4 for a breakdown of the votes and priorities.

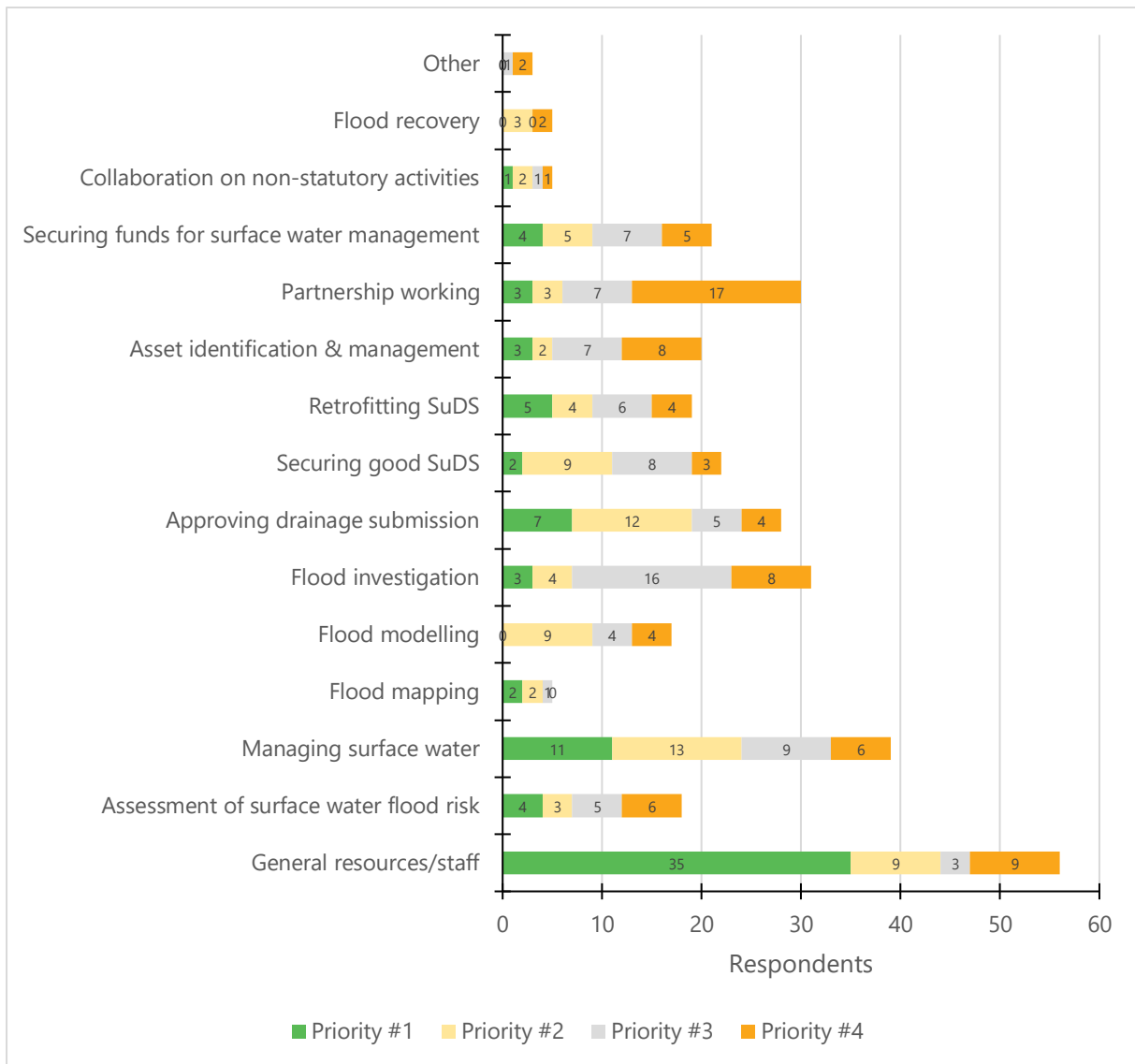


Figure 5-4 Priorities for funding (Q 38, 80 Responses)

Community engagement was the most common response when respondents were asked about other funding priorities not listed in question 38 (question 39). The responses are summarised as:

- Community engagement – supporting community groups
- Non statutory roles – e.g. mapping, modelling, community engagement
- Maintenance

Some respondents also stated that there was nothing in the previous question covering capital delivery (although it was intended that this would be included within 'managing surface water').

### Funding and securing partnership funding

Respondents were asked how easy it is to secure partnership funding from different sources (question 40). Obtaining funds from 'internal RMA funds' and 'Regional Flood and Coastal

Committee' sources were regarded as the easiest, with nearly a quarter (22%) of respondents regarding them as either easy, or very easy sources from which to obtain funding.

Obtaining funds from 'Flood Defence Grant in Aid' and 'land managers/developers' were considered to be the most difficult to source, both with around a half (51%) of respondents regarding it as either difficult, or 'very difficult'. These sources were closely followed by obtaining funds from 'water company investment' with just under half (49%) finding it either difficult, or very difficult.

See Figure 5-5 for a full breakdown.

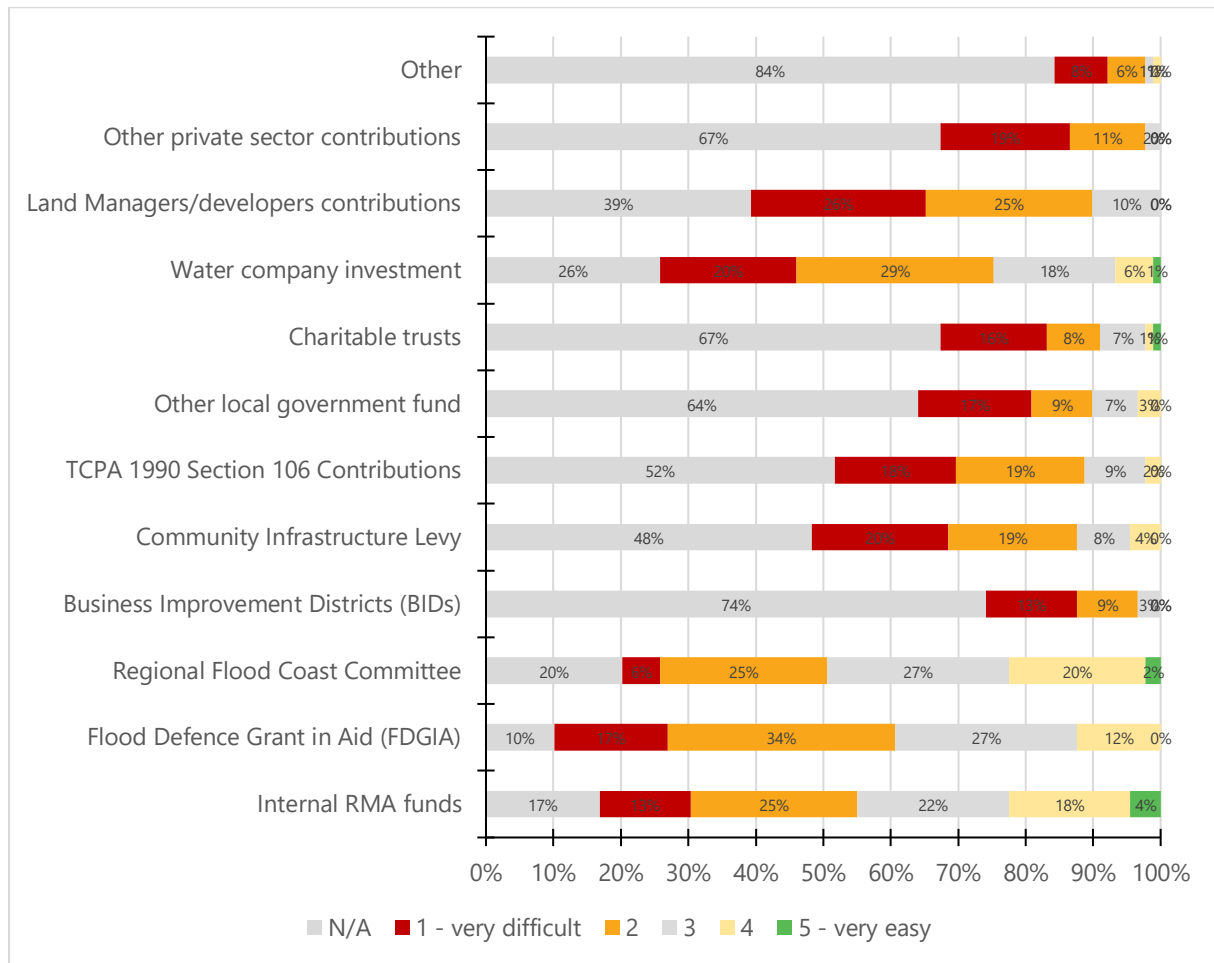


Figure 5-5 Ease of securing partnership funding from different sources (Q 40, 89 responses)

Alignment of funding, particularly with water companies and the complexity of applying for funds were the most common responses when respondents were asked to explain experiences of securing funding (question 41). It was also recognised by a few respondents that there is a general lack of funding. Other responses can be summarised as:

- Alignment of funding** – the challenge of ensuring there is alignment of benefits with potential beneficiaries was mentioned by a few respondents. This was thought to be particularly relevant when working with water companies (aligning with their drivers and regulatory requirements). It was remarked that water companies are more focused on removing surface water from sewers, rather than managing surface water flood risk in general. Partnering with water companies is challenging due to



mismatching funding cycles, AMP process and the impact this has on timelines. This can be compounded by the uncertainty of Ofwat determinations. Conversely, a water company respondent suggested that it's also challenging for WaSCs to obtain funds from other partners.

- Funding application process** – several respondents explained difficulties in finding funding, complexity of the application process, and the time and resources to secure funding are significant challenges. Many respondents suggested that the complexities of surface water management may not be well understood by those managing and administering funding, i.e. GiA and Local Levy. It was common for respondents to suggest that GiA is very challenging for smaller surface water management schemes that deliver smaller outcome measures (e.g. OM2), particularly in areas of low density. The rigorous application process (of obtaining evidence and modelling) and scoring for Grant in Aid means the application process is very resource intensive and expensive for many of the respondents.

Many of the respondents suggested that securing additional, or partnership funding is frustrating and very dependent on the context, benefits and level of support. One respondent suggested that rhetoric and language of partners rarely led to funding. It was also suggested that Local Levy is primarily allocated to the Environment Agency, and also setting up advisory services to support RMAs with the bureaucracy of applying for funding.

Over a third of respondents (38%) suggested that approaches to align funding with other partners is either ineffective, or very ineffective (question 42). Just over a tenth of respondents (14%) suggested approaches for alignment were effective, or very effective. The full breakdown is provided in Figure 5-6.

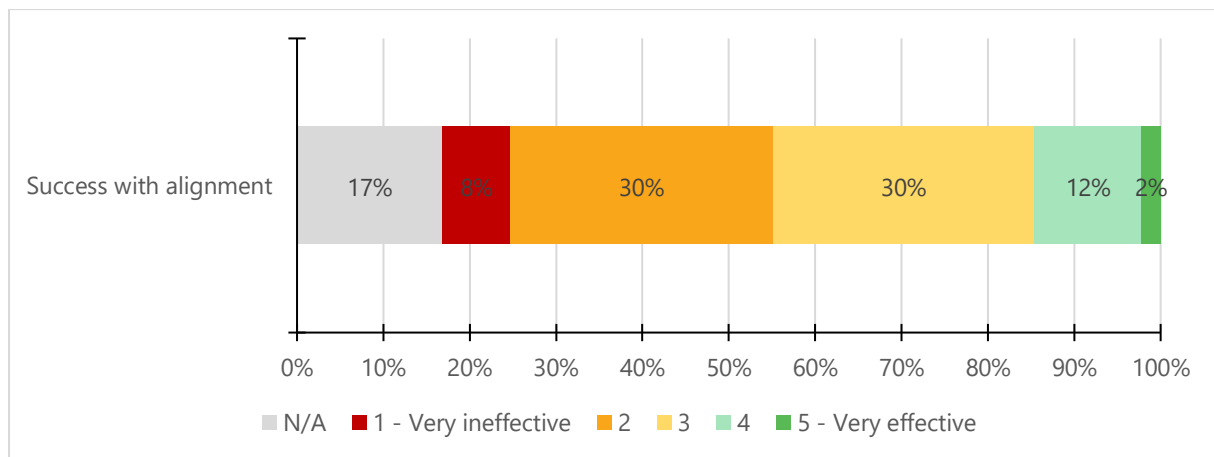


Figure 5-6 Approaches to align funding with other partners (Q42, 89 responses)

The challenges around alignment of funding was emphasised during the discussions with the focus groups. The local government focus group requested that government provided greater leadership in assisting with the alignment of different investment plans, funding sources and processes used by the various RMAs.

The focus groups were also critical of approaches to obtain funding. The groups said that the process needs to be simpler, streamlined and more transparent. Reflecting views expressed in the survey the focus groups also agreed that the process for applying for funding is often disproportionate to the funding being secured.

