

'CoBA' Coastal Based Approach

The Coastal Based Approach is a simple idea to establish partnerships covering the entire UK coast.

We are an island nation whose lives are enhanced by the coast. The coast provides the link between us and the vast marine resources which sustain the economy, environment and our society. It's time to invest in the way we manage and care for the coast.

The English Coast is a treasured landscape, visited and enjoyed by so many of us, providing a sanctuary and sustaining our health and well-being. But coasts are facing serious challenges:

- Coastal communities are on the frontline of climate change with storms and sea level rise;
- Coastal communities around England suffer from high levels of social deprivation;
- Dependence upon tourism results in a high proportion of seasonal work.

The coast is a highly contested space between different interested parties which lacks the resources and capacity to be effectively managed. At the same time, the coast offers huge opportunities:

- Nature-based solutions to climate change through conservation and restoration of coastal habitats providing a carbon sink - what we now call blue carbon and green recovery;
- Seasonal revenue from recreation and tourism could be used better to support deprived coastal communities;
- Access to the sea is critical for fisheries and all marine industries - there is huge potential for growth, particularly within ports and renewables;
- Increase connectivity between people and the sea – it is proven to be important for social and mental health and well-being benefits and will increase ocean literacy.

The number of public bodies and private sector interests is highest at the coast. This has made planning and management complex, with the focus too often either inland or offshore. We need a new resilient approach which focuses on the land-sea interface, allowing communities to take a real role in how the coast is managed.

The **Coastal Based Approach (CoBA)** provides flexible, collaborative, inclusive and effective leadership for some of the most challenging, complex and often neglected areas of the country. CoBA will formalise and build resilience into pre-existing community-led structures at the coast, providing local capacity to cover the areas currently unrepresented. It will assist existing and new local coastal partnerships, many of which have grown organically, to achieve their full potential and provide national consistency along the entire English coast.

CoBA is based upon the success of the Catchment Based Approach (CaBA) which began in 2010 and has grown to address land use and water issues across every English river catchment – CoBA will adapt learning from this approach for the coast. This paper asks the Government to support the initiation of CoBA (as it has with CaBA). The Government (and its Arms Length Bodies) have an array of ambitious coastal/marine initiatives that need direct local input to ensure effective and long-lasting delivery. For a modest investment the Government can leverage a large return: CaBA has demonstrated over £3 returned for every £1 invested. By bringing people and organisations together, CoBA will assist in the delivery of green recovery, net zero targets, restoration of marine biodiversity and the levelling up agenda on jobs & resilience. Very importantly, by investing in local capacity, it will mobilise co-operation between communities and Government. CoBA will facilitate the delivery of significant partnership funding to key projects around the English coast that won't otherwise be achieved. Investing in CoBA will offer considerable returns for the economy, environment and society.

To deliver CoBA across the entire English coast, Government is asked to:

1. **Champion the launch and delivery of CoBA in 2020-21 as it did with CaBA in 2010;**
2. **Target investment of £1.8m a year over 3 years to seed fund the development of CoBA;**
3. **Give policy priority to CoBA, enabling it to flourish and deliver.**

The Coastal Based Approach

Enabling systematic collaboration and integrated delivery for the entire English coast

This paper outlines the vision for CoBA and further information on how it would support delivery of Government policy and programmes.

Cross-Departmental Delivery Support

CoBA will provide an umbrella for Government Departments to deliver at the local level: working with local authorities and bridging the links across community networks through a place-based approach to decision making. This will link health & education agenda's; engage under-represented groups (children, elderly, BAME) in coastal regeneration, plus support recovery strategies for the hospitality sector in coastal towns. It will also contribute to the Cabinet Office 'One Public Estate' Programme through partnership working, encouraging collaboration for climate resilience.

