


Appendix B – Flood and coastal erosion risk management in England: Summary of evaluation findings

The following tables summarise the main strengths and weaknesses within current FCERM governance in England. There are 3 tables, organised according to **process**, **outcome** and **impact**-orientated evaluation criteria (as outlined in [Appendix A](#)). These findings are based on extensive document analysis and interviews with leading actors in FCERM, and are presented in no particular order.

Certain findings are shared across England and Wales – as signified by 2 asterisks ().**


Please note that references are cited in the main report ([‘Evaluating the effectiveness of flood and coastal erosion risk governance in England and Wales’](#)).


Table B1: Process-based evaluation of FCERM governance in England¹

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>Strengths</p> <ul style="list-style-type: none"> ●** Strategic direction is established in the National FCERM Strategy for England (Environment Agency, 2020a). RMAs are required to act consistently with this (with monitoring in the form of Section 18 reporting: Environment Agency, 2018). ●** RMAs are acting in accordance with national policies, strategies and guidance. ●** The strategic overview role of the Environment Agency is an essential aspect of FCERM governance for maintaining line of sight from the national to the local scale. Greater clarity is provided in the revised national FCERM strategy (Environment Agency, 2020a). ●** The Flood and Water Management Act 2010 provides greater clarity of roles and responsibilities, especially for surface water management. ●** The Coastal Groups Network (CGN) helps facilitate the exchange of information between local and national scales. Coastal Groups


¹ **Process** refers to the way in which decisions are made within FCERM governance.


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>also adopt a shared terms of reference, developed by the CGN, to help maintain a degree of consistency.</p> <ul style="list-style-type: none"> • Regional Flood and Coastal Committees (RFCCs) play a central role in identifying, communicating and managing risks across catchments and shorelines, maintaining a strategic oversight and targeting investment according to local needs. • Some interviewees commented on whether there was consistency in the interpretation of all guidance, but also whether that was a problem. Some flexibility to act was considered necessary to be able to realise outcomes. • The national approach was seen to be flexible enough to allow actors to work with the system rather than against it. • Land use change statistics report the location and area of land use change, including the proportion of new residential development created in flood zone 3, which is essential for monitoring the effectiveness of the planning system and maintaining 'line of sight'.
	<p>Weaknesses</p> <ul style="list-style-type: none"> •** The complexity and confusion surrounding roles and responsibilities has continued to be raised by scrutiny bodies in England and Wales. This concern was also voiced by some interviewees, alongside calls for a legislative review (including the Coast Protection Act 1949 and the Flood and Water Management Act 2010). •** Interviewees emphasised the need to clarify and establish the legal remit of roles and responsibilities pertaining to climate change adaptation, noting that governance for adaptation is highly fragmented and unclear. •** Misalignment of policy/funding cycles was reported to be inhibiting opportunities for better partnership working (also see CCC, 2019). •** In some situations, there is a reported mismatch between those who have a formal role/responsibility and those who have the capacity and capability to act (especially at the local level). • Issues were raised about the consistency, quality and availability of data used within Section 18 reporting. • The ownership/responsibility for some assets could be more effectively and efficiently carried out by some RMAs than those with formal ownership. However, mechanisms for transferring responsibilities for asset ownership and maintenance are regarded as complex and bureaucratic, and, in many cases, purchasing assets at market rates is impossible. • Some have questioned the 'statutory teeth' of the RFCCs, given the relatively weak duty of the Environment Agency to 'take into account any representations (whether made in response to a consultation or otherwise) made by the Committee' (Flood and Water Management

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>Act 2010). Concerns were also raised about the disconnect between flood and coastal erosion risks in the RFCCs, and it was suggested that Coastal Groups should be made a formal part of the RFCCs' membership.</p>
	<p>Strengths</p> <ul style="list-style-type: none"> ●** The importance of place-based approaches is embedded in the national FCERM strategy and there is greater emphasis on tailoring approaches to realise place-based solutions which are considered to be more fit for purpose. ●** There is flexibility among Coastal Groups to enable place-relevant discussions to inform the implementation of SMP2 Action Plans. ●** Place-based needs are informed through participation/involvement (see separate evaluation criteria). ●** LLFAs are responsible for developing, maintaining and applying a local flood risk management strategy for their area. ● Place is a central principle of FCERM. For instance, catchment-based approaches are now seen to be routine. ● Links to existing partnerships (namely the catchment partnerships) are helping to support place-based implementation of FCERM. The creation of specific partnerships for FCERM at the local scale is also encouraged (see Priest and others, 2020). <p>Weaknesses</p> <ul style="list-style-type: none"> ●** Resource constraints, particularly among local authorities, were consistently highlighted as limiting the place-based implementation and the ability of actors to engage in partnerships/collaborations. ● Some concerns were raised about whether the differences between and within communities are always recognised and place-based needs reflected in decision-making. ● Balancing the flexibility required for place-based decision-making with the need for consistency was also highlighted. This raised an important issue around different ways of working (for example, RFCCs, IDBs) and inconsistencies in terminology between RMAs and third parties. ● Some interviewees felt that current approaches can be too project-led and not reactive enough to the local situation. ● The lack of a clear vision on resilience, and what it may mean to different people, is affecting how organisations work to realise more tailored, place-based approaches in FCERM. ● Also see weaknesses associated with participation/involvement (further below).
	<p>Strengths</p>


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • Medium-term capital commitments are established for the FCERM programme over a 6-year programme 2015 to 2021. This provides an opportunity for RMAs to ‘package’ projects and source competitive prices from suppliers, creating greater resource efficiency. •** Multiple benefits are encouraged through funding criteria. •** New windows of opportunity exist for aligning FCERM with other socio-economic and environmental agendas and sharing resources within the public sector to maximise efficiency (for example, via the Environmental Land Management Scheme). •** The principle of proportionality is embedded in FCERM to ensure that planning and management is proportional to the risk at hand. • The average cost-benefit ratio for FCERM schemes in England is 5:1 (Environment Agency, 2020a). • Partnership funding seeks to promote co-funding arrangements and broaden contributions from private and third sectors. • There is a dedicated FCERM budget and funding from central government has increased - “historically funding has increased steadily in real terms since 2005/06, from an average of £671 million a year for the period 2005/06 to 2009/10 to an average of £821 million a year for the period 2014/15 to 2018/19” (Defra, 2019; 6). For 2019/20, the total budget was £815.4 million across Defra, Environment Agency and MHCLG (Defra, 2019). These values do not include additional funds raised by other RMAs or from private investment as part of partnership funding. • Financial resources are considered to be used efficiently. • Cost-benefit analysis ensures cost-effectiveness and is widely regarded as a robust, appropriate means of allocating funding. The use of whole-life costing considers not only the balance against alternatives, routine maintenance as well as capital replacements for the life of the asset. • The National Network of Regional Coastal Monitoring Programmes maximises efficiencies in coastal monitoring and provides a coordinated approach, with funding secured on a 5-year cycle from Defra. • The use of standing advice for minor developments helps support resource efficiency (Environment Agency, 2019b). <p>Weaknesses</p> <ul style="list-style-type: none"> •** A coherent strategy (and mechanisms) for incentivising private sector involvement and generating new funding streams is lacking. Repeated concerns have been raised about how the £600 million target for external investment will be met (Efra Committee, 2015; Alexander and others, 2016a); 15% (around £100 million) of which it is expected will be secured through private sources (Priestley, 2017).