Both focus groups suggested consideration should be given to whether there was a way to provide the LLFA (or highway authority) with a ringfenced allocation of funding every year that could be used at their discretion to reduce surface water flood risk. The WaSC focus group supported the NIC recommendation to devolve/designate funding to the LLFA, but recognised this would only be beneficial if the funds could be ringfenced for surface water management purposes. These designated funds could then be leveraged to obtain funds from other partners.

When asked to consider the reasons for having successes and/or difficulties in aligning funding with partners (question 43) commentary can be summarised as:

- **Effective existing relationships** – a few respondents suggested having established partnership arrangements (particularly through LFRMS) helps with the alignment of funding. Likewise it was recognised that relationships, ownership of assets, legal issues, contract frameworks can also influence partnership funding.
- **Time for planning** – several respondents suggested that significant planning is required, with several years of discussion and planning to align funding for some projects. This requires long term commitment from partners.
- **Different responsibilities** – different responsibilities, regulations and drivers make alignment between potential partners challenging.

Nearly half (49%) of respondents are not aware of innovative financing models for surface water flood risk management (question 44). Over a third (37%) were aware of models, and about a tenth (11%) have undertaken initial research and a very small number (2%) had used models (this was the Environment Agency and one WaSC). See Figure 5-7 for the pie chart.

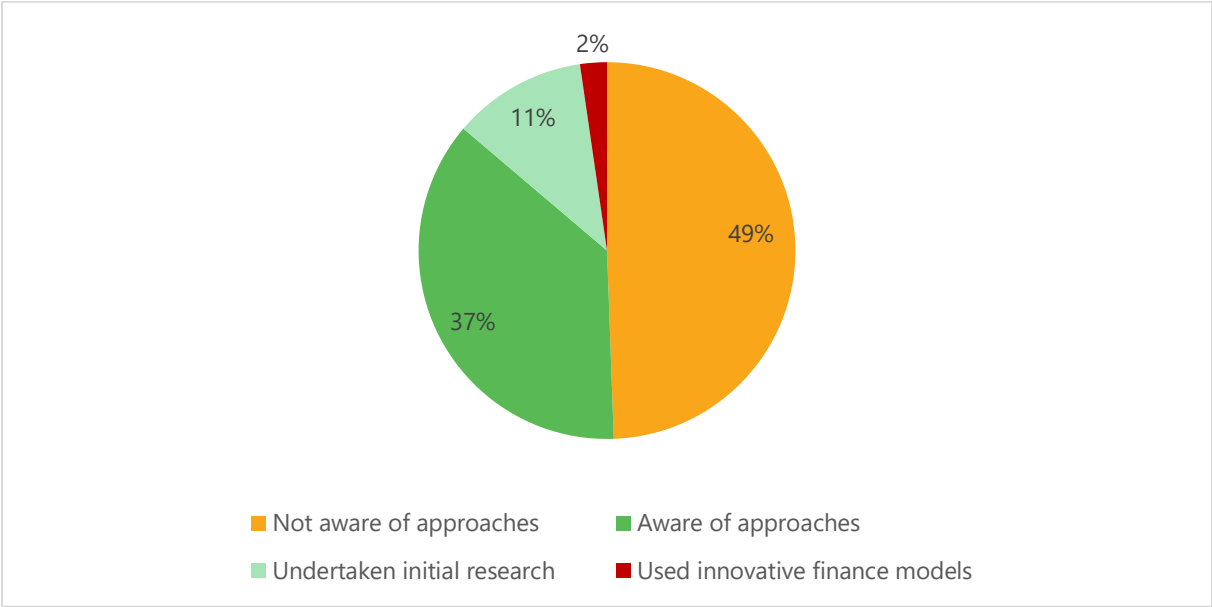


Figure 5-7 Awareness of innovation financing models for surface water management (Q44, 87 responses)

Respondents overwhelmingly provided information about challenges when they were asked to provide further commentary about enablers and barriers for funding for surface water management (question 45).

The pursuit of multiple benefits to support funding for surface water management, whether this was for regeneration, or public realm improvement was considered to be an enabler by a few respondents. A respondent from the Environment Agency suggested that they had developed a streamlined application process for SuDS and NFM. They have committed to improve the appraisal guidance for FCERM projects to reflect drivers around climate adaptation and resilience.

The role of green finance and non-public sector funding was highlighted, and an Environment Agency response highlighted that by 2030 they will provide green finance training for RMAs.

The commentary around barriers echoed previous feedback from the survey, focussing on challenges around resources, i.e. skills and capacity and the overall funding application process. These can be summarised as:

- **Resources** – several respondents flagged that RMAs had insufficient capacity and skills to apply for funding and commit to funding partnerships. It was also recognised that deficiencies in skills and resources meant it was also difficult for RMAs to spend the funding.
- **Suitability of Grant in Aid** – many respondents specifically identified challenges with Grant in Aid (GiA) in terms of defining assets and the inability to deal with interdependent, or dispersed assets. Challenges around the complexity and resources required for applications were also a commonly referenced barrier. However, it was recognised that there are plans for this to be improved.
- **Funding application process** – many respondents suggested developing a proportionate business case for funding was challenging (i.e resources and time required is often disproportionate to the funding secured). The nature of surface water management also means developing a favourable cost benefit ratio can be difficult because schemes are often small individually.

## Conclusions

Just over half of the respondents (52%) said they had an allocated (ring fenced) budget for surface water management activities. Of this, less than half (41%) had long-term certainty on the budget (less than a quarter, 21% of the full sample). Respondents suggested that this results in poor resourcing, capital delivery and maintenance of assets.

Respondents suggested that 'Local Flood Risk Management Strategies and Policy' was the best-funded activity. Activities like 'operations and maintenance', 'general staff/resources' and 'asset management' were considered by the respondents to be the least-funded. Many respondents identified challenges related to reduced funding allocation and a cumbersome funding decision making process. There was general agreement from respondents that there is insufficient funding allocated, particularly for maintenance and revenue purposes. The main challenges related to the alignment of funding and funding application process.

The process for applying for funding (Grant in Aid) and aligning funding with RMAs (particularly WaSCs) are considered by the respondents and participants in focus groups to be very challenging. The approach was considered to be too onerous, with prescriptive and resource-hungry requirements often making application disproportionately more expensive

than the funding secured. Many respondents also suggested that the complexities of surface water management was not well understood by those managing and administering funding.

## Recommendations to improve funding

As before, the recommendations have been structured to present those that the funders and CIWEM consider could potentially be delivered in the short to medium term, say within two years, and recommendations that may be longer-term that would require more involved change to deliver. These recommendations may require significant changes in legislation, regulations and/or funding.

Only one recommendation is considered to be deliverable within the next two years. All other recommendations are likely to be longer-term, as they will be dependent on funding and spending reviews and changes that may need to be undertaken after the next cycle of capital funding is complete in 2027/28

### Short to medium term recommendations

#### 1. **Government and the Environment Agency – to review the funding application process.**

Despite changes to the process for partnership funding rules and Partnership Funding Calculator in 2020 and updates to appraisal guidance in 2022 respondent commentary and discussion during the focus groups suggest completing a funding application with the required evidence and business case still remains a significant barrier to RMA's applying for funds. In many cases the resources and expenditure required for completing a funding application are disproportionate to the funding secured. As a consequence, many LRFAs look to other sources of funding (e.g. their own investment, Local Enterprise Partnerships, developers) to deliver better surface water management outcomes.

RMA's also have difficulties in obtaining favourable scoring and cost benefit ratios for small, complex and spatially dispersed surface water management schemes. The appraisal process needs to be reviewed as the same funding application process is used for the management of all flooding sources. Commentary from the respondents suggest this is ineffective and challenging for all RMA's. The Government and the Environment Agency should explore how the funding application process can better meet the different needs for surface water management and in particular, be made more proportionate.

Additionally, commentary was provided to suggest it is challenging for RMA's, particularly LRFAs and communities to understand and determine the progress of a funding application. Improved transparency would support approaches to secure partnership funding from multiple sources, the management of surface water and engagement with at risk communities.

Recognising that Regional Flood and Coastal Committees are public meetings and papers should be available it would be beneficial if agendas, papers and decisions were actively disseminated and easily accessible as this would increase transparency and accountability. In a similar vein all RMA's should provide greater transparency on timescales of the progress of their funding applications (i.e. deadlines, decisions, funding allocation and monitoring).

## Longer-term recommendations

### 2. **Government** – to ensure sufficient funding is provided to surface water management schemes.

Respondents reported that RMAs managing surface water are not receiving sufficient funding for the capital delivery and maintenance of surface water management infrastructure. This may be due to the lack of funding, or more likely that funding is not accessible due to challenges with the funding application and allocation process.

The inability to readily obtain funding impacts the delivery of statutory responsibilities for LLFAs (e.g. asset registers, local flood risk management strategies). Other responsibilities that are permissive, and non-statutory, or implied in national strategies, or expected from LLFAs (where there are related statutory responsibilities) tend not to be funded (e.g. community and partnership working, project delivery, and data collection or sharing as well as plan development such as DWMPs). Despite implications for budgets and resourcing LLFAs often fund such activities because they are considered locally important.

Defra has promised a review of LLFA funding for statutory duties. However, on the basis of this review we recommend extending the remit of the funding review to include surface water management activities not funded for all RMAs and other organisations involved in surface water management e.g. Local Planning Authorities, or other infrastructure providers. This would identify the need for enabling regulation and potential funding gaps for the different organisations involved in managing surface water.

Accountability and transparency of the funding process would be improved if the amount of funding spent on tackling the different flood sources was also routinely reported. Other suggestions may improve the approach to funding and associated outcomes are:

### 3. **Government** – to provide sufficient funding to RMAs for surface water maintenance.

Historically there has been a considerable imbalance between capital and revenue (operation and maintenance) funding. Only the EA can apply for funding for maintenance of flood management schemes. This difficulty in funding maintenance significantly deters local authorities from developing new schemes.

### 4. **Government** – to enable the designation of funds for local government RMAs to spend on surface water management.

It would be beneficial to consider the process and thresholds for devolving and ringfenced funding across a catchment or smaller area to local government RMAs to deal with relatively low cost, short to medium term surface water flooding problems (i.e., no/low regret interventions).

As suggested by the NIC (NIC, 2022), this designation of funds could be based on a collaborative assessment of local flood risk and an agreed costed programme for delivery. It could also be aligned with WaSC investment cycles to improve surface water management and where necessary improve partnership working.

### 5. **Government and regulators** – to develop mechanisms to support and enable alignment of funding for surface water management.

Long-term planning mechanisms (like LFRMS and DWMPs) need to be ambitious and outline activities that RMAs could collaborate on and be potentially funded by all RMAs.

LFRMS, DWMPs and Surface Water Management Plans should support long-term planning and investment aligning benefits with the different drivers and benefits for RMAs and beneficiaries that may fund surface water management schemes. More also needs to be done to enable flexibility of funding from different sources and support the alignment of the different RMA investment cycles, that often have different start times and durations. This approach could be supported by improved collaboration between LLFAs, WaSCs, Regional Flood Coastal Committees and a strengthened proactive Strategic Overview role on surface water management for the Environment Agency that enable greater flexibility in investment, accommodate different funding cycles and associated expenditure.

## **6. RMA capacity and skills for surface water management**

As the risks caused by climate change and urbanisation increase we need to support the development of talent in the FCERM sector. In particular, it is essential RMAs have the right skills and resources to effectively manage surface water.

Following the introduction of the FWMA in 2010 LLFAs benefited from a capacity building programme to develop skills and support delivery of their new duties. Since then the Environment Agency has worked with a number of organisations (e.g. CIRIA, The Association of Directors of Environment, Economy, Planning and Transport (ADEPT), the Town and Country Planning Association (TCPA)) to identify the skills required and provide additional support where required.

Whilst having sufficient competent professionals is primarily reliant on funding, other approaches are required to attract, develop and retain people with the right skills and behaviours. The 2020 FCERM Strategy identified that RMAs need skills and behaviours for engagement, collaboration, securing innovative funding, spatial planning and community engagement. Since then there have been various commitments from the Environment Agency and Defra to look at these skills in the sector. From the survey responses resourcing and skills still seems to be a challenge for RMAs.

This survey was developed to explore RMA capacity and skills to undertake surface water management activities. Views on staffing levels, recruitment and skills coverage were sought and respondents were also asked to consider approaches that could be used to improve the resourcing and skills on surface water management within RMAs.

### **Available capacity**

Just over half (54%) of the respondents said they did not have a full complement of staff to deliver their surface water management responsibilities, only a third of respondents (34%) said they did have a full complement of staff, with remainder not knowing. See Figure 6-1.