Marine Policy Statement and delivery of Marine Plans

CoBA will help facilitate the exchange of ideas and information needed to help coastal communities and stakeholders understand coastal development opportunities, and how they can play their part in decision making. This will help ensure any new growth and infrastructure along the coast is sustainable on a local and national level, enhances biodiversity and is climate resilient.

25 Year Environment Plan

CoBA will provide enhanced support and advice to coastal communities who actively want to protect their local biodiversity. It will also provide a platform to better coordinate local knowledge (citizen science) with universities and other academics that can help us to meet the 25 YEP targets.

Flood and Coastal Erosion Risk Management (FCERM) Strategy & Shoreline Management Plans (SMPs)

CoBA will support the delivery of the (soon to be published) FCERM strategy long-term ambitions by providing an arm from Regional Flood and Coastal Committees out to local communities to better understand the climate impacts around their coast and identify solutions. By helping communities to understand the impacts and their responsibilities, they will be better prepared to take action.

Achievement of Good Environmental and Good Ecological Status

CoBA will provide a supportive framework for collaborative working, facilitating the delivery of action plans across every coastal community in England. It will build on a wealth of local knowledge and insight, work with CaBA Partnerships and help to address fresh water and marine issues to achieve Good Ecological and Good Environmental Status for the Clean and Plentiful Water and UK Marine Strategy.

Policy and project delivery

CoBA will provide a streamlined conduit for dialogue between government policy and local communities. This will be particularly useful for any post marine pioneer actions to implement a natural capital approach, or enabling local input into wider work such as 'valued blue/green spaces protected for future generations'.

CoBA and Coastal Partnerships

To address local needs there are already an array of community based Coastal Partnerships. Their coverage is fragmented and some are financially fragile, but there is huge experience within them which can benefit CoBA. They demonstrate significant local impact, delivering benefits to society, environment and economy. Consequently, they provide a platform to support delivery of CoBA - CaBA has proved that this approach provides a return on investment of over 3 to 1. Their geographical remit could be extended and with a secure base, they will stimulate more funding to enable delivery of a wide range of initiatives, realising benefits to coastal communities and delivering government objectives around the whole coastline.

Final thoughts

The UK's partnership approach to managing the coast is on the cutting edge of coastal management globally. This initiative is 'shovel ready' and it will be of significant interest at COP26 in November 2021 as a mechanism for local engagement and delivery of global objectives. It will also be the key driver for the successful delivery of the celebratory and inclusive Year of the Coast 2023 to coincide with designation of the England Coastal Path.



The Coastal Based Approach

Enabling Systematic Collaboration and Integrated Delivery

for the Entire English Coast

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Origins

The proposal for a Coastal Based Approach (CoBA) has arisen as a result of some recent events and conversations among the authors. The results of UK coastal governance research and Marine Parks research (Natasha Bradshaw) and a presentation by Aisling Lannin (MMO) on the legacy of the Marine Pioneers, raised similar issues. How we look at the challenges facing the coastal environment and our growing understanding of collaborative governance, suggest that we can do better. Bob Earll, Damian Crilly and Peter Barham have direct experience of helping develop the Catchment Based Approach (CaBA) at its inception (2010-2012). Applying this model to the entire English coast has prompted the idea for a Coastal Based Approach (CoBA). Our consultation with colleagues began in the autumn of 2019 and continues; it has been supportive and encouraging. We are now looking at how this idea may be taken forward.

Acknowledgements

Prepared by Bob Earll, Natasha Bradshaw, Peter Barham and Amy Pryor. Useful feedback has been provided by Damian Crilly, Bill Parker, Eve Leegwater, Sam Lew, Aisling Lannin, Sarah Young, Nicola Radford, Niall Benson, Rhoda Ballinger, Ian Townend, Tracey Hewett and Jan Brooke. In addition, the paper has benefitted from feedback following presentations at the Coastal Futures conference 2020, at workshops for the *Wholescape Approach to Marine Management* Project, an Environment Agency workshop on estuaries and coasts, and discussion with the Catchment Based Approach Estuaries and Coasts Working Group. The CoBA committee has been in contact with Government departments and bodies including Defra, the Marine Management Organisation and Environment Agency to ensure that the design and evolution of CoBA will support the increased efficiency and improved delivery of their objectives.