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> ●** Shortfalls in revenue/resource funding were consistently identified by interviewees as an ongoing weakness within FCERM governance. ●** Additional resources are seen to be critical in carrying out management responsibilities and achieving FCERM outcomes. ●** Securing funding at the local scale is challenged by resource constraints and internal competition between FCERM projects and other corporate priorities. ●** Access to funding contributions from other sectors/government departments is restricted by policy silos and misaligned funding cycles. ●** The significant weight assigned to protecting people and property, alongside other weaknesses, means that funding criteria may not enable optimal benefits to be achieved, however, reforms to partnership funding announced in April 2020 may help address this. ●** Knowledge gaps/challenges of quantifying intangible benefits (for example, wellbeing), although this may be addressed through reforms to partnership funding. ●** There are resource gaps related to time, skills and capacities to conduct 'difficult conversations' and meaningful engagement in communities subject to adaptation. ●** Limited resources in local authorities undermine participation in Coastal Groups. ● Although the Spending Review and Autumn Statement 2015 protected the budget for flood defence maintenance for a 3-year period for 2016/17 to 2019/20 (Priestley, 2017), the wider resource budget has continued to be supported through annual allocations, which is considered to be hindering longer-term planning. ● Corporation tax relief is not being used enough to incentivise private sector contributions. ● The ability for some organisations to contribute to partnership funding is constrained by their lack of capacity (rather than willingness). ● Maintaining the capacity of personnel resources was a main concern. There is a reported lack of skilled and experienced staff entering and remaining within FCERM roles, which has implications for working relationships. It was suggested that more effort is needed to build skills (for example, via a national skills board). ● Some interviewees felt there was undue bureaucracy, particularly when applying for small amounts of finance. This is seen as driving unnecessarily high transaction costs, particularly for surface water flood risk management schemes (Defra, 2018b). ● Duplication of effort was raised particularly in relation to activities associated with understanding flood risk and its implications for assets. While this could be addressed through better partnership working, there are certain barriers to this, including asset security, concerns about competition and also differing standards and


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>requirements across sectors (for example, different modelling standards).</p> <ul style="list-style-type: none"> • Too many meetings were perceived to undermine resource efficiency. • Routine post-project appraisal evaluations are lacking, which inhibits full understanding of the cost-effectiveness of hazard reduction outcomes. • Transferring responsibilities for asset ownership and maintenance was perceived to be limiting the ability to achieve effective and efficient FCERM at the local level. Although some transfer mechanisms exist, they were not always working effectively or appropriate to all local circumstances. Transfer approaches were regarded as complex and bureaucratic, and, in many cases, purchasing assets at market rates is impossible. This is seen to be restricting the transfer of responsibilities to those public bodies most suited to manage less critical assets over the longer term. • Analysis shows that it would not be cost-beneficial to implement SMP policies (to protect or adapt) for 149 to 185km of the coastline in England (CCC, 2018).
	<p>Strengths</p> <ul style="list-style-type: none"> • ** Duties to cooperate and share information (for example, Flood and Water Management Act 2010, Localism Act 2011 and Civil Contingencies Act 2004) are credited for improving collaboration between RMAs. • ** Multi-agency planning for certain aspects of FCERM (such as incident planning) is the norm. • ** There is a strong desire to collaborate expressed within the FCERM community, and wide recognition that no one organisation can achieve this alone. Strong working relationships are established within the FCERM community. • All interviewees reflected on the improvements that have been made in recent years in terms of joined-up working. Activities such as community flood planning as well as partnership funding are recognised as encouraging/requiring these actions. • Positivity was expressed about new mechanisms (for example, Public Sector Cooperation Agreements) in aiding collaborative efforts, but it was felt that the full potential of these agreements had not yet been reached. <p>Weaknesses</p> <ul style="list-style-type: none"> • ** Conflicting planning horizons can hamper opportunities to collaborate and integrate activities.


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> •** For partnerships to develop and be successful there is a need to enhance understanding of ‘the other’ and increase awareness of the remits/constraints of other actors. •** Resources (especially time) are required for collaboration, yet are reportedly lacking. • Some interviewees expressed concerned that ensuring alignment with national FCERM policy can sometimes inhibit certain innovations and the realisation of FCERM outcomes. Interviewees described the need to ‘work around’ certain constraints (including asset ownership, different funding sources) to facilitate joined-up working. • Collaborative efforts are often seen as additional to the ‘day job’ rather than being core elements of it (particularly for stretched organisations such as LLFAs). The positive benefits that collaboration can bring are not being fully recognised at all levels of organisations. Better evidence of the added benefits is needed. • There was some concern among interviewees that collaborative efforts are over-reliant on individuals and individual ‘goodwill’ in order to work effectively. There is a danger that it is up to certain individuals to ‘hold the system’ together, as well as concern that this could affect the personal and professional wellbeing of staff (as they balance collaborations with the existing ‘day job’). • It was felt that the multiple roles of the Environment Agency (as facilitator, mentor, critical friend and regulator) may negatively impact some relationships and the interactions which are possible. • The need to share (open) data was recognised, but difficulties were reported in terms of competition and cost. • The mismatch in organisational boundaries can be challenging. For external (in particular private) organisations, the RMA landscape can be very difficult to navigate, for example, in terms of understanding roles/responsibilities, dealing with multiple LLFAs, or needing to be involved with multiple partnerships. • ‘Innovators’ are required to resolve difficulties that arise from being the first to work differently. Many frustrations were expressed about having to work around the system.
	<p>Strengths</p> <ul style="list-style-type: none"> •** The broad range of strategies/measures promoted through the National FCERM Strategy and Defra’s Policy Statement (HM Government, 2020a) promotes integration with allied policy areas. •** The proposed Environmental Land Management Scheme (ELMS) has considerable potential to foster greater integration with FCERM (Defra, 2020a). •** In spatial planning, LPAs are required to ‘have regard to’ SMPs and the National FCERM Strategy, which helps foster integration across policy areas.