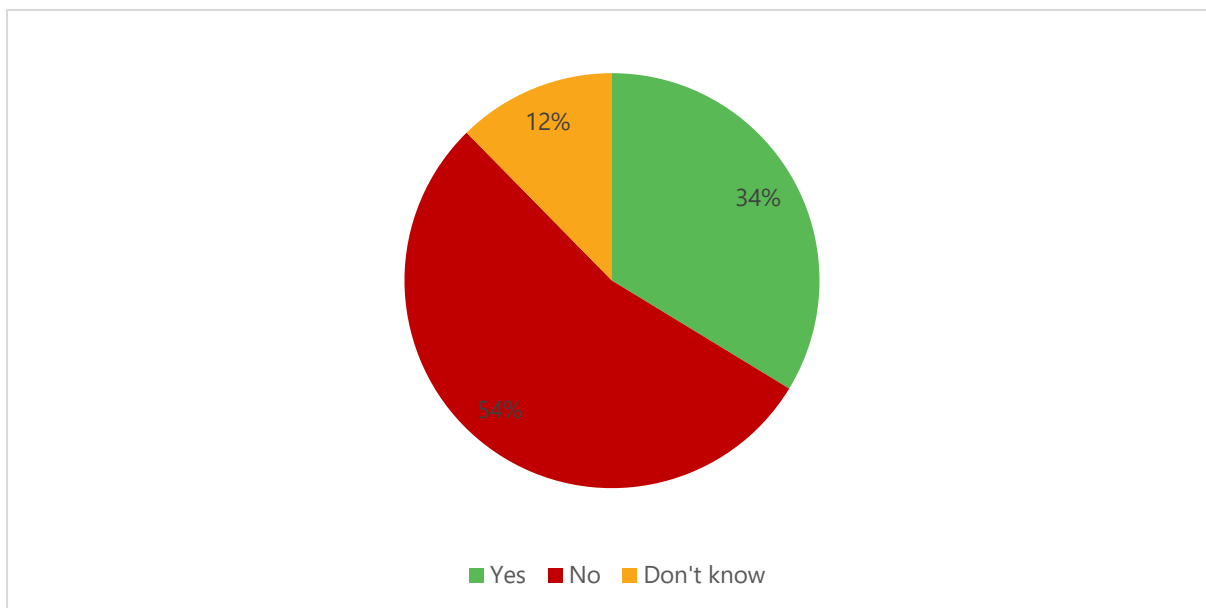


Figure 6-1 RMA's with a full complement of staff to deliver surface water management responsibilities (Q46, 89 responses)

There was not a significant difference when focussing on responses from local government. However, there was significant variation between the responses provided by LLFAs at county and unitary levels. County authorities (20 respondents) said half (50%) of them had a full complement of staff to deliver surface water management responsibilities and over a third (35%) did not. However, less than a quarter (23%) of unitary authorities (44 respondents) said they had a full complement of staff, with over two-thirds (68%) saying they did not.

A general lack of allocated funding, and prioritisation of surface water management was suggested by several respondents as the reasons underpinning a lack of staff to deliver surface water management responsibilities (question 47). Several respondents also remarked that there was a general lack of resources and skills across the FCERM sector which impacts surface water management.

Many respondents then went on to explain that challenges with recruitment and staff retention are the main challenges. This can be summarised as:

- **Recruitment** – many respondents explained that the lack of available funds means that salary and/or benefits packages within the public sector RMA's (particularly local government) are not desirable and are uncompetitive. Commentary suggested the skills required for an LLFA officer are also quite diverse, this combined with requiring some local knowledge means that finding appropriate candidates can be challenging.
- **Retention** – several respondents suggested that the poor salary and/or benefits package and the fact they're understaffed means that retention can also be challenging. Respondents suggested that the lack of opportunities for progression within local government meant that LLFA officers would move on from RMA roles.

The discussion in the focus group with local government very closely reflect the concerns around availability of skills and capacity within RMA's, particularly LLFAs within unitary authorities.

Several survey respondents remarked that their RMAs have open vacancies, a few have had long-term vacancies (over 6 months). Some RMAs are recruiting inexperienced candidates with the aspiration to train them and support their career progression. Others have suggested they're using consultants to fill vacancies.

Responses to the question on the estimated Full Time Equivalent (FTE) needed to deliver surface water management responsibilities in their RMAs are understandably varied (question 48). The average was 6 FTE's and lowest suggested was 2, with one WaSC being an outlier by suggesting they needed more than 100 FTEs. The most a LLFA suggested they needed was 15 FTEs. This should be compared with the response to question 5, when the majority of respondents said they had three, or less FTEs. As mentioned earlier, questions relating to staff requirements are likely to be subjective, based on the spatial areas covered, catchment characteristics, sources of flooding, flood risks and the condition of surface water management assets.

Nearly half (49%) of the respondents suggested it was very challenging to fill posts within their RMA to deliver surface water management. Overall, around three quarters of the respondents suggested it was either very challenging, or challenging. See Figure 6-2 for the breakdown. These challenges were also similar to those expressed by the local government focus group.

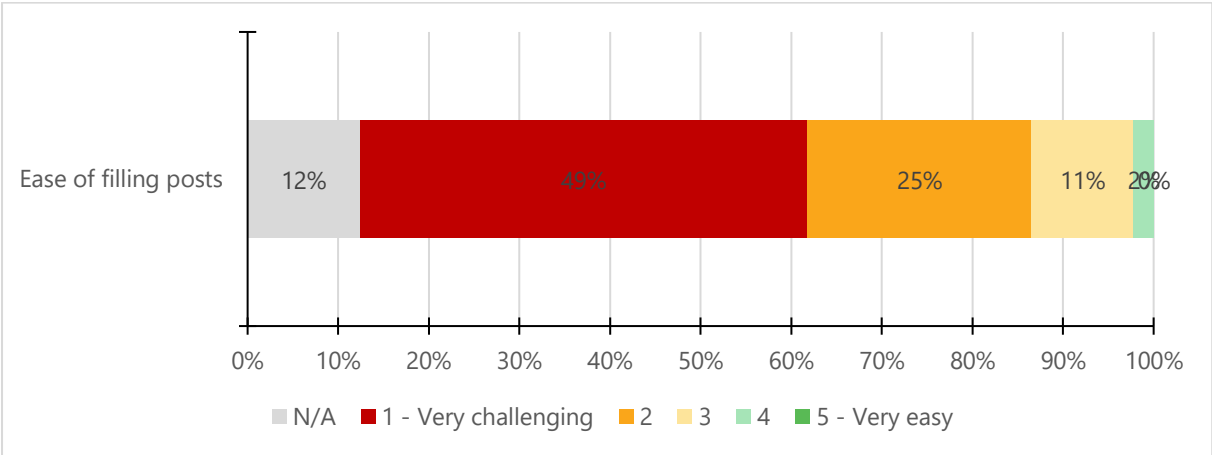


Figure 6-2 Ease of filling posts within the RMA to deliver surface water management (Q49, 89 responses)

When respondents were asked to explain their results for question 49, most went on to explain why it was challenging to fill posts (question 50). Challenges with matching private sector salaries and finding candidates with the right skills and experience were the most common responses. Commentary from respondents can be summarised as:

- Salary and/or benefits package** – LLFAs cannot compete with private sector salary/benefit packages. The small workforce also creates higher workloads and pressures within LLFAs with fewer benefits. Respondents also suggested that other RMAs like the EA, IDBs and WaSCs offer more attractive packages. Some respondents suggested the location of their RMA may also not be attractive, and within the South East of England the Cost of Living makes it even harder to attract candidates.



- **Skills and experience** – many respondents suggested that there is a general skills gap in the industry and many candidates do not have the required skills, knowledge or experience.

A few respondents suggested recruiting less-experienced graduates has proved demanding in terms of internal resources and support and often the graduates leave to join consultancies with better salary/benefits packages once they gain suitable skills/experience. One respondent suggested that working with local universities running flood and water post-graduate courses was helpful. This was also discussed by the local government focus group where they provided examples of an LLFA working with a local university, where the RMA provided lectures and hosted work experience for students. This potentially provided a ‘win-win’ for the University and the LLFA in terms of employability of graduates with appropriate skills.

A few respondents also suggested that temping agencies, or consultancies were helping but they recognise they require additional management and the approach is not sustainable, or affordable in the long-term unless it is related to a grant for a specific project.

### Available skills

Just over half of the respondents (58%) suggested they had enough skills within their RMA, with around a third (34%) suggesting they didn’t. This was not significantly different when only analysing responses from local government. See Figure 6-3 for the full breakdown.

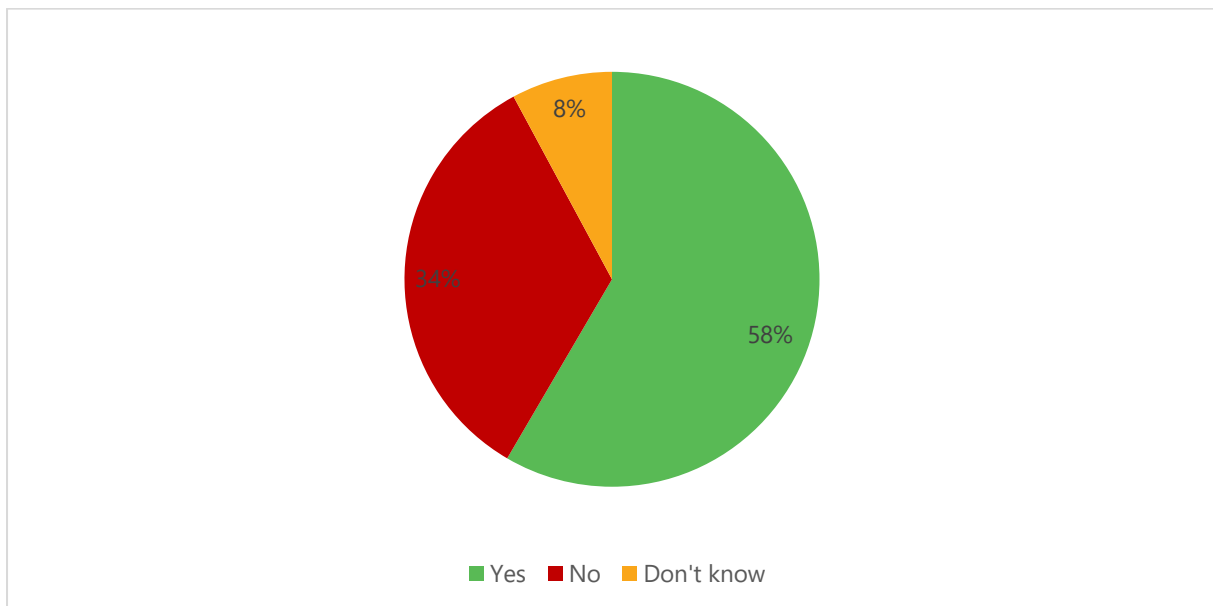


Figure 6-3 Are there sufficient skills within RMAs (Q51, 89 responses)

When asked to provide commentary around why there was insufficient skills within their RMA to manage surface water (question 52) the most common suggested challenge was around a lack of knowledge and skills. Challenges around recruiting new staff and retention was also flagged by a few respondents as a problem.

When discussing the availability of skills, many respondents suggested that the varied skills required for surface water management (e.g. knowledge of legislation, regulations) are very difficult to cover in an RMA, particularly as requirements and good practice is continuously

changing. A couple of respondents highlighted that they focus on skills to cover statutory requirements, but they were concerned about skills required for project delivery, SuDS and modelling.

A respondent also highlighted the challenge of an ageing workforce, with loss of knowledge and more senior, established staff preferring to work part time. Conversely, a few respondents also flagged that the team they had still required development. The local government focus group highlighted that the availability of general engineering skills are a challenge in other parts of local government as well, e.g. highways.

Respondents suggested that skills of 'planning and flood risk' (74 respondents), 'partnership working' (73 respondents) and 'engagement with communities' (72 respondents) were the most important for managing surface water in their RMA. The full breakdown is in Figure 6-4.

Other necessary suggested skills included modelling, dealing with the media and social media, civil engineering, and flood incident management. It was also stated that the required skills will depend on statutory roles and the associated remit of the RMA. This suggests that the surface water management role within RMAs requires a mix of skills and knowledge that are not easily covered and learnt within a traditional classroom.

There was also recognition that there was greater focus on the availability of resources and training on fluvial and coastal flooding processes and risk management, rather than surface water management.