Executive Summary

1. Introduction: The Coastal Based Approach ‘CoBA’ Vision

England’s coast is a densely populated, highly inter-connected land and seascape, with a diverse mix of land ownership, governance, and economic competition between diverse legitimate interests. It is increasingly recognised that sustainable management of our infrastructure and natural assets and improving coastal community resilience to natural hazards poses complex systemic challenges. The Coastal Based Approach (CoBA) is a simple idea which offers a vision to strengthen and provide a systematic and flexible approach to enable leadership through collaborative, integrated, place based and inclusive management for the entire English Coast.

CoBA is based upon the ideas that have been used for the Catchment Based Approach (CaBA) launched in 2010 by the Conservative Government (via Defra). CaBA provides a supportive framework for collaborative working, facilitating the delivery of action plans in every English catchment addressing land use and water issues. It has proved that returns on investment from this approach can be over 3 to 1. This paper describes how CoBA could be set up and what issues would need to be resolved. The paper asks that the Government show leadership and vision for the coast and support for the CoBA to cover the entire English coastline.

2. The Problem: Meeting the Needs of Coastal Communities

How to meet the needs of the coast is set out in two main categories, firstly in relation to the issues and secondly in relation to governance.

- **Issues**

The management of coastal issues pose a set of challenges quite unlike those on land. The land-sea interface is very different and requires knowledge of both terrestrial and marine interactions and many of the issues that arise have no direct terrestrial counterparts. The stakeholders at the coast need to be versed in differing terrestrial and marine natural systems and their governance. Pressures on the coast arise from conflicting demands for space, which may increase with new marine development. The coast and coastal communities offer unique characteristics with a strong need to balance multiple interests. This will become increasingly important as the UK faces the impacts of climate change, with the coast on the front line.

- **Governance**

The needs of coastal communities have been highlighted by a number of recent reports which have put forward the case for more concerted central Government action (House of Lords, 2019). The complexity of coastal governance is well known; a plethora of organisations and designations have arisen in an ad hoc way over many years. There is a need for a more coherent approach to coastal governance based on our extensive understanding of collaborative working.

Beyond Silos Many organisations operating conventional land and sea management policies are set up in a historical context operating in ‘top-down’ discipline-specific ‘silos’. These traditional approaches originate from a ‘command and control’ paradigm that considers issues in isolation and tends not to take full account of: the complexity of natural systems; the interactions, opportunities and trade-offs across different sectors and scales; and the range of values and needs of the coastal community. Hence, opportunities are often missed, which would otherwise positively impact all members of communities and maximise budgetary efficiencies through integrated approaches.

A new approach to governance Co-ordination and collaboration are needed across scales, sectors, and levels of government. A flexible and enabling framework is needed to transition and transform understanding and management of complex natural systems whilst taking into account local and regional scales. This will improve a shared capability through adaptive management. It will need a shift from ‘government to governance’ with public, private and civil society sectors working in partnership to establish more collaborative governance. This would not require any changes to the current legislation. CoBA groups would have no legal duties or executive role; this would remain with statutory partners. CoBA would assist with the delivery of legal responsibilities and related programmes.

3. Proposal: Collaborative governance for collective action & delivery

Collaborative governance is an arrangement where one or more public agencies directly engage non-state stakeholders and citizens in informal, cooperative decision-making (see Note 5). It provides opportunities for identifying how to bridge the gaps in the overlaps of existing legislation and policy; capture synergies and minimise trade-offs and; promote cross-sectoral alignment in a forum for deliberation by inter-dependent stakeholders.