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> ●** Drainage and Wastewater Management Plans (DWMPs) will promote integrated water management, catchment-based thinking and partnership working (Atkins, 2019). ● Integration between FCERM and spatial planning is supported through specific policy instruments, including strategic flood risk assessments and sequential and exception planning tests. ● One of the main benefits of partnership funding is that it ‘ties together’ organisations within the context of a project to realise particular FCERM outcomes (albeit the level of integration varies according to the type of measures implemented). ● Closer integration with environmental policy and the Nature Recovery agenda is promised through the Environment Bill 2019-2021 and its proposed changes (for example, biodiversity net gain, local nature recovery strategies and enhanced biodiversity duty). These could increase opportunities for implementing schemes with FCERM benefits and unlocking alternative sources of funding. <p>Weaknesses</p> <ul style="list-style-type: none"> ●** Conflicting planning horizons and funding cycles can hamper opportunities to collaborate and integrate activities. ●** There remains a tendency towards budget, operational and specialist silos within national and local government. ●** Different spatial and temporal scales of planning documents can make integration difficult. In particular, the disjointedness between SMPs and local (development) plans was highlighted by interviewees and others (CCC, 2018). ●** Resource constraints limit opportunity and capacity for collaboration and integration. ●** Leading actors within FCERM are regulated or overseen by different areas of government (for example, Defra, MHCLG, Health, Transport), with different (sometimes competing) agendas and priorities, which can make cross-sectoral integration difficult. ● An appreciation of the constraints of other organisations (particularly those for which flooding is only one responsibility) is often lacking and expectations on third parties were considered to be too high in some cases. ● There is a question about whether the balance between FCERM and other environmental, social and economic needs, requires more attention in order to ensure that one is not over-emphasised to the detriment of another. In particular, there were some concerns that social needs are not fully considered within decision making and that too much emphasis on the economy may be detrimental to FCERM. ● Data sharing appears to be highly variable, but concerns (often around competition and the costs of data collection) can prevent this.

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
 <p>Long-term sustainability</p>	<p>Strengths</p> <ul style="list-style-type: none"> ●** Climate change (and future flood risk) is firmly and routinely embedded within FCERM governance and decision-making. ●** Adaptive approaches are increasingly advocated for large-scale schemes, which involve identifying trigger points and managing risk through pre-determined interventions, while simultaneously instilling a degree of flexibility to adjust responses according to changes in conditions. ●** SMPs provide a long-term strategic vision for the coast and are informed by scientific evidence on future sea level rise. Coastal Groups play an important role in coastal governance to promote long-term thinking. ●** Flood risk is a material consideration within spatial planning, with specific policy mechanisms in place to help ensure that (re)development does not increase flood risk now or in the future to promote sustainable development. ●** Under the Planning and Compulsory Purchase Act 2004, development plans must include “policies designed to secure that the development and use of land in the local planning authority’s area contribute to the mitigation of, and adaptation to, climate change” (section 19(1A)). ● Flood risk management plans (FRMPs) (published 2016) cover all sources of flooding over a 5-year period, looking ahead to 100 years. ● Long-term investment scenarios are carried out approximately every 5 years and adopt a 50-year timeframe (Environment Agency, 2019c). <p>Weaknesses</p> <ul style="list-style-type: none"> ●** Conflicting planning horizons across sectors can inhibit long-term planning and collaboration. ●** Adaptation is essential, yet there are significant challenges to implementing adaptation schemes. ●** There is a lack of awareness of SMPs and poor accessibility to those outside of FCERM. ● Concern was raised about whether existing timeframes used for considering FCERM options (for example, design life of flood defence) apply to all approaches to increase societal resilience. For instance, some aspects of societal resilience rely on community memory and awareness, which vary over time. Therefore, different perspectives on long-term sustainability may need to be embedded into FCERM. ● Long-term investment scenarios 2019 (Environment Agency, 2019c) estimate that the annual average cost of funding FCERM activities is expected to increase over 50 years by between £100 million to £200

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>million, and it is unclear how these additional funds will be achieved. This is especially true for implementing SMP (CCC, 2018).</p>
	<p>Strengths</p> <ul style="list-style-type: none"> ●** Important FCERM-related legislation and policy requires public bodies to involve the public and work in partnership with communities. ●** Under the Flood and Water Management Act 2010 LLFAs have a statutory duty to consult the public and other RMAs about the local FRM strategy, publish the strategy and issue guidance about how this will be applied in the local area. ●** Community participation is routinely embedded within decision-making practices. ●** There are a number of resources available for supporting community-based action, including dedicated community engagement officers within local authorities and the Environment Agency, as well as support through the National Flood Forum. ●** Resources are provided to help communities plan for flooding (for example, Cabinet Office, 2011; Environment Agency, 2012). <p>Weaknesses</p> <ul style="list-style-type: none"> ●** The capacity, ability and willingness of communities to be involved varies between places. ●** Local involvement often relies on certain individuals who have the time, confidence and skills to input. This raises questions about representativeness. ●** A shortfall in personnel and financial resources limits capacity for engagement. ●** Training and capacity building are required if alternative forms of engagement are to be embraced (Kelly and Kelly, 2019). ●** Flexibility in how engagement is achieved may be leading to differences in the effectiveness of participation. ● The situation in practice is very mixed. Some interviewees have witnessed disrespectful treatment of at-risk communities in some places. It was suggested that communities are still having to 'conform' to external views of what should constitute action. Efforts to improve participation and engagement with communities needs to continue. ● There is often a mismatch in expectations and also confusion about roles and responsibilities, which can be a barrier to effective participation.
	<p>Strengths</p>