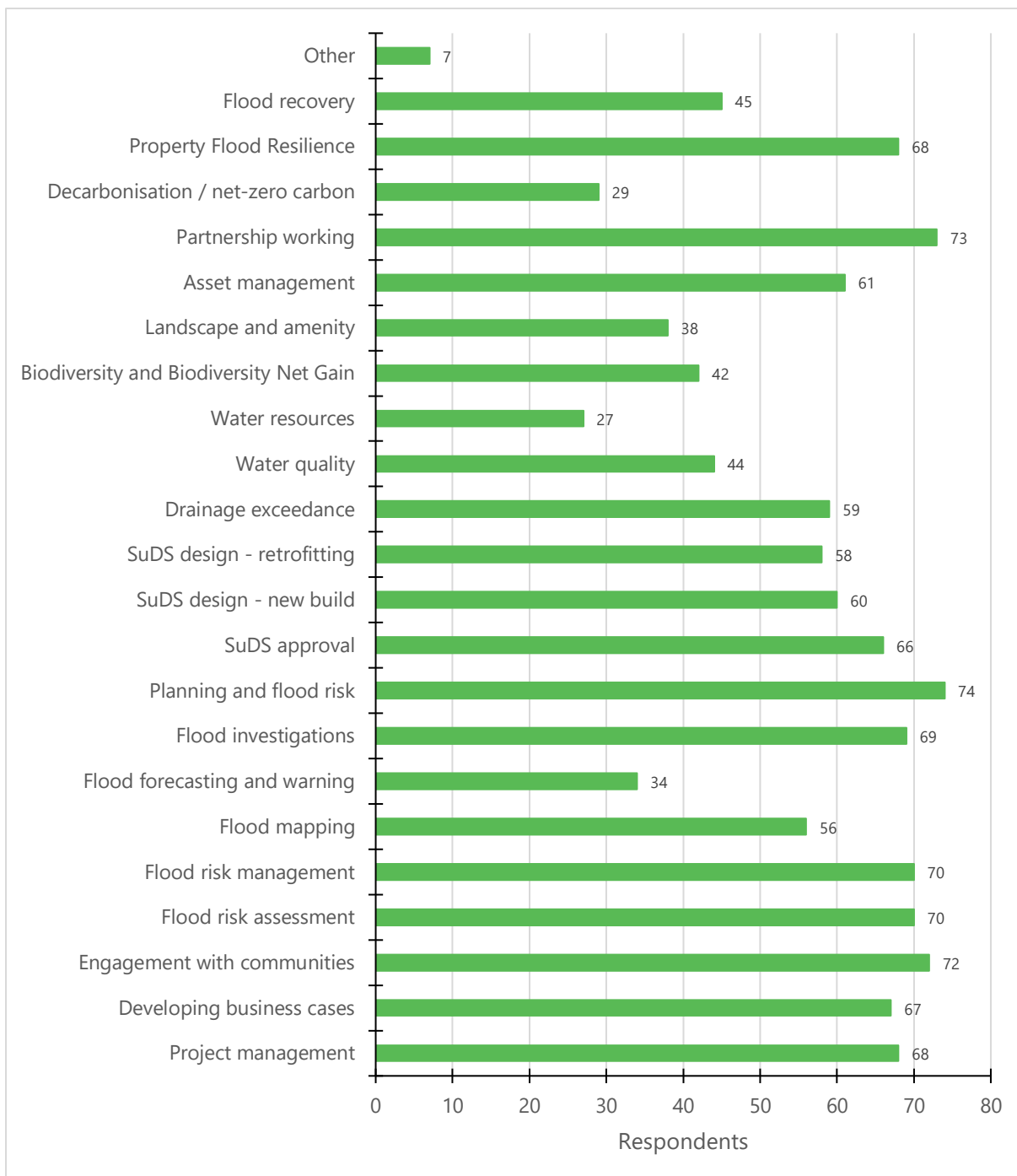


Figure 6-4 Skills that are important for managing surface water in RMAs (Q53, 85 responses)

### Capacity and skills for specific activities

When asked to consider available capacity and resources (question 54) activities relating to 'landscape and amenity', 'biodiversity and biodiversity net gain' and 'decarbonisation and net-zero' are regarded by respondents as having the least available resources. This may have implications for the implementation of Schedule 3 of the FWMA and SuDS implementation.

Activities thought to have the most resources include 'flood risk management', 'planning and flood risk' and perversely given previous challenges expressed in this area, 'partnership working'. Figure 6-5 provides the full breakdown.

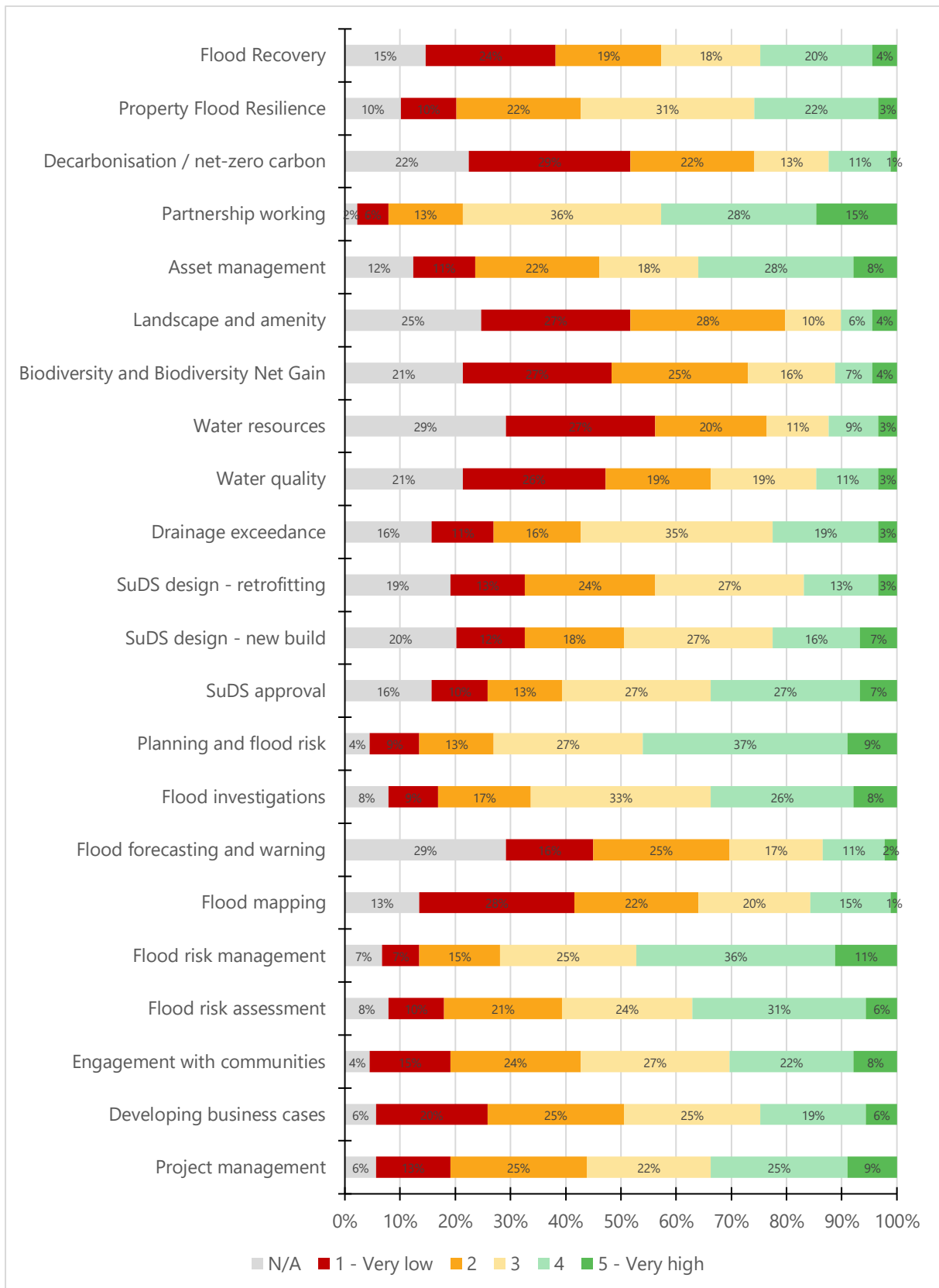


Figure 6-5 Estimated capacity for surface water management activities (Q54, 89 responses)

When asked to consider the competency and levels of skills for activities (question 55) activities relating to 'biodiversity and biodiversity net gain', 'landscape and amenity', 'water quality' and 'decarbonisation and net zero' are regarded by respondents as have the lowest

competency and level of skills. This is likely to be critical when considering the skills required to deliver multi-beneficial SuDS and implement Schedule 3.

Activities thought to have the highest level of competency and skills are 'planning and flood risk', 'flood risk management', 'partnership working' and 'flood risk assessment'. Figure 5-6 provides the full breakdown.

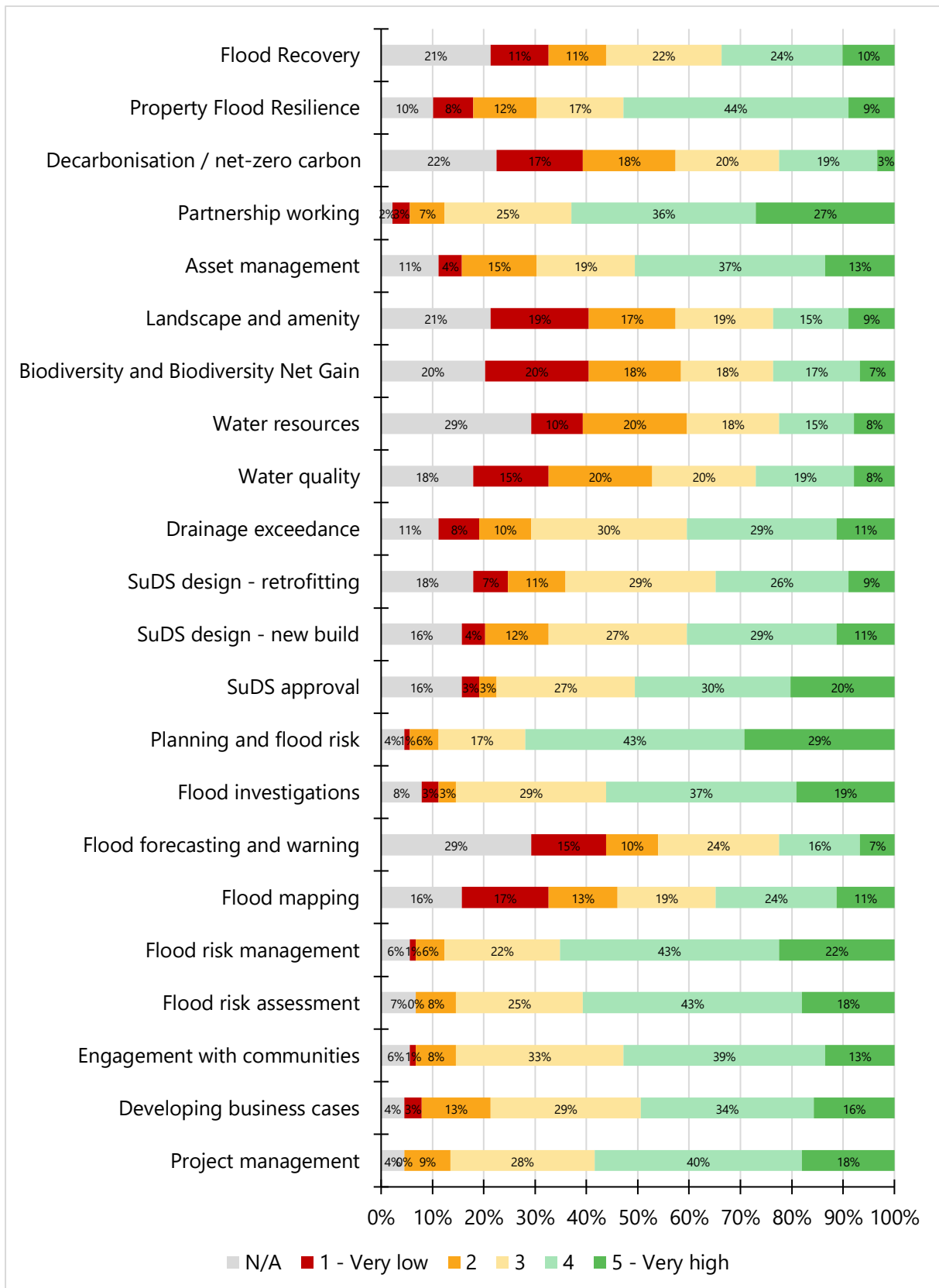


Figure 6-6 Estimated skills and competency for surface water management activities (Q55, 89 responses)

Respondents were asked about the other work areas they contributed to (question 56). Drainage and Wastewater Management Plans (DWMPs) was the most common area (72 respondents) followed by River Basin Management Plans (RBMPs) (59 respondents) and

infrastructure delivery (55 respondents). The full breakdown is presented in Figure 6-7. Other areas respondents contributed to included engaging with biodiversity and ecology teams, contributing to national local flood risk management strategies and supporting Property Flood Resilience.