We now have many practical examples of effective partnership and collaboration models. When done well they can enable collaborative action on a project basis or local place-based issues, which generate a wide range of benefits enabling an integrated, values based and cross-sectoral approach. They are also particularly effective at breaking down barriers between organisations and delivering effective communications between stakeholders. Current examples include the Catchment Partnerships, Local Enterprise Partnerships, Coastal/Estuary Partnerships and Natural Capital Pioneers.

4. Delivery: Benefits to Government

The Coastal Based Approach will deliver:

- Collaborative governance for the entire English coast, filling the gaps where no partnerships currently exist, to ensure every coastal community is represented;
- A consistent national delivery framework with regional and local flexibility according to need;
- Strengthen communication and joint working between Government agencies, local authorities, non-governmental organisations and all sectors: port/harbour authorities, utility companies, renewables industry, tourism associations, fishing clubs, recreation user groups etc.;
- The mandate and resources to assist CoBA group partners to produce clear and agreed action plans. These plans would contribute to real improvement in the coastal environment, by facilitating the exchange of ideas and information between coastal communities, such as understanding the benefits of climate adaptation, to social well-being and conservation.
- Access to funding which would contribute to real improvements by sharing knowledge across coastal communities.

CoBA will provide clear benefits to Government and its agencies in the delivery of a wide variety of policies and programmes including:

- i) A platform for collaboration between coastal communities, businesses and local Government, to maximise multiple benefits;
- ii) Delivery of Government policies and programmes including the 25 Year Environment Plan targets;
- iii) Communication between stakeholders and within coastal communities, providing a unified voice.

CoBA will set out the need for defined coastal units, filling the gaps for the entire English coast. The funding benefits of collaborative working will be quantified, along with the value of resourcing local co-ordinators and national co-ordination. The English Coastal Partnerships Network (CPN) are ready to support delivery of CoBA.