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> •** The UK Climate Change Risk Assessment (as required by the Climate Change Act 2008) informs climate change mitigation and adaptation planning (HM Government, 2017). •** Ongoing investment and participation in the Defra/Environment Agency WG/NRW R&D Programme. •** Opportunities for sharing good practice are provided through leading networks/groups (for example, coastal groups, Flood & Coast annual conference). •** Local plans are underpinned by a strategic flood risk assessment. • All interviewees suggested that the best available evidence is being used for FCERM decision-making. • Evidence from UKCP18 and the latest Met Office modelling is being used to embed climate change and sea level risk scenarios into FCERM. • There is a long-term approach to data gathering and flood risk mapping. • Providing open access FCERM data aims to provide evidence to a broader group of actors. • The National Network of Regional Coastal Monitoring Programmes provides data to underpin evidence-based decisions for FCERM. • The Environment Agency's Extreme Flood Outlines constitute a good representation of plausible severe river and tidal flooding (HM Government, 2016). • Improvements to risk modelling has enhanced understanding of the numbers of people/property at risk and informed the National Risk Register of civil emergencies (Environment Agency, 2018). • The national coastal erosion risk map has been updated (2015 to 2017) to provide consistent assessment of coastal erosion risk around England. <p>Weaknesses</p> <ul style="list-style-type: none"> •** Evidence gaps remain in terms of quantifying the benefits of catchment/area-based approaches, particularly natural flood management (NFM) and other intangible benefits for wellbeing. •** Better evidence in relation to the benefits of working together are needed to support collaborative working. •** Establishing confidence in working with natural processes/NFM and catchment-based approaches requires around 3 to 5 years of evidence and ongoing monitoring to establish their effectiveness at mitigating flood risk, yet resource constraints could restrict monitoring. • Greater efforts are needed in terms of sharing good practices more widely between different organisations (for example, where innovations are occurring and have/have not worked, such as via Flood & Coast).


Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • It was felt that post-project appraisal could be significantly improved to provide useful lessons/evidence to inform future projects. • The extent to which data-sharing is working is variable. In cross-sectorial contexts, data sharing can be particularly problematic as time consuming negotiations are needed between different organisations. • There are inconsistencies in the evidence base, skills and knowledge across and between sectors, with some suggesting that they were still 'catching up' (for example, after having taken on different responsibilities, or from recognising the increasing need to tackle flood risk). • There is the need to develop more of a (cross-)organisational culture of honesty, both internally and externally, and share insights into those aspects which have not worked. • There is a perceived lack of long-term coastal data in some areas which is inhibiting understanding of coastal risk.
	<p>Strengths</p> <ul style="list-style-type: none"> •** Various accountability and assurance mechanisms are established. •** There is periodic scrutiny of FCERM via the National Audit Office and Public Accounts Committee as well as external reviews and inquiries. •** Section 18 reporting mechanism (required under the Flood and Water Management Act) via the Environment Agency (Environment Agency, 2018). •** Section 19 reports (as required under the Flood and Water Management Act) investigate specific flood incidents and whether RMAs have fulfilled their duties. •** Local authority overview and scrutiny committees may scrutinise FCERM activities. •** Safeguards are in place to minimise inappropriate development, including notification directions and call-in powers. •** Legal processes exist for challenging decisions and holding public actors to account (for example, judicial review), albeit access to these mechanisms are affected by the ability to bring about court proceedings. •** There is a clear and consistent process for FCERM investment which provides transparency. • Partnership funding arrangements bring investment decisions closer to those impacted. The need for local contributions (and, in some instances, local tax rises) may lead to greater scrutiny of FCERM decisions and investment. • The Environment Bill 2019-21 proposes introducing new accountability and enforcement mechanisms through the establishment of a new governance body, the Office for

Process-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>Environmental Protection. The OEP will report to Parliament, including annual progress reports on the progress of the Environmental Improvement Plan (which includes actions related to FCERM).</p> <p>Weaknesses</p> <ul style="list-style-type: none"> •** There was some concern that collaboration could potentially dilute accountability and blur the boundaries of responsibility. Responsibilities (and associated liabilities) need to be clear. •** Enforcement in spatial planning should be improved to ensure that flood-related conditions are being effectively implemented. •** Responsibilities for coastal adaptation are obscure and appear to be slipping through the gaps created by siloed governance. The lack of clarity has implications for holding actors to account. • In some areas of FCERM governance, it was felt that there is a lack of audit and scrutiny and some degree of “incremental looseness within the system”, and too much focus on internal quality assurance. • Reactive post-event commitments of additional capital funding based on ‘political calculations’, raised concerns about the accountability of decision-making (this was also highlighted by the EAC, 2016). • One interviewee commented on the lack of enforcement power of the Environment Agency with regards to ensuring commitments at the project-scale are met (for example, timeline, spend), with few penalties to support this. • The outcome indicator framework aims to provide a transparent and consistent approach for assessing progress 66 indicators, yet further development is required for most (Defra, 2020c). Indicators for the goal of ‘reducing risk of harm from environmental hazards’ are yet to be developed.

Table B2: Outcome-based evaluation of FCERM governance in England²


Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	Strengths

² **Outcome** refers to the implementation of the decision-making process and whether the intended goal was achieved (rather than the Impact of this per se).


Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
 <p>Societal resilience</p>	<p>Cross-cutting</p> <ul style="list-style-type: none"> •** A holistic risk-based and diversified approach is adopted and well established in FCERM. <p>Preparedness</p> <ul style="list-style-type: none"> •** Well-established flood warning systems are in place, with continued improvements and wider coverage to extend lead time for action. Dissemination is promoted through multiple push and pull channels, with opt out systems leading to higher coverage. Environment Agency flood warning performance measures (19/20, Q3) indicate that coverage is at 84% and take up of the service at 83%. •** There is a clear framework for flood emergency management, reinforced through the National Flood Emergency Framework for England (Defra, 2014b; Gilissen and others, 2016). <p>Awareness, empowerment and recovery of local communities</p> <ul style="list-style-type: none"> •** Increasing emphasis on working with communities and empowering household and community action, with specific roles to facilitate this within some organisations as well as supporting mechanisms (for example, community flood plan guidance). •** Considerable efforts have been made to improve consistency and access to flood information among communities and other FCERM professionals. •** Advice and support for local communities is available from the National Flood Forum. •** There is high insurance penetration in general. Flood Re is ensuring access to affordable home insurance in high-risk areas. •** Flood Re emphasises the need to 'build back better' and permits the payment of claims which include a limited amount of resilient and/or resistant repair, above and beyond the flood-related loss (Flood Re, 2019: 11). <p>Minimising exposure via spatial planning</p> <ul style="list-style-type: none"> •** Policy triggers are in place to minimise inappropriate development in at-risk areas (for example, sequential/exception tests). LPAs must 'take account of' SMPs and should avoid inappropriate development in vulnerable locations (MHCLG, 2019a). Any area likely to be affected by physical changes to the coast should be identified as a Coastal Change Management Area, making it clear what development will be appropriate and making provisions for any development or infrastructure that needs to be relocated. •** Efforts have been made to improve the uptake of property-level flood resilience measures, including The Bonfield Report/Action Plan (Defra, 2016) and a Code of Practice for Property Flood Resilience (CIRIA, 2019).

Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> ●** The eligibility requirements of Flood Re mean that only properties built before 2009 may be entered into the scheme, therefore maintaining this additional mechanism for deterring development away from at-risk areas. ● Revisions to the NPPF in 2018 gave more clarification that the sequential approach in plan-making should take into account current and future impacts of climate change, while safeguarding land from development that is required, or likely to be required, for current/future flood management (MHCLG, 2019a: para.157). Subtle changes have also been made to the presumption in favour of sustainable development to help minimise inappropriate development going ahead in instances where development plan policies are either absent or out of date (HCL, 2019a). ● Post-event Household Flood Resilience Grant Scheme has helped promote the uptake of property-level measures. By 2018, it was estimated that over 10,500 properties had had applications approved (Defra pers. Comm). <p>Implementing alternative approaches</p> <ul style="list-style-type: none"> ●** Pilots (for example, Flood Resilience Pathfinder initiatives; Defra and others, 2015; Twigger-Ross and others, 2015) have begun to consider longer-term adaptation needs and examine appropriate governance mechanisms for this. ●** Research has been commissioned through the R&D programme to provide behavioural insights for understanding the uptake of property flood resilience and priority areas for future research (Park and others, 2020). <p>Weaknesses</p> <p>Cross-cutting</p> <ul style="list-style-type: none"> ●** There are calls for a longer-term commitment to revenue/resource funding to support a wider range of FCERM activities. ● Many respondents reported that there was a lack of understanding and/or inconsistency about what societal resilience means and how to measure and monitor it, therefore making it difficult to compare success between areas. <p>Preparedness</p> <ul style="list-style-type: none"> ●** Recent R&D research suggests that the level indicators used in flood alerts are not widely understood and found that impact information would better aid public decision-making and actions (Blazey and McCarthy, 2020). These findings are being considered by the Environment Agency/Natural Resources Wales. <p>Awareness, empowerment and recovery of local communities</p>

Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> ●** Criticism that community engagement focuses too heavily on outputs (such as community flood plans), as opposed to recognising the importance of the process itself (NFF and CEP, 2018). ●** Engaging and empowering communities on matters of adaptation requires alternative ways of working, meaningful engagement (not consultation) and building relationships and capacity within communities to act. However, sustained engagement will require adequate resourcing. ●** Limitations related to Flood Re are discussed under Social Equity. ● Various schemes to provide relief to communities and businesses are often provided after flooding. However, these are not guaranteed to be opened and are discretionary. Caution is also needed to prevent overreliance on post-event assistance, rather than proactive resilience activities. ● Grants for property-level resilience are not included within the core package of the Flood Recovery Framework in England, which focuses on immediate recovery needs only (DCLG, 2017b). <p>Implementing alternative approaches</p> <ul style="list-style-type: none"> ●** Various barriers are restricting the implementation of adaptation schemes, particularly on the coast. ●** FCERM funding criteria have been criticised for having a narrow view of 'benefit', which has constrained funding for alternative measures/schemes. It is too soon to evaluate how this might improve with recent changes to partnership funding (Environment Agency, 2020e). ●** Significant uptake of property-level resilience has been slow. It was felt that clear strategies are missing to incentivise change at the household level and that approaches need to become more normalised. <p>Minimising exposure via spatial planning</p> <ul style="list-style-type: none"> ●** Poor enforcement in spatial planning is attributed to the lack of resources and capacity within LPAs. As a result, a reactive approach to compliance checking appears to have been established. ●** Interviewees reflected on the lack of accountability attributed to developers themselves. Rather than risks being simply passed onto homeowners, it was argued that developers should also retain some responsibility and liability, which may further help to improve compliance with planning conditions. ●** Building Regulations have remained unchanged, despite recommendations in the Pitt Review that this would be “the simplest way of ensuring that appropriate flood resilient measures are taken” (Pitt, 2008: 76). Part C relates to ‘Site preparation and resistance to contaminants and moisture’ and Part H (Drainage and water disposal) are the most relevant.

Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • Questions have been raised about the effectiveness of spatial planning in preventing piecemeal development in areas at flood risk. • Conflicting priorities between Defra and MHCLG were discussed. The CCC notes that the current target to construct 300,000 new homes a year could lead to 90,000 homes being built in the next 5 years in flood risk areas (CCC, 2018: 45). • Radical reforms proposed through the white paper, 'Planning for the future', which are seeking to 'cut red tape' and introduce a simplified process to speed up growth and build new housing, raised a number of concerns.
	<p>Strengths</p> <p>Mitigating the likelihood and magnitude of flood hazards (fluvial and coastal)</p> <ul style="list-style-type: none"> • ** Increasing emphasis on natural flood management and hybrid approaches (for example, green-grey infrastructure), in addition to defences, to mitigate flood likelihood and magnitude (while providing other ecosystem services/benefits). • The most recent 6-year, £2.6 billion capital programme (April 2015 to March 2021) gives better protection to 300,000 properties from 1,500 schemes (Environment Agency, 2018). Doubling this, the next capital programme will allocate £5.2 billion towards 2,000 flood defence schemes over the next 6 years and further protect 336,000 properties (HM Government, 2020a). • Views on partnership funding were broadly positive and seen as a way of raising more investment and more schemes. Clarke and others (2018) in their 'Further Evaluation of Partnership Funding' concluded that the aims of the policy are being achieved, resulting in increased investment in FCERM, above what central government would have contributed. Under partnership funding, there has been increased investment of £760 million through secured contributions, an additional 421 schemes funded, 65,000 additional properties protected (of which 5,500 were in deprived areas) and 1,300 additional properties protected from coastal erosion (of which 107 are in deprived areas). <p>Asset maintenance</p> <ul style="list-style-type: none"> • ** Inspection and maintenance regimes are established. • ** Third party structures, which help to manage flood or coastal erosion risk, may be designated under the Flood and Water Management Act to prevent them being altered, removed or replaced without consent. This helps to ensure they continue to work as an FCERM asset and the owner does not inadvertently increase risk to themselves, their neighbours or surrounding area (see Defra and Welsh Government, 2012).

Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>Surface water management</p> <ul style="list-style-type: none"> • National planning policy was strengthened in 2015, which made sustainable urban drainage systems (SuDS) a material consideration for new major development and LLFAs statutory consultees (DCLG, 2014; 2015). Non-statutory technical standards for SuDS were also published (Defra, 2015). • The revised NPPF establishes a clearer expectation that developers should provide sufficient justifications (with clear evidence) where SuDS are not included within development proposals. • A recent study concluded that the current arrangements in planning have successfully encouraged the uptake of SuDS (MHCLG, 2018), although certain weaknesses were also highlighted. <p>Weaknesses</p> <p>Mitigating the likelihood and magnitude of flood hazards (fluvial and coastal)</p> <ul style="list-style-type: none"> • ** Concerns were raised about the lack of revenue/resource funding to support a range of FCERM activities, including defence maintenance, which could undermine the integrity of the defence network. • ** A coherent strategy (and mechanisms) for incentivising private sector involvement and generating new funding streams is lacking. • ** Evidence gaps remain around the flood mitigation benefits of NFM and catchment-wide schemes. • Some risks (namely coastal erosion and groundwater flooding) are seen as the 'poor relations' to urban, fluvial and coastal flooding. <p>Asset maintenance</p> <ul style="list-style-type: none"> • Recent research examined the impact of climate change on asset deterioration and estimates a potential annual increase between 30% and 80%, as well as upgrading and improvement works requiring additional investment over and above currently estimated rebuild or refurbishment costs (Burgess, 2020). This research informed the Environment Agency's long-term investment scenarios. <p>Surface water management</p> <ul style="list-style-type: none"> • The decision not to establish SuDs Approval Bodies (SABs) means there are missed opportunities to ensure compliance and effectiveness. • SuDS apply to major developments (10 properties or more), meaning the cumulative effect of small developments on surface water run-off is not accounted for.

Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • In the absence of an overseeing body (such as SABs), the case-by-case approval process could lead to a piecemeal approach and restrict the ability to realise the full potential of SuDS as part of a range of complementary measures within an area. • There is no legal requirement and it is possible for SuDS to be disregarded if a compelling case can be made.
	<p>Strengths</p> <ul style="list-style-type: none"> •** Increasing emphasis on nature-based solutions, linked to other ecosystem services and multiple benefits (for example, drought mitigation, carbon sequestration/storage, water quality, amenity, health). The ambition of trying to achieve multi-benefits is now considered to be mostly routine and there is a clear willingness to realise multi-benefit schemes. •** Opportunities for aligning FCERM and land use management via the proposed Environmental Land Management Scheme (ELMS) could help provide a wider range of ecosystem services, including flood mitigation. • Proposed local nature recovery strategies could potentially help bring about multi-benefit approaches. • There are numerous examples of good practice, such as the ‘Slowing the Flow’ project in Pickering, North Yorkshire, which is trialling land management measures (for example, woodland creation, restoring wetlands and low-level flood storage bunds) in the attempt to slow and store water in the upper and middle sections of the catchment, reducing flood risk and providing other environmental and amenity benefits. Holnicote in Somerset is another example of good practice (‘National Flood Resilience Review’; HM Government, 2016). <p>Weaknesses</p> <ul style="list-style-type: none"> •** FCERM funding prioritises the protection of people and property, which makes other benefits harder to justify, although recent changes to partnership funding could improve this, with greater consideration of environmental outcomes (Environment Agency, 2020f) and mental health impacts (Environment Agency, 2020g). •** Approaches for measuring different types of benefits were considered to be lacking. Moreover, additional benefits may emerge over different time periods and be difficult to quantify, yet funding often demands high levels of outcome certainty. •** ‘Buy in’ from other areas of government was seen to be critical to the success of realising multi-benefit approaches. However, further engagement is required to maximise emerging windows of opportunity (for example, Drainage and Wastewater Management Plans, Environmental Land Management Scheme).


Outcome-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> ● ** Adaptive approaches require integrated solutions, yet siloed governance appears to be a barrier to this. ● ** Recurrent barriers to cross-sectoral/departmental working included aligning planning cycles, conflicting priorities/agendas and different approaches to measuring benefit. ● ** Considerable uncertainties remain with regards to ELMS and how this will work in practice, alongside FCERM. ● One interviewee commented on the potential dangers of aligning economic growth to FCERM investment, which could lead to unintended consequences.
	<p>Strengths</p> <ul style="list-style-type: none"> ● ** Partnership working is promoted within FCERM and effective working relationships are being established; this is seen as essential for achieving FCERM activities. ● ** Understanding roles and responsibilities has improved with the implementation of the Flood and Water Management Act 2010. ● Partnership working is seen to be resulting in better FCERM. <p>Weaknesses</p> <ul style="list-style-type: none"> ● ** Recurrent barriers to effective partnership working include resource (financial and personnel) constraints and conflicting priorities. In England, there was evidence to suggest that partnership working is also undervalued by senior management, which is exacerbated by the lack of tangible evidence for demonstrating benefits. ● It was reported that partnership working is seen as a ‘nice to have’ additional activity to ‘the day job’. ● There is still some confusion about the roles and responsibilities/remits between organisations, which can constrain effective partnership working. ● Evidence of effective partnership working is variable between place and organisations, particularly in terms of working with third parties (for example, those without statutory FCERM responsibilities), which was seen to be harder to initiate and sustain. ● Difficulties were reported with regards to data sharing (for example, incompatible formats and systems, data storage capacities, competition issues and concerns about sharing commercially sensitive data, liabilities, and skills/capacities to use data), which constrain partnership working. ● In theory, partnership working should facilitate shared perspectives of problems/solutions. However, some interviewees felt that this needed to occur much earlier in the FCERM process. ● Also see barriers outlined under Collaboration and Integration.