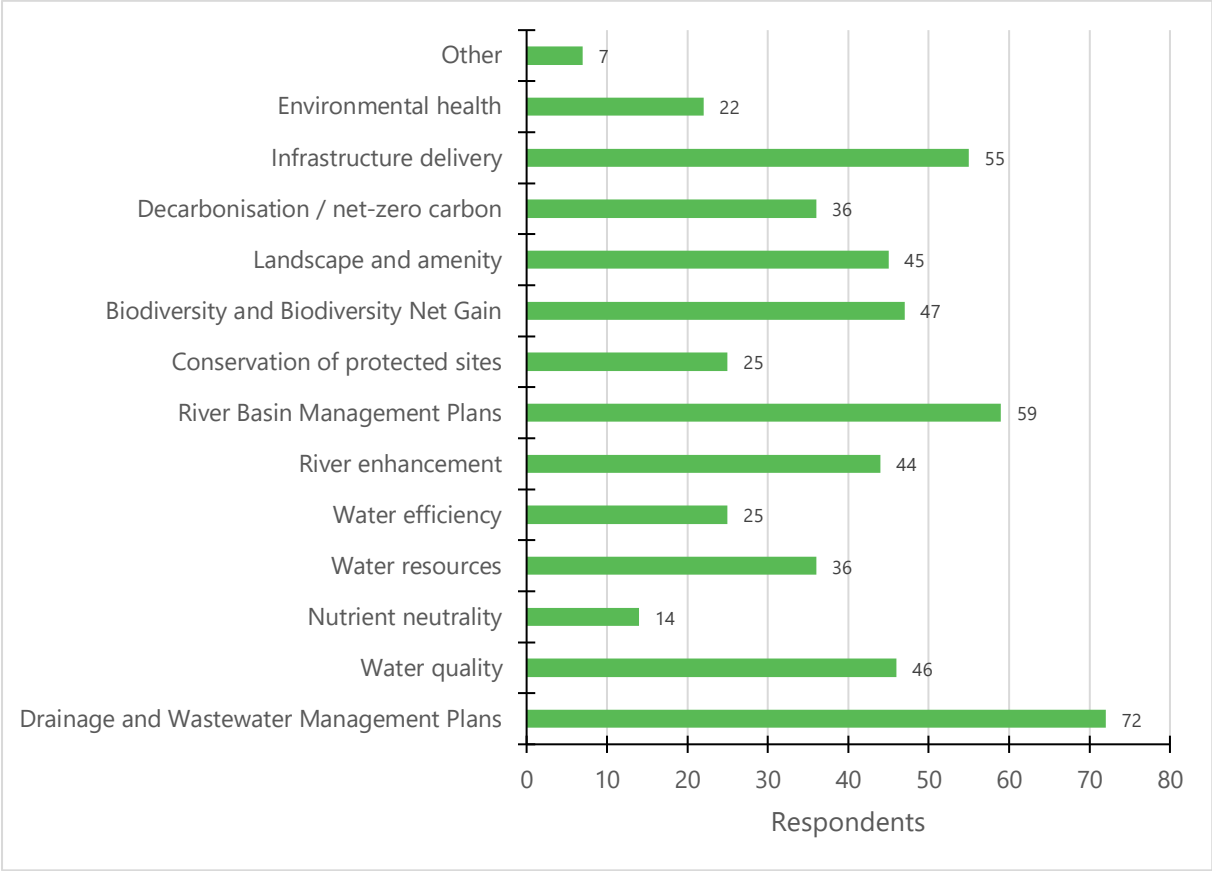


Figure 6-7 Other areas that RMA contribute to (Q56, 84 responses)

SuDS, climate change, obtaining specialist skillsets and general staff issues were the most commonly identified future risks or challenges that respondents were concerned about (question 57).

Many respondents highlighted concerns about retaining, training staff, an ageing workforce and succession management and the requisite knowledge and skills around legislation and regulations. There was also a recognition that skills around securing funding and partnership working would be useful.

The specific risks and challenges are summarised as:

- Emerging requirements for SuDS** – many respondents were mindful of the implications of commencing Schedule 3 of the FWMA and how requirements around water quality, amenity and biodiversity, and specifically Biodiversity Net Gain, could be challenging to meet. As well as concerns about the approval process for new development many respondents suggested retrofitting SuDS and undertaking maintenance could also be challenging.
- Emerging requirements for climate change** – climate change both in terms of mitigation (decarbonisation) and adaptation, particularly resilience was regarded by

many respondents as a future challenge. Some respondents suggested that climate change will increase flood risk and require adaptation through urban design, and Property Flood Resilience.

- **Obtaining specialist skillsets** – several respondents reflected on the requirements for community engagement, partnership working and contributing to Drainage and Wastewater Management Plans. Other respondents also specifically mentioned the need to find skilled modellers and also generalists competent at a diverse range of skills with a knowledge of the relevant policy and regulations.
- **General staff issues** – many respondents took the opportunity to again highlight concerns around the recruitment and retention of suitably qualified staff. This was commonly linked to challenges in securing and allocating funding and having competitive salaries. Some respondents reflected on the impact this has on the motivation of staff, stress levels and the wellbeing of existing staff.

It was commonly considered that increasing development, growth, ageing infrastructure and the changing policy landscape is likely to increase flood risks and create future challenges for all RMAs.

### Approaches to improve capacity

Respondents were asked about the effectiveness of suggested approaches to improve capacity within their RMA (question 58). Understandably 'recruit new staff' is the most common approach with nearly two thirds (61%) suggesting it was either effective, or very effective. This was followed by an approach to 'mentor staff from within your department' with over half respondents (54%) and 'apprenticeships' with half (50%) considering these approaches were either effective, or very effective.

In terms of approaches considered ineffective, or very ineffective respondents suggested that 'use external consultants' and 'use frameworks (e.g. Environment Agency frameworks etc)' were thought to be ineffective, with over a third (36%) of respondents suggesting it was either ineffective, or very ineffective.

The full breakdown of approaches is provided in Figure 6-8.



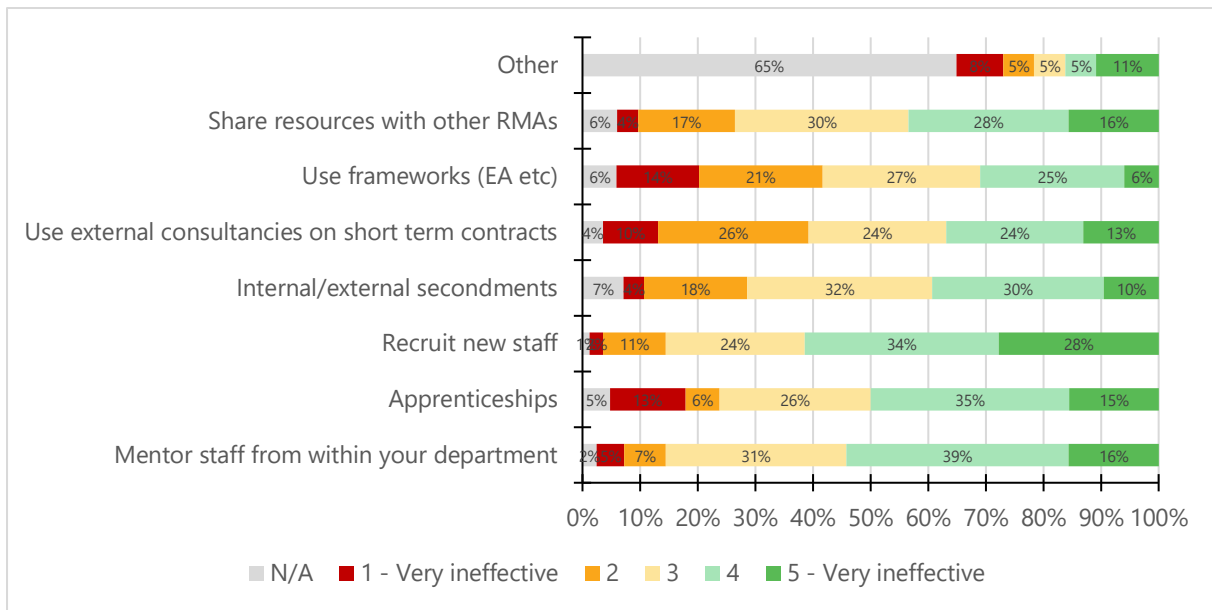


Figure 6-8 Effectiveness of approaches to improve capacity within RMA (Q58, 84 responses)

During the local government focus group discussions it was highlighted that a highway authority has been using apprenticeships (at level 3, ONC and level 4 HNC) and they have been able to tailor some of the courses to include surface water management. However, there is a lack of choice and it would be useful to have the apprenticeships include more drainage, or surface water management content.

Accredited training, on the job training, sharing of resources and good practice were common suggestions when respondents proposed other approaches to improving capacity within their RMA (question 59).

Improved funding (particularly for small scale schemes) was also suggested by a number of respondents to help support recruitment, retention and training enabling RMA to better deliver on their statutory roles. One respondent suggested raising the profile and awareness of opportunities in surface water management and increasing the attractiveness of relevant roles in line with growing interest in climate change – encouraging more people to explore the role.

The main comments from respondents can be summarised as:

- **Accredited training** – many respondents suggested additional industry and accredited training would be beneficial. This could be delivered through e-learning (as previously developed by the Environment Agency) and also aligned with graduate schemes where the accredited courses could offer industry recognised qualifications.
- **On the job training** – some respondents highlighted opportunities for apprenticeships on surface water management and training schemes linked to universities. However, some also highlighted the risk of staff leaving the RMA for more competitive jobs once sufficiently experienced.
- **Shared resources** – having a pooled resource within RMA covering functions like parks, regeneration that can support surface water management was thought to be

beneficial by a handful of respondents. Similarly, respondents also recognised the value of sharing resources and good practice with other local RMAs (potentially within a catchment hub).

The local government focus group recognised that the Environment Agency is making resources available via a SharePoint system. However, this is for Environment Agency staff and often is of limited relevance to other RMAs.

Nearly two-thirds of respondents (60%) suggested there wasn't sufficient affordable and accessible training opportunities for RMAs on surface water management (question 60). This is presented in Figure 6-9.

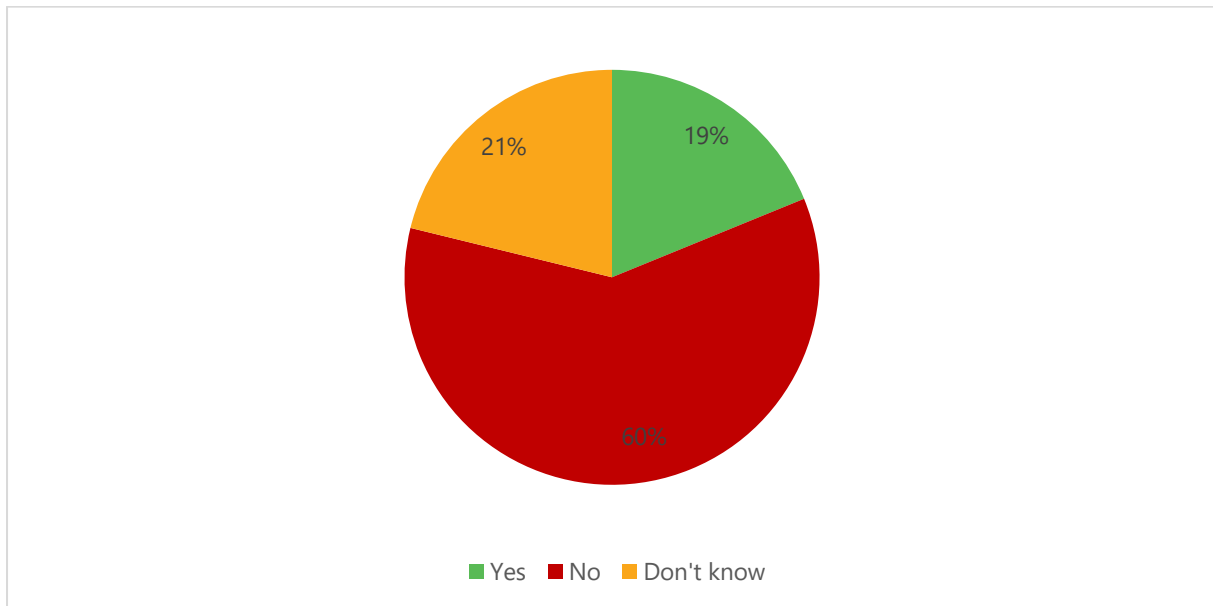


Figure 6-9 Are the sufficient affordable/accessible training opportunities for RMAs on surface water management (Q60, 85 responses)

When respondents were asked to explain what was needed (question 61) many explained that specialist training courses are required. Some also suggested the financial and time costs often makes the training unaffordable. The responses are summarised below:

- **Specialised training courses** - many respondents suggested that accredited national or regional training provision should be provided to help ensure there is consistency. Some respondents referenced the usefulness of the capacity building workshops that were delivered in 2011/12 to support the implementation of the FWMA.