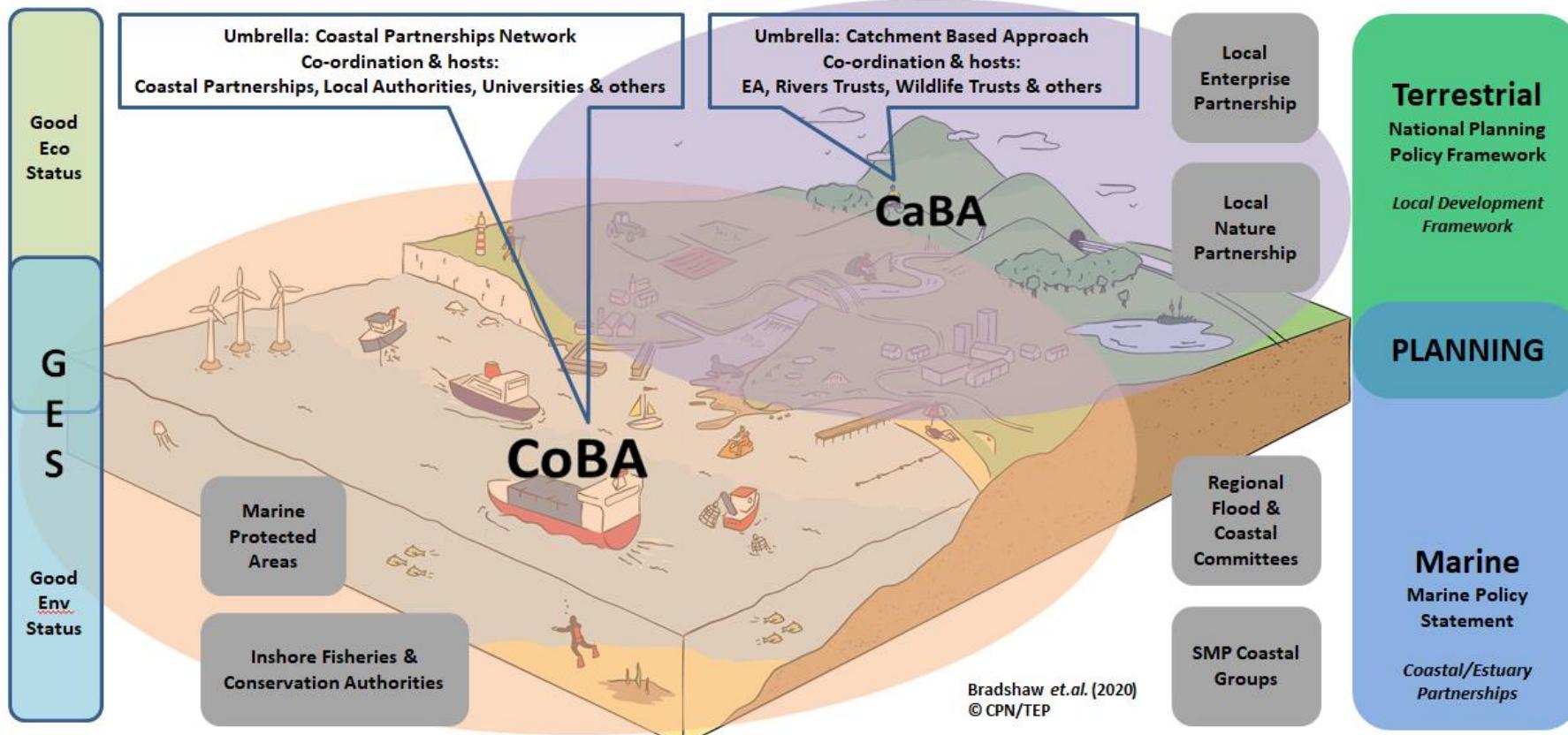
5. Conclusion: The Proposal

It is proposed that the model of the Catchment Based Approach be applied to the entire English coast.

More specifically the proposal asks for the Government:

- i) To demonstrate leadership and vision to face the challenges of climate change at the coast, and provide political credibility for CoBA by backing its' launch and delivery;
- ii) To provide targeted investment (as with CaBA) , prioritised from existing budgets, for the establishment of CoBA in 2021 – the start of a three year programme culminating in a celebratory and inclusive [Year of the Coast 2023](#).

Bridging the gap in the overlap through a Coastal Based Approach: CoBA



NOTES

Terrestrial & Marine Plans are statutory. Catchment & Coastal Partnerships are non-statutory but support statutory delivery including the achievement of Good Ecological Status for Clean and Plentiful Water and Good Environmental Status for the UK Marine Strategy.

Grey boxes are sector/issue-focused groups, committees or partnerships. CaBA/CoBA are cross-sector collaboration networks.

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1. Introduction: The Coastal Based Approach Vision

England's coast is a densely populated, highly inter-connected land and seascape, with a diverse mix of land ownership, governance and economic competition between diverse legitimate interests. It is increasingly recognised that sustainable management of our infrastructure and natural assets and improving coastal community resilience poses complex systemic challenges.

The Coastal Based Approach (CoBA) is a simple idea which offers a vision to strengthen and provide a systematic and flexible approach to enable leadership through collaborative, integrated, place-based management for the entire English Coast.

CoBA is based upon the ideas that have been used for the Catchment Based Approach (CaBA), established in 2013 by the Department for Environment, Food and Rural Affairs (Defra). CaBA provides a supportive framework for collaborative working, facilitating the delivery of action plans in every English catchment addressing land use and water issues (Note 1). CoBA and CaBA share the strong ethos around collaborative governance.

This paper describes the need for such an approach and outlines proposals on how CoBA could be set up and what issues would need to be resolved. It asks that the Government demonstrate leadership and vision for the coast by supporting CoBA to deliver a collaborative approach for the entire English coastline.

2. The Problem: Issues and Governance

2.1 Issues

The management of coastal issues pose a set of challenges quite unlike those on land.