Table B3: Impact-based evaluation of FCERM governance in England³

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
<div data-bbox="178 555 336 651" style="background-color: #004a7c; color: white; padding: 5px; border-radius: 5px; text-align: center;">Resilient places</div>	<p>STRENGTHS</p> <ul style="list-style-type: none"> • Also see Societal resilience and Hazard reduction criteria. <p>The impact of hazard reduction</p> <ul style="list-style-type: none"> • The current 6-year flood investment programme would have reduced risk to 300,000 properties. • The effectiveness of existing defences is typically determined post-event – for example, 800,000 properties were defended against the tidal surge in December 2013 (Environment Agency, 2014b). Additionally, RMS (2019) estimates that current defences in the UK prevent river flood damages by up to £1.1 billion a year, a 63% reduction in inland flood losses. <p>Preventing inappropriate development</p> <ul style="list-style-type: none"> • There is general adherence to Environment Agency advice. The proportion of new residential development constructed in flood risk areas remains below 9% a year (Environment Agency, 2018). <p>Promoting (resilient) recovery</p> <ul style="list-style-type: none"> • The availability of post-event grants (for example, property resilience grants) have facilitated recovery as well as providing a mechanism for fostering adaptation. •** The implementation of Flood Re provides a backstop of resilience by providing affordable insurance. Flood Re (2019) suggests that 250,000 properties have benefitted across the UK. • A core package of measures may be triggered through the Flood Recovery Framework, which focuses on immediate recovery needs, including a community recovery grant, business recovery grant, council tax discount scheme and business rate relief scheme (DCLG, 2017b). • The Bellwin Scheme helps local authorities recover income spent through responding to emergency actions taken on behalf of communities, although local authorities have suggested practices of

³ **Impact** refers to the combined effect of governance processes and outcomes, and the extent to which desired results are achieved.

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>claiming are time consuming (with implications for resource efficiency).</p> <p>Weaknesses</p> <p>Preventing inappropriate development</p> <ul style="list-style-type: none"> • Although the policies of spatial planning are considered to be broadly effective, there is concern that piecemeal development is increasing exposure. • ** Resource constraints are severely restricting compliance checking and enforcement. <p>Surface water management</p> <ul style="list-style-type: none"> • There are continued reservations about the maintenance of SuDS and lack of technical expertise within LPAs to judge the appropriateness of different measures. <p>Promoting (resilient) recovery</p> <ul style="list-style-type: none"> • ** Flood Re has maintained the continued availability of insurance for many properties, but some properties are excluded (for example, small businesses). There is a risk that the presence of the scheme could reduce the sense of urgency required, and even disincentivise risk mitigation as financial incentives have been removed. <p>Uptake of property-level measures</p> <ul style="list-style-type: none"> • ** Significant uptake of property-level resilience has been slow. It was felt that clear strategies are missing to incentivise change at the household level and that approaches need to become more normalised to establish resilient places. <p>Barriers to implementing alternative approaches</p> <ul style="list-style-type: none"> • ** There is an adaptation implementation gap, which is driven by gaps in funding and responsibilities, prohibitive legislation (for example, Highways Act 1980), the non-statutory status of SMPs, and lack of strategic/practical guidance or policy instruments. <p>Monitoring success</p> <ul style="list-style-type: none"> • Evidence about the resilience of places is lacking due to the absence of a clear and consistent understanding of resilience and approaches to measuring it.
<div data-bbox="177 1872 336 1966" style="background-color: #00a651; color: white; padding: 5px; border-radius: 10px; display: inline-block;">Resilient growth</div>	<p>Strengths</p> <ul style="list-style-type: none"> • ** Mechanisms are in place to minimise disruption to businesses and facilitate preparedness/recovery, including i) duties under the Civil Contingencies Act 2004, whereby local authorities are required to

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>advise and assist local businesses and voluntary organisations to help them plan for emergencies and support the continuation of their activities, and ii) the Business Continuity Management Toolkit developed by the UK government.</p> <ul style="list-style-type: none"> •** Small businesses are excluded from Flood Re. •** The UK Adaptation Reporting Power (under the Climate Change Act 2008) is now voluntary, with calls for mandatory reporting (CCC, 2017). •‘Today’s growth and infrastructure – resilient to tomorrow’s climate’ is a strategic objective of the national FCERM strategy (Environment Agency, 2020a). •There is increasing engagement with business organisations about flood risk and awareness-raising initiatives aimed at business and enhancing business continuity from flooding. For instance, Local Enterprise Partnerships (LEPs) are increasingly being involved as actors within FCERM decision-making. •A core package of measures may be triggered through the Flood Recovery Framework, which focus on immediate recovery needs, including a business recovery grant, council tax discount scheme and business rate relief scheme (DCLG, 2017b). From the 2013 to 2014 floods almost 1,000 businesses were reported to have received business rate relief to the value of £4 million (Sandford, 2019). •Government investment over the current 6-year FCERM investment programme aims to provide £30 billion in economic benefits (although this is yet to be evaluated). The £5.2 billion in the next spending programme is expected to provide £32 billion in avoided wider economic damages (John Curtain; Efra, 2020). •There has been increasing recognition/investment in FCERM among infrastructure providers, for example, Network Rail has developed route-based weather resilience and climate change adaptation plans, investing £900 million up to 2019 to improve resilience. Highways England has a 5-year plan of investment of £78 million to reduce flooding to major roads and a further £300 million as part of the Road Investment Strategy (HM Government, 2016). •The Environment Agency and others are routinely working with infrastructure and service providers to join up knowledge and help ensure that investment in future networks is resilient to flooding. •Targeted flood warnings for infrastructure services allow organisations to act sooner to ensure business continuity. •Growth investment has been used as part of the investment for FCERM. For example, the River Aire Flood Alleviation Scheme (Leeds) brings together various contributions of funding from the Department for Business, Energy and Industrial Strategy Regional Growth Fund, Defra’s Growth Fund, FCERM grant-in-aid, Leeds City Region Enterprise Partnership, Yorkshire Water and CEG.