Many respondents suggested there was more training resources for fluvial flooding, than surface water management. There were suggestions from respondents that higher education should provide more and better content on surface water management and nature based solutions. A few respondents suggested that changes in national policy (e.g. climate change allowances), or regulations and funding should not be introduced without relevant training. Other suggestions for specific training included:

### **General training courses for all RMAs**

- Flood risk management
- RMA responsibilities
- SW asset ownership, management legislation & responsibilities
- Partnership working
- Working with communities
- Flood risk planning (LFRMS, DWMP etc)
- Development and flood risk (planning apps, local plans)

### **Training specific to LLFAs**

- Developing business cases for funding
- Green finance
- Modelling
- Ordinary watercourse regulation (consenting and enforcement)
- Flood Investigations (S.19)
- Evaluating planning applications
- Flood Risk Projects management
- SuDS approval, evaluation and inspection and maintenance
- Detailed SuDS design and evaluation for multiple benefits (flood risk, water quality, amenity and biodiversity)

- **Affordability of training** – many respondents highlighted that training was expensive (i.e. cost of courses, travel and accommodation) and it also requires a significant time commitment.
- **Continual development programmes** – some respondents made reference to there being a shortage of continuous professional development programmes, accreditation or supplementary qualifications as there are with other disciplines (i.e. planners have Royal Town and Planning Institute). Training tends to be via one-off courses. A respondent highlighted that there are no appropriate engineering apprenticeships, or training for surface water management and SuDS. Some respondents made reference to the need for improved interaction with higher education ensuring they are providing the necessary skills but encouraging the development of day release courses and MSc / PG Cert / PgDip courses.

### **Approaches to improve skills and competency**

When asked about approaches to improve skills and competency within their RMA (question 62). 'Very short (e.g. lunchtime) CPD session' was the most common approach (68 responses), followed with 'e-learning self-paced modular training courses' and 'short 1, or 2 day virtual/face-to-face training' (each with 61 responses). The full breakdown is presented in Figure 6-10.

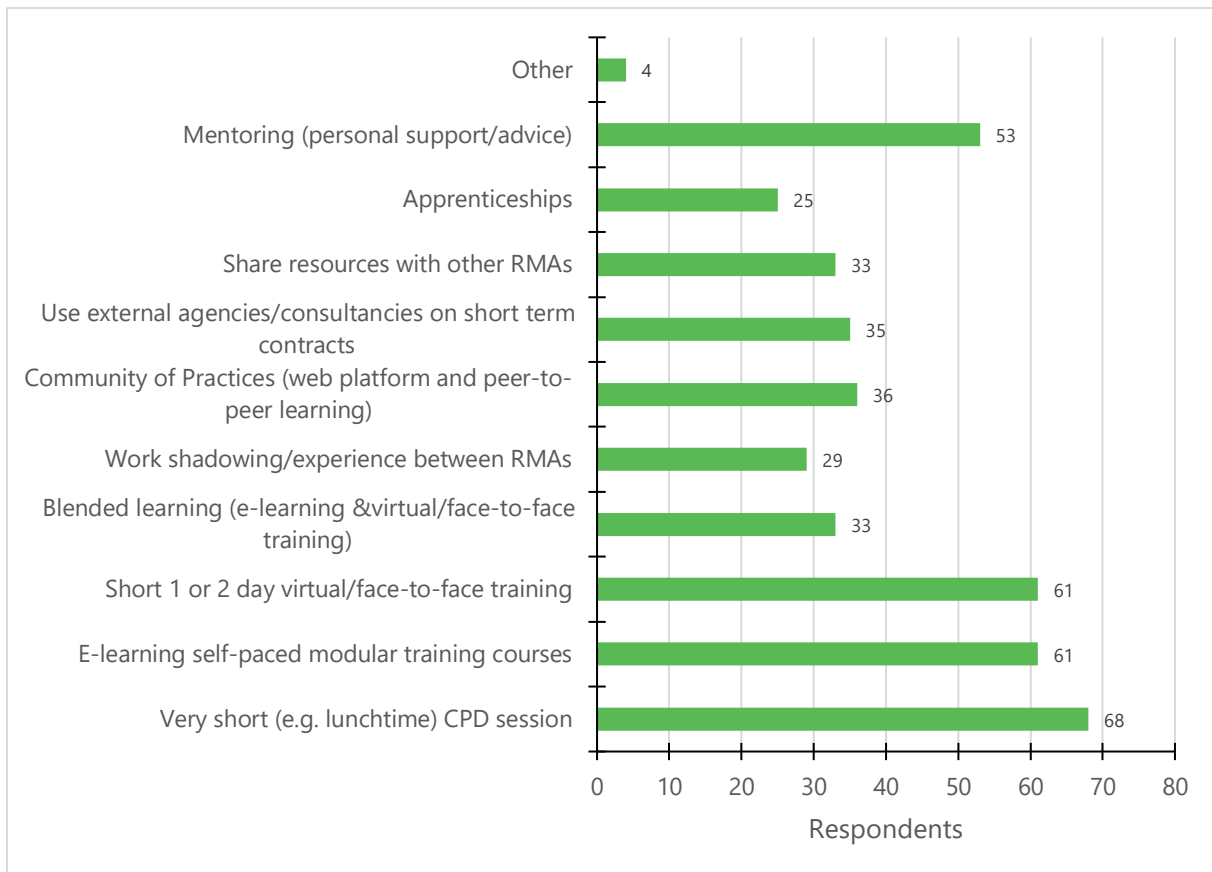


Figure 6-10 Approaches used to improve competency and skills (Q62, 86 responses)

Respondents were asked to rate the effectiveness of approaches for improving competency and skills within their RMA (question 63). Two-thirds (66%) of respondents suggested that 'mentoring (personal support/advice) was either effective, or very effective, closely followed by slightly less (62%) finding 'blended learning (e-learning & virtual/face-to-face training)' effective or very effective.

Conversely the 'use of external agencies/consultancies on short term contracts' was thought by around a third of respondents (38%) to be ineffective, or very ineffective. A quarter (25%) of respondents found 'very short (e.g. lunchtime) CPD session' ineffective, or very ineffective. See Figure 6-11 for a full breakdown.

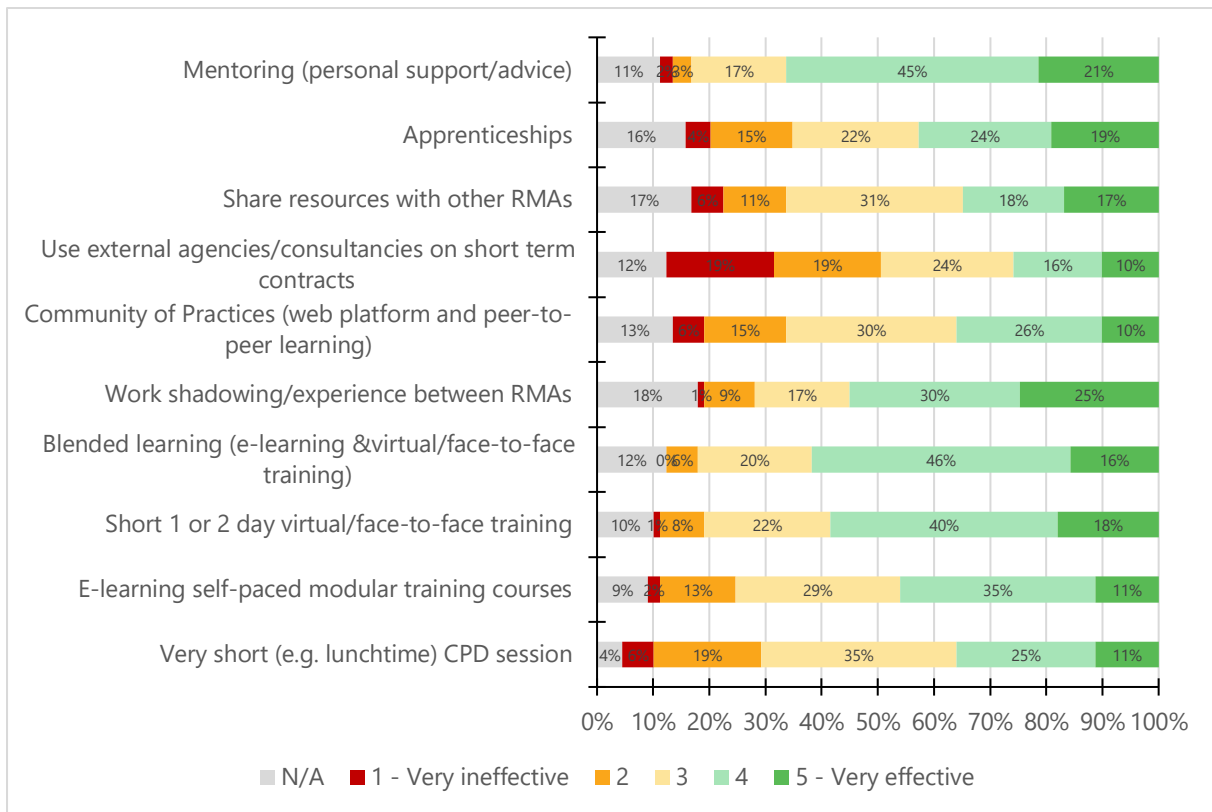


Figure 6-11 Effectiveness of approaches to improve competency and skills within their RMA (Q63, 89 responses)

### General improvements to capacity and skills

Respondents clearly considered that improvements to funding, training and certification would support capacity and skills for surface water management (question 64). A review of legislation, particularly around planning and Schedule 3 was also considered helpful. The responses are summarised as:

- Funding** – some respondents considered that LLFAs should have sufficient funding to enable capital delivery and maintenance activities for surface water management. The respondents suggested greater funding would also enable improved opportunities for recruitment, retention and continuous professional development of staff. Respondents also cautioned that without sufficient funding surface water management would remain challenging, even with initiatives like shared resources and limited support from the Environment Agency.
- Training and certification** – many respondents highlighted the importance of training, particularly for when new guidance is introduced (with a view to supporting climate change allowances and Schedule 3 implementation). The value of centrally managed training, accreditation and certification of the necessary skills was highlighted by several respondents. Some respondents emphasised the usefulness of on the job training, e.g. apprenticeships and graduate training. Additionally, some requested that the Flood and Coastal Engineering (FACE) course is made more accessible to all RMAs, not just the Environment Agency. One respondent suggested that an academy for RMAs, or a practitioners portal would be useful.

- **Legislation review** – the need for easily understood, clear and unambiguous legislation was proposed by a number of respondents (particularly around planning, the National Planning Policy Framework and SuDS delivery). This included a strengthening of existing legislation and regulation, such as in relation to the duty to cooperate, and planning requirements for developers. Similarly there were some suggestions of a review of legislation around drainage (e.g. the Land Drainage Act, Building Regulations and proposed implementation of Schedule 3).

When respondents were asked to provide additional information about capacity and skills (question 65) the most common theme was around the impact of low staffing levels and the value of training, whether through courses, on the job training or working with universities. These can be summarised as:

- **Staffing levels** – several respondents concluded that the inadequate funding and capacity with LLFAs makes recruitment and retention very difficult. It was suggested there is very little resilience in LLFAs and that collaboration and shared resources could help improve delivery and reduce costs. A few respondents suggested training may not always help, as there are so many skills required for statutory and non-statutory roles that providing suitable coverage is difficult to provide over a small workforce. This is often exacerbated by high turnover rates that also require cyclical training.
- **Training** – a number of respondents recognised the value of accredited courses that covered the surface water management roles of RMAs (as requirements for fluvial flooding are relatively well understood). These courses could be provided by universities and apprenticeships. This, combined with suitable salaries and benefits to attract and sustain staff would be beneficial.

## Conclusions

Just over half (54%) of the respondents said they did not have a full complement of staff to deliver their surface water management responsibilities. There were significant differences between county and unitary LLFAs. Over two thirds (68%) of unitary authorities said they did not have a full complement of staff, compared to less than a quarter (23%) of county authorities.

A general lack of allocated funding, and prioritisation of surface water management was suggested by several respondents as the main reasons underpinning staff shortages. Challenges with recruitment and staff retention were commonly suggested by respondents as being of critical concern.

Lack of funding means that salary and/or benefits packages within RMAs (particularly local government) were not competitive, or attractive. This together with high workloads also means that retention of good staff can also be challenging. This could account for nearly three quarters (74%) of respondents suggesting it was challenging to fill posts within their RMA to deliver surface water management.

Respondents suggested that they had the least availability of capacity and skills to deliver activities related to the delivery of SuDS and NBS (e.g. landscape, amenity, water quality, biodiversity, decarbonisation).

The policy ambition outlined in Defra's Storm overflows discharge reduction plan and the ongoing requirements for DWMPS means there's likely to be significant need for skills and capacity around retrofitting SuDS. The resultant challenges around skills and capacity are likely to be significantly exacerbated by the implementation of Schedule 3.

Respondents suggested that mentoring staff and apprenticeships were the most common approaches to improving capacity (other than recruitment). Nearly two-thirds (60%) of respondents suggested training opportunities for RMAs on surface water management were unaffordable and inaccessible. Many respondents suggested that accredited national, or regional training provision should be provided, with some referencing the capacity building workshops that were delivered to support the implementation of FWMA as being useful at the time.

### **Recommendations to improve capacity and skills**

As before, the recommendations have been structured to present those that the funders and CIWEM consider could potentially be delivered in the short to medium term, say within two years, and recommendations that may be longer-term and would require more involved change to deliver. These recommendations may require significant changes in legislation, regulations and/or funding.

Three recommendations are considered to be deliverable within the next two years. All other recommendations are likely to be longer-term, as they will be dependent on availability of funding.

#### **Short-medium term recommendations**

##### **1. Government and the Environment Agency – to embed changes to policy and process with appropriate dissemination and training.**

Changes to regulation, policies and procedure needs to be appropriately communicated, disseminated and supported with funding for resources and training well in advance of planned implementation. This is important to ensure that all relevant RMAs are aware of and prepared for the changes, potential implications and have examples of good practice.

There have been recent occasions (e.g. Climate Change Allowances, changes to National Planning Practice Guidance) where RMAs have been caught off-guard with the changes, relying on updates and guidance from consultancies and subscription or member organisations. The implementation of Schedule 3 will require capacity building for SuDS Approval Body officers and other disciplines within LLFAs, relevant RMAs and developers/consultants.

Appropriate dissemination should be included in any communications plan associated with a national FCERM initiative. This would link to the recommendation on improved communication and engagement with and between RMAs. This could include webinars (that can be recorded), videos/animations, presentation packs and e-learning. These activities need to be tailored to the initiative, the required level of understanding and the RMA audience.

2. **Government – to undertake a skills gap analysis for surface water management.**

Like other disciplines within FCERM and the broader water and environment management sector there are fundamental challenges around the capacity and skills of the workforce involved in surface water management.

An assessment of skills and capacity has been undertaken as part of the Defra review for the implementation of Schedule 3 review (Defra, 2023) and as identified significant challenges capacity and skills. With the level ambition being expressed by Defra around the storm overflows discharge reduction plan (Defra, 2022) a comprehensive, independent and inclusive assessment of skills gaps around all forms of surface water management within all RMAs and the relevant supply chain should be undertaken, together with the identification of approaches to increase skills and capacity.

This review asked for suggestions for other training (see recommendation 3) however a specific skills gap analysis review covering all aspects of surface water management in RMAs, and the supply chain should be undertaken.

3. **Enabled by Government and the Environment Agency relevant professional bodies and RMAs – to provide opportunities for peer-to-peer learning.**

Facilitating learning from peers within similar RMAs is an effective way to share experience, good practice and support capacity building around surface water management. Enabling a formalised approach to peer-to-peer learning would support many of the other recommendations from this review relating to engagement, dissemination and training.

During this review reference was made to the usefulness of the Local Authority Network on Drainage and Flood Risk Management (LANDFORM) funded by the Environment Agency and set up by CIRIA in 2007 and the capacity building following the introduction of the FWMA in 2010.

Similarly, a centrally funded and independently-facilitated Community of Practice could assist with engagement and upskilling of those working on surface water management. Professionals are used to attending virtual meetings, workshops and webinars this would improve cost effectiveness, accessibility and uptake of learning. Opportunities for virtual learning could be complemented by occasional face-to-face meetings, supporting better collaboration and different learning experiences. Sharing knowledge could also include making better use of the Flownet Knowledge Hub and if appropriate the Environment Agency's SharePoint resources that respondents suggested could be made more relevant to all of the RMAs.

The role of mentoring on surface water management within (and perhaps between different) RMAs also needs to be properly explored as this can be a valuable approach to improve skills. Professional bodies and RMA representative groups may be able to facilitate this if appropriately resourced.



## Longer-term recommendations

### 4. **RMA and relevant professional bodies – to explore the role of apprenticeships and on the job training.**

With the challenges of developing and maintaining capacity, particularly those around offering an attractive salary and benefits package, it may be beneficial to consider developing apprenticeships, to encourage a wider range of people within the industry at all skill levels. This should ensure sufficient inclusion of surface water management modules in existing apprenticeship training programmes. This could also be incorporated into established Continuing Professional Development, Professional Development and more formal on-the-job training for surface water management roles.

The Environment Agency Flood and Coastal Engineering (FaCE) programme is scheduled to end in 2023. Any new graduate training scheme should be accessible to other RMAs (particularly those from LLFAs) and it should include appropriate content on surface water management. Likewise, any approach to support on the job training within RMAs should be shared to see if it is applicable and useful elsewhere.

### 5. **Colleges, universities and professional bodies – to consider the development of improved and accredited training for RMA employees.**

Commentary from survey respondents suggest that the range of skills needed to manage surface water management differs to those required for general flood risk management. Respondents highlighted the need for accredited training and Continuous Professional Development for all RMAs to improve skills. During this review LLFAs were particularly concerned about the skills and capacity requirements for the implementation of SuDS and Schedule 3.

It would be beneficial to improve the inclusion of surface water management content in college and university courses (e.g. engineering, planning, geography, ecology, landscape architecture and architecture) to improve the future skills pipeline in the longer-term. The relevant professional bodies, organisations and RMA groupings could suggest higher and further education course content as part of the skills assessment in recommendation 1.

To complement this the short courses could be delivered. The format and delivery of short courses would need to reflect requirements for accessibility and affordability for RMAs.

It is likely the colleges, universities and professional bodies would need to be funded initially to develop course content. Course content suggested during the review include:

General training courses for all RMAs	Training specific to LLFAs
<ul style="list-style-type: none"> <li>• Flood risk management</li> <li>• RMA responsibilities</li> <li>• SW asset ownership, management legislation &amp; responsibilities</li> <li>• Partnership working</li> <li>• Working with communities</li> <li>• Flood risk planning (LFRMS, DWMP etc)</li> <li>• Development and flood risk (planning apps, local plans)</li> </ul>	<ul style="list-style-type: none"> <li>• Developing business cases for funding</li> <li>• Green finance</li> <li>• Modelling</li> <li>• Ordinary watercourse regulation (consenting and enforcement)</li> <li>• Flood Investigations (S.19)</li> <li>• Evaluating planning applications</li> <li>• Flood Risk Projects management</li> <li>• SuDS approval, evaluation and inspection and maintenance</li> <li>• Detailed SuDS design and evaluation for multiple benefits (flood risk, water quality, amenity and biodiversity)</li> </ul>

6. **RMA's – to explore approaches to improve transparency of information and knowledge management within their workforce.**

With a knowledgeable but ageing workforce, and significant levels of staff turnover, combined with process and decisions that lack visibility it would be beneficial to improve knowledge management within RMAs.

Improving knowledge management would ensure there is accessible information and robust approaches to developing asset registers and documenting processes and procedures for surface water management to support succession planning and improved resilience within the RMA workforce. It is possible that approaches for knowledge management could be shared between the different RMA organisations.

7. **Regional Flood and Coastal Committees – to explore approaches to enable local hubs for sharing resources and good practice.**

The benefits of sharing resources and expertise between RMAs, particularly nearby LLFAs, was highlighted during the review. This was considered to be easier to facilitate at a local, or regional level. It was suggested approaches to sharing resources and expertise (potentially through RFCCs) should be explored to enable knowledge and skills to be shared on particular challenges and also support the sharing of resources, thereby reducing the dependency on in-house skills within RMAs.

## 7. References

Environment Agency. 2020. *National Flood and Coastal Erosion Risk Management Strategy for England*. ISBN 978-1-5286-1791-8. [Document can be downloaded here](#)

Environment Agency. 2022. *FCERM Strategy Roadmap to 2026*. [Document can be downloaded here](#)

Defra. 2018. *Surface water management – an action plan*. [Document can be downloaded here](#)

Defra. 2020. *Report of a review of the arrangements for determining responsibility for surface water and drainage assets (The Jenkins Review)*. [Document can be downloaded here](#)

Defra. 2021. *Surface water management: a government update*. [Document can be downloaded here](#)

The National Infrastructure Commission. 2022. *Reducing the risk of surface water flooding*. [Document can be downloaded here](#)

## 8. Appendix 1 – Copy of the survey

23/08/2022, 20:18

CIWEM surface water management review

### CIWEM surface water management review

In recent years there have been several Government Action Plans, independent reviews and government updates on surface water management. However, more can be done to obtain and share views from those that have responsibilities for surface water management so continual progress can be made with surface water management and resilience to flooding.

CIWEM has been asked by the London Drainage Engineers Group (LDEEG), Local Government Flood and Coastal Erosions Risk Management Technical Advisory Group (LG FCERM TAG) and Association of SuDS Authorities (ASA) to undertake an independent review to better understand the potential opportunities and challenges in relation to surface water management and provide some recommendations for improvement.

This review will complement the activities being undertaken by Defra, the Environment Agency and the National Infrastructure Commission. This survey is a key part of the review and it is for Risk Management Authorities involved in delivering surface water management. It focuses on three key areas:

- Cooperation and collaboration
- Funding
- Capacity and skills

Whilst the survey is aimed at local government, we welcome responses from all Risk Management Authorities. It should be completed only by those working in an RMA. Completing the survey should take around 30-45 minutes and (if you sign in to google) progress can be saved (we can only accept online responses).

The deadline for responses is August the 15th 2022.

Many thanks

The project team

Completing this survey is voluntary, responses will be anonymised any personal data provided will be used for the purposes of the project (i.e. further engagement, obtaining case studies). Information collected will be stored in accordance with CIWEM's Privacy Policy (<https://www.ciwem.org/privacy-policy>). For further information and queries related to the survey contact Paul Shaffer at [paul.shaffer@ciwem.org](mailto:paul.shaffer@ciwem.org).

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\*Required

[https://docs.google.com/forms/d/1j5bkU4\\_YxJGlpofW\\_mMSUCKL5H-7EUgwESLPZ5nCg/edit](https://docs.google.com/forms/d/1j5bkU4_YxJGlpofW_mMSUCKL5H-7EUgwESLPZ5nCg/edit)

1/33

**About you**

1. Are you responding to this survey as an individual or an organisation? \*

*Mark only one oval.*

- Individual  
 Organisation

2. What is the name of the organisation you work for, (if the Environment Agency please provide your Area/National team name)?

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3. As defined by the Flood and Water Management Act what type of Risk Management Authority (RMA) are you? \*

*Mark only one oval.*

- Environment Agency  
 Lead Local Flood Authority at a unitary level  
 Lead Local Flood Authority at a county level  
 District or Borough Council  
 Coastal protection authority  
 Water and sewerage company  
 Internal Drainage Board  
 Highways authority  
 National Highways

## 4. 1.4. What function do you provide in the RMA? (tick all that apply) \*

*Tick all that apply.*

- Planning - policy
- Planning - spatial planning
- Approval/Evaluation of designs
- Design
- Construction
- Maintenance
- Asset Management
- Highways design/management
- Flood risk management
- Flood investigations (S.19 etc)
- Investment
- Engagement
- Partnership Funding
- Strategy and Policy
- Development/Building Control
- Climate Change adaptation
- Emergency Planning
- Flood response/recovery
- Other: \_\_\_\_\_

5. How many Full Time Equivalent (FTE) employees are working on the RMA role in your organisation? \*

Mark only one oval.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 10 or more

6. Please estimate the percentage of FTE's working on the RMA role fulfilled by consultants.

Mark only one oval.

- 0 - 10%
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40 - 50%
- 50 - 60%
- 60 - 70%
- 70 - 80%
- 80 - 90%
- 90 - 100%

7. Please estimate the percentage of staff in your RMA with experience of surface water management.

Mark only one oval per row.

	0 - 20%	20 - 40%	40 - 60%	60 - 80%	80 - 100%
0 - 2 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 - 4 years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4+ years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Exploring cooperation and collaboration for surface water management

8. To what extent are you clear on the responsibilities of your own RMA in terms of managing surface water flood risk? \*

Mark only one oval.

	1	2	3	4	5	
Very unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very clear

9. How clear are you on the responsibilities of other RMAs in terms of managing surface water flood risks?

Mark only one oval.

	1	2	3	4	5	
Very unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very clear



10. From your experience how clear do you think other RMA's are about their own responsibilities for managing surface water? (1 = Very unclear, 5 = Very clear)

Mark only one oval per row.

	1	2	3	4	5
Environment Agency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lead Local Flood Authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District or Borough Councils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and sewerage companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal Drainage Boards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Highway authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National highways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. If you scored lower than a 2 for any RMA please explain why?

\_\_\_\_\_

12. Should surface water management be coordinated by one RMA or organisation? \*

Mark only one oval.

- No Skip to question 15
- Yes Skip to question 13
- Don't know Skip to question 15

13. If yes, who do you think should coordinate activities for surface water management?

Mark only one oval.

- Environment Agency Skip to question 15
- Lead Local Flood Authorities Skip to question 15
- District or Borough Councils Skip to question 15
- Water and sewerage companies Skip to question 15
- Internal Drainage Boards Skip to question 15
- Highway authorities Skip to question 15
- National Highways Skip to question 15
- Other: \_\_\_\_\_

14. Please explain who else should coordinate surface water management.

\_\_\_\_\_

15. Please explain what activities need coordinating, and/or why?

\_\_\_\_\_

16. How would you rate your collaboration with the RMAs below on surface water management? (0 = N/A, 1 = very ineffective, 5 very effective).

Mark only one oval per row.

	0	1	2	3	4	5
Environment Agency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lead Local Flood Authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District or Borough Councils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coastal protection authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water and sewerage companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal Drainage Boards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Highway authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National Highways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. How would you rate your collaboration with other organisations below on surface water management? (0 = N/A, 1 = very ineffective, 5 very effective)

Mark only one oval per row.