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<p>Weaknesses</p> <ul style="list-style-type: none"> ●** UK research suggests that business continuity planning is highly variable and often developed in larger companies only (ASC, 2014). ●** Small businesses are excluded from Flood Re. ●** The UK Adaptation Reporting Power (under the Climate Change Act 2008) is now voluntary, with calls for mandatory reporting (CCC, 2017). ●** There is a need for better engagement with different service providers across sectors to ensure appropriate planning for future flood risk and minimise network disruption. ● Recent flood events have highlighted the vulnerability of existing infrastructure. Notably, the 8-week closure of the rail line to Dawlish due to flooding in 2013/14, the closure of the East Coast mainline in winter 2015/2016, and the 10 rail lines blocked in November 2019. In 2015/16 roads closed for several weeks due to a bridge collapse (Tadcaster) and landslide on the A591 Grasmere to Keswick (with between 4,000 and 7,000 journeys a day disrupted for 6 months). ● There is the potential danger that tying economic growth to FCERM investment could disincentivise other sources of investment and may lead to negative impacts on residual risk.
<p style="background-color: #00b050; color: white; padding: 5px; border-radius: 5px; display: inline-block;">Adaptive capacity</p>	<p>Strengths</p> <ul style="list-style-type: none"> ● Also see points raised under Long-term sustainability. ●** Post-event reviews and learning from events is routine within FCERM, both from within by those with FCERM responsibilities and those considered to be more independently led and/or external to the system (for example, 'The winter floods of 2015/2016 in the UK - a review', Marsh and others, 2016, Pitt, 2008). ●** Section 18 and 19 reporting mandated through the Flood and Water Management Act 2010 provide useful opportunities for learning. ●** Different planning epochs are considered for short term (0 to 20 years), medium term (20 to 50 years) and long term (50 to 100 years) within SMP2, to take account of sea level rise and inform long-term planning. ●** Flood risk management plans produced by LLFAs are reviewed on a 6-yearly cycle (under the Flood Risk Regulations 2009). ●** Flood Re's Transition Plan outlines a vision to 'build back better', including supporting research into standards for property-level measures. ● The revised English National FCERM Strategy (Environment Agency, 2020a) places a greater emphasis on adaptation. ● Longer term planning is routinely embedded within most elements of FCERM.

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • Post-event flood resilience grants for homes and businesses help encourage resilient reinstatement after floods. • Adaptive approaches are increasingly advocated for large-scale schemes, which involve identifying trigger points and managing risk through pre-determined interventions, while instilling a degree of flexibility to adjust responses according to changes in conditions (for example, Thames Estuary 2100 project). • Preparing for a 'Changing Climate: Good Practice Guidance for Local Government' was made available in 2019, England. <p>Weaknesses</p> <ul style="list-style-type: none"> • ** SMP2 are unfunded proposals only. Implementing SMP2's 'Hold the line' policies will require significant funding contributions (CCC, 2018). • ** Legislative rigidity is a significant barrier to implementing adaptation initiatives, particularly with regards to the Highways Act 1980 and duties to maintain public rights of way. • ** There is a risk that Flood Re is seen as the panacea and may undermine the sense of urgency required to ready communities for risk-reflexive pricing. • Managing coastal change and adaptation was considered to be lagging behind other areas of FCERM governance. Although it was acknowledged that some pilot work was being carried out and this was welcomed as a necessary step, it was felt that there was still some way to go. • There was some concern that the impact of climate change was not being fully recognised within FCERM governance (for example, spatial planning). • Institutional learning and 'memory' is hampered by the high turnover of staff within some institutions. • The extent to which learning (and recommendations) change practice is variable.
<div data-bbox="188 1621 331 1715" style="background-color: #92d050; border-radius: 10px; padding: 5px; display: inline-block;">Social Equity</div>	<p>Strengths</p> <ul style="list-style-type: none"> • ** Mechanisms are in place to address the needs of vulnerable groups in emergency response. • ** Flood Re aims to continue to maintain the affordability of flood insurance and extends principles of solidarity between all those with an insurance policy. • Partnership funding requires local contributions, representing a shift towards the 'beneficiary pays' principle. This is arguably a fairer approach and has enabled more schemes to advance (Clarke and others, 2018).

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
	<ul style="list-style-type: none"> • A deprivation bias has been embedded with the partnership funding calculator in England, meaning that households within different deprivation bands qualify for funding on a sliding scale; in other words, the top 20% and 21 to 40% deprivation bands will qualify for 2.25 and 1.5 times higher (respectively) than the amount available to non-deprived households (Defra, 2011; Environment Agency, 2020d). • A recent evaluation of partnership funding estimates that 5,500 more properties in deprived areas have been protected from flooding than might have been under the previous approach, albeit the number of additional properties in deprived communities protected against coastal erosion is noticeably lower (Clarke and others, 2018). <p>Weaknesses</p> <ul style="list-style-type: none"> •** It is too soon to evaluate how Flood Re will support a just transition to risk-reflective pricing. The gradual rise in premiums towards risk-reflective levels may ultimately impact on penetration, and there will be some residents who will be unable to afford to reduce their flood risk. •** FCERM funding formula inherently favour defence-based approaches and the protection of people/property, which limits access to funding for other communities/different types of schemes/types of risk (England and Knox, 2015; Alexander and others, 2016a). • The absence of routine (independent) scrutiny means there is a potential lack of consistency in FCERM between organisations and areas, which may impact on social equity. • The lack of consistency between places was seen to be leading to differentials in outcome (for example, those where LLFAs had more experienced or committed staff in FCERM being more likely to have positive FCERM outcomes). • It was felt that some risks are better considered within FCERM governance (for example, urban flooding, fluvial and coastal flooding) than others (for example, coastal erosion and groundwater). • Clarke and others (2018: pxxi) indicate that partnership funding potentially increased inequality between regions (5 of the 12 regions studied had an estimated decrease in the number of properties protected than if partnership funding had not been implemented). • Securing alternative funding, as required by partnership funding, may lead to fairness issues as this may be easier for some areas than others. • Reactive post-event commitments of additional capital funding based on 'political calculations', has raised concerns about the potential inequalities this may create (for example, EAC, 2016). <p>Strengths</p>

Impact-based criteria	Main strengths and weaknesses identified from interviews and document analysis: England
<div data-bbox="178 353 336 443" style="background-color: #f4a460; border-radius: 10px; padding: 5px; text-align: center;">Acceptability</div>	<ul style="list-style-type: none"> ●** There is a strong sense of shared ownership/responsibility within the FCERM community. ●** Community consultation and engagement is embedded in FCERM practice. ●** There are successful examples at the local scale of effective community engagement, where efforts are being made to establish trust and ownership in FCERM matters. ●** There is often assurance that the most cost-effective approach has been adopted (although this is not necessarily the most acceptable or preferred option). <hr/> <p>Weaknesses</p> <ul style="list-style-type: none"> ●** Some communities are better equipped and able to input into FCERM decision-making and realise actions. This is likely to affect views on acceptability. It is also important to recognise that community acceptance of FCERM approaches are dynamic and may vary over time. ●** Community satisfaction in FCERM decision-making is variable and depends on levels of engagement, whether communities felt listened to, and whether they received investment to reduce and/or manage risk. ● It was reported that some communities feel abandoned compared to others.