	0	1	2	3	4	5
Local Planning Authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Building/Development Control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Community Engagement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Emergency Planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Parks and public spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local gov't - Regeneration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional Flood and Coastal Committees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural England	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transport infrastructure organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Catchment Partnerships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Riparian landowners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land managers/farmers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community flood groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Local resilience  
forums

Third Sector / Non  
Governmental  
Organisations

18. If you have a formalised partnership agreement to support surface water management (e.g. Memorandum of Understanding) with an RMA, please indicate which ones listed below. (tick all that apply)

*Tick all that apply.*

- Environment Agency  
 Lead Local Flood Authorities  
 District or Borough Councils  
 Coastal protection authorities  
 Water and sewerage companies  
 Internal Drainage Boards  
 Highways authorities  
 National Highways  
 Regional Flood Coastal Committees  
 Other: \_\_\_\_\_

19. Please provide further detail on these agreements in terms of arrangements and outcomes.

\_\_\_\_\_

20. Please rate how effective existing approaches are for supporting collaboration and cooperation.

*Mark only one oval.*

	1	2	3	4	5	
Very ineffective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very effective

21. If you scored this low (i.e. 1), or high (i.e. 5) please explain why.

\_\_\_\_\_

22. Following a flooding event where the source of flooding is unclear how well is this resolved, in terms of completing investigations and suggesting actions?

*Mark only one oval.*

	1	2	3	4	5	
Very badly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very well

23. If you scored this low (i.e. 1), or high (i.e. 5) please explain why.

\_\_\_\_\_

24. What do you think enables collaborative working?

\_\_\_\_\_

25. How effective is collaboration with RMA's on certain activities? (0 = N/A, 1 = very ineffective, 5 very effective)

Mark only one oval per row.

	0	1	2	3	4	5
Data and information sharing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engagement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General shared resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing/implementing LFRMs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asset recording & management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood mapping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood modelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood investigations (S.19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood forecasting and warning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capital delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partnership working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SuDS for new build	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retrofitting SuDS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drainage and Wastewater Management Plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood recovery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. If you scored any activity low (i.e. 1), or high (i.e. 5) please explain why.

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27. Please tell us about the other activities and organisations you collaborate with on surface water management - particularly any non-statutory activities.

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28. Have you got examples of good collaboration and cooperation with other organisations, e.g. established partnerships?

Mark only one oval.

- Yes Skip to question 29
- No Skip to question 30

29. If yes, can you please provide further details (including any relevant contact details for further information)?

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30. What would you like to see improved in regulations, governance and guidance in relation to collaboration and cooperation for surface water management?

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### Exploring funding for surface water management



31. Do you have an allocated (ring fenced) budget for surface water management? \*

Mark only one oval.

- Yes Skip to question 32
- No Skip to question 33

32. If yes, do you have long term certainty on the allocated budget?

Mark only one oval.

- Yes
- No

33. If no, what are the consequences of this.

---

34. In your opinion, how sufficient is funding for the following surface water management activities? (0 = N/A, 1 = insufficient, 5 = more than sufficient) \*

Mark only one oval per row.

	0	1	2	3	4	5
Local Flood Risk Management Strategies and Policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contributing to Planning Policy and other strategic plans (e.g. DWMPs, FRMPs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capital projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Operations and maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood incident management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood recovery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asset management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General staff/resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

35. If you scored lower than a 2 for any activity please explain why.

\_\_\_\_\_

36. Generally speaking please estimate the percentages of funding your RMA obtains for surface water management against the following potential sources of funding (please think about the last year).

Mark only one oval per row.

	0 - 20%	20 - 40%	40 - 60%	60 - 80%	80 - 100%
Internal RMA funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funding Grant in Aid (FDGIA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional Flood Coast Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Improvement Districts (BIDs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Infrastructure Levy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TCPA 1990 Section 106 Contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other local government fund (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Charitable trusts (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water company investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land Managers/developers contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other private sector contributions (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. Please provide further detail about funding sources requested above, or those not included in the list.

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## 38. Please indicate the top 4 priorities for funding in your RMA.

Mark only one oval per row.

	Priority #1	Priority #2	Priority #3	Priority #4
General resources/staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assessment of surface water flood risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing surface water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood mapping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood modelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood investigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Approving drainage submission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Securing good SuDS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retrofitting SuDS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asset identification & management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partnership working	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Securing funds for surface water management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration on non-statutory activities (e.g. DWMPs, FRMPs etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood recovery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

39. Please provide further detail about other funding priorities if not listed above.

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40. How easy is it to secure partnership funding from the sources below? (0 = N/A, 1 = very difficult, 5 very easy)

Mark only one oval per row.

	0	1	2	3	4	5
Internal RMA funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funding Grant in Aid (FDGIA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regional Flood Coast Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business Improvement Districts (BIDs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community Infrastructure Levy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TCPA 1990 Section 106 Contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other local government fund (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Charitable trusts (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water company investment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land Managers/developers contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other private sector contributions (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. If you scored any funding source low (i.e. 1), or high (i.e. 5) please explain why.

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42. Please rate the success you have had with approaches to align funding with other partners. (0 = N/A, 1 = very ineffective, 5 = very effective) \*

Mark only one oval per row.

	0	1	2	3	4	5
Alignment of funding with partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

43. If you scored any activity low (i.e. 1), or high (i.e. 5) please explain why.

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44. To what extent are you aware of innovative financing models for surface water flood risk management?

Mark only one oval.

- Not aware of approaches
- Aware of approaches
- Undertaken initial research
- Used innovative finance models



- 45. Please provide any further information about enablers and barriers for funding for surface water management.

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Exploring capacity and skills for surface water management

- 46. Does your RMA have a full complement of staff to deliver its surface water management responsibilities? \*

Mark only one oval.

- Yes Skip to question 49
- No Skip to question 47
- Don't know Skip to question 49

- 47. If no, please explain why?

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- 48. What is the estimated Full Time Equivalent needed to deliver surface water management responsibilities in your RMA?

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49. **4.4. Please rate how easy or challenging it is to fill posts within your RMA to deliver surface water management? (0 = N/A, 1 = very challenging, 5 = very easy)** \*

Mark only one oval per row.

	0	1	2	3	4	5
<b>How easy is it to fill posts</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

50. **If you scored this low (i.e. 1), or high (i.e. 5) please explain why.**

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51. **Overall, are there sufficient skills within your RMA to manage surface water?** \*

Mark only one oval.

- Yes Skip to question 53  
 No Skip to question 52  
 Don't know Skip to question 53

52. **If no, please provide further detail.**

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53. **4.8. What skills are important for managing surface water in your RMA? (tick all that apply).**

*Tick all that apply.*

- Project management
- Developing business cases
- Engagement with communities
- Flood risk assessment
- Flood risk management
- Flood mapping
- Flood forecasting and warning
- Flood investigations
- Planning and flood risk
- SuDS approval
- SuDS design - new build
- SuDS design - retrofitting
- Drainage exceedance
- Water quality
- Water resources
- Biodiversity and Biodiversity Net Gain
- Landscape and amenity
- Asset management
- Partnership working
- Decarbonisation / net-zero carbon
- Property Flood Resilience
- Flood recovery
- Other: \_\_\_\_\_

54. Please rate your RMA's estimated capacity i.e. resources for the activities below. (0 = N/A, 1= very low, 5 very high)

Mark only one oval per row.

	0	1	2	3	4	5
Project management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing business cases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engagement with communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood risk assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood risk management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood mapping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood forecasting and warning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning and flood risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS design - new build	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS design - retrofitting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drainage exceedance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity and Biodiversity Net Gain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Landscape and amenity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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<b>Asset management</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Partnership working</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Decarbonisation / net-zero carbon</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Property Flood Resilience</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Flood Recovery</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

55. Please rate your RMA's estimated competency and level of skills for the activities below. (0 = N/A, 1= very low, 5 very high)

Mark only one oval per row.

	0	1	2	3	4	5
Project management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing business cases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engagement with communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood risk assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood risk management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood mapping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood forecasting and warning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood investigations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning and flood risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS approval	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS design - new build	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SaDS design - retrofitting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drainage exceedance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity and Biodiversity Net Gain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Landscape and amenity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Asset management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Partnership working	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decarbonisation / net-zero carbon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property Flood Resilience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood Recovery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

56. Which of the following work areas related to surface water management does your RMA contribute to? (tick all that apply)

Tick all that apply.

- Drainage and Wastewater Management Plans
- Water quality
- Nutrient neutrality
- Water resources
- Water efficiency
- River enhancement
- River Basin Management Plans
- Conservation of protected sites
- Biodiversity and Biodiversity Net Gain
- Landscape and amenity
- Decarbonisation / net-zero carbon
- Infrastructure delivery
- Environmental health
- Other: \_\_\_\_\_

57. What future risks or challenges are you concerned about having suitable skills and capacity to manage?

\_\_\_\_\_

58. Please rate how effective the following approaches could be for improving capacity within your RMA. (0 = N/A, 1 very ineffective, 5 very effective)

Mark only one oval per row.

	0	1	2	3	4	5
Mentor staff from within your department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruit new staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal/external secondments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use external consultancies on short term contracts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use frameworks (EA etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share resources with other RMAs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify in next Q)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

59. Please suggest any other approaches not included in the list above.

\_\_\_\_\_

60. Are there sufficient affordable/accessible training opportunities for RMAs on surface water management?

Mark only one oval.

- Yes  
 No  
 Don't know



61. If no, please explain what is needed and why.

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62. What approaches have you used to improve competency and skills within the RMA? (tick all that apply) \*

*Tick all that apply.*

- Very short (e.g. lunchtime) CPD session
- E-learning self-paced modular training courses
- Short 1 or 2 day virtual/face-to-face training
- Blended learning (e-learning & virtual/face-to-face training)
- Work shadowing/experience between RMAs
- Community of Practices (web platform and peer-to-peer learning)
- Use external agencies/consultancies on short term contracts
- Share resources with other RMAs
- Apprenticeships
- Mentoring (personal support/advice)
- Other: \_\_\_\_\_

63. Please rate how effective the following approaches could be for improvement competency and skills within your RMA. (0 = N/A, 1 = very ineffective, 5 very effective)

Mark only one oval per row.

	0	1	2	3	4	5
Very short (e.g. lunchtime) CPD session	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-learning self-paced modular training courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Short 1 or 2 day virtual/face-to-face training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blended learning (e-learning & virtual/face-to-face training)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work shadowing/experience between RMAs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community of Practices (web platform and peer-to-peer learning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use external agencies/consultancies on short term contracts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share resources with other RMAs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apprenticeships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring (personal support/advice)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

64. What would you like to see improved in regulations, governance, guidance and training in relation to capacity and skills for surface water management

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65. Please provide any further information about capacity and skills for surface water management.

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**Thank you**

Thank you so much for your input into the survey. We appreciate it's detailed and long, however this will provide useful information and evidence.

66. Are you happy to be contacted further regarding this survey, and/or your responses?

*Mark only one oval.*

- Yes Skip to question 67
- No

67. If yes, please provide your contact details (name, contact details)

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## 9. Appendix 2 - Respondents to the survey

Anglian Water	Birmingham City Council
Bournemouth, Christchurch and Poole Council	Bracknell Forest Council
Brighton and Hove City Council	Buckinghamshire Council
Cambridgeshire County Council	Central Bedfordshire Council
City of York Council	Cornwall Council
Coventry City Council	Cumbria County Council
Devon County Council	Dorset Council
East Riding of Yorkshire Council	Environment Agency
Essex County Council	Fylde Council
Gloucestershire County Council	Hampshire County Council
Havant Borough Council	Herefordshire Council
Hertfordshire County Council	Hull City Council
Kent County Council	Kirklees Council
Lancashire County Council	Lancaster City Council
Leicester City Council	Leicestershire County Council
Lincolnshire County Council	London Borough of Bromley
London Borough of Enfield	London Borough of Hammersmith & Fulham
London Borough of Haringey	London Borough of Harrow
London Borough of Hounslow	London Borough of Lewisham
London Borough of Tower Hamlets	London Borough of Waltham Forest
Luton Borough Council	Medway Council
Milton Keynes Council	Norfolk County Council
North Devon Council	North Somerset Council
Northumbrian Water	Nottingham City Council
Nottinghamshire County Council	Peterborough City Council
Pevensey and Cuckmere Water Level Management Board	Private individual
Rochdale Borough Council	Royal Borough of Greenwich
Royal Borough of Kensington and Chelsea	Severn Trent Water
Sheffield City Council	South Tyneside Council
South West Water	South West Water
Southampton City Council	Suffolk County Council
Surrey County Council	Swindon Borough Council
Thames Water	Torbay Council
Transport For London	United Utilities
Wakefield Council	Warwickshire County Council
Water Management Alliance	Water Management Consortium
West Lancashire Borough Council	Wokingham Borough Council
Yorkshire Water	