The needs of coastal communities have been highlighted by several recent reports (House of Lords, 2019) which have put forward the case for more concerted central Government action. Coasts are on the front line of climate change (Environment Agency, 2020) with sea level rise and intensity of storms putting many coastal communities at risk. The management of flood and erosion risk is now a high priority. Developing approaches to flood and erosion risk management highlight the growing and ongoing need for adaptive management and for developing resilience. The rate of change and increasing vulnerability of coastal communities to climate change calls for a more radical shift in the way we look after this shared space. The coast is a major attraction with huge levels of seasonal recreation taking place which are integral to coastal economies, but many are deprived communities. Coastal and inshore natural resources include fisheries and wildlife and in the wider marine environment, businesses like ports and offshore renewables will lead to additional pressure and opportunities.

All these issues involve stakeholders that are quite different to any terrestrial management counterparts. Catchment management is about the interaction of land use and water, while coastal management also involves stakeholder interests in marine governance such as harbour authorities, offshore development and land-sea interactions e.g. shoreline management. The stakeholders and the expertise required in these two settings are very different.

At any one time there are many different Government and agency programmes in operation at the coast. Some current examples include the marine plans, 25 Year Environment Plan, the Coastal Concordat, the current consultation on water quality, the Shoreline Management Plan revision and supporting flood and coastal erosion risk management strategy. There is little coherence in the way these policies and initiatives are delivered. A wide range of voluntary initiatives have arisen to support co-ordination and awareness-raising due to the high value placed on the coast.

2.2 Governance

There is an inherent complexity about the coastal environment, straddling land and sea, with various levels of legislation that make it especially difficult to manage. Three decades of work on integrated coastal zone management (ICZM) and the lack of ongoing commitment to any overall coastal strategy have demonstrated how difficult governance across the land-sea divide can be; and there is no current prospect for its resolution. There is a need to encourage inclusive, sustainable place-based management and support effective planning and partnerships, which focus on facilitating action from within and between bodies to encourage a long-term approach to delivery (House of Lords, 2019).

There are different management groups with coastal interests – Regional Flood and Coastal Committees, Coastal Groups for shoreline management, Catchment Partnerships with estuarine interests, Harbour Authorities, Inshore Fishing and Conservation Authorities and other statutory arrangements, as illustrated in the diagram above. In addition there is a huge number and diversity of informal user groups. The formal management and informal interests require co-ordination for effective governance.

Due to the high value placed on many coastal areas, there are a plethora of coastal/marine designations that have evolved over the years in an ad hoc way. These include Heritage Coasts, Areas of Outstanding Natural Beauty, World Heritage Sites and National Parks, Marine Conservation Zones, Special Protection Areas/Special Areas of Conservation, Sites of Special Scientific Interest and Ramsar sites, all with different objectives and management structures. Currently, thought is being given to Highly Protected Marine Areas and how the legacy of the Marine Pioneer and the Marine Park for Plymouth are to be taken forward. There is a need to simplify messaging around the value of our coasts and seas. CoBA could help to join the dots by providing a platform for vertical and horizontal integration across all levels of governance and scales (national, sectoral and local), engaging stakeholders and coastal communities in a consistent manner. This will benefit how our coasts are managed.

Whilst there are currently three networks of partnerships in place that cover the English coast (Note 2) there are still major gaps in coverage especially for the rural coastline. Put simply, there is no coherence in the way we have organised our approach to the coast, but experience we can build on and improvements we can make through CoBA

2.3 Meeting the Needs of Coastal Communities

i. **Beyond Silos**

We now have an extensive literature supporting the benefits of collaborative governance (Note 5). However, many organisations operating conventional land and sea management policies are set up in a historical context operating in 'top-down' discipline-specific 'silos'. These traditional approaches are predicated upon a command and control paradigm that considers issues in isolation when setting objectives. These approaches tend not to take full account of the complexity of natural systems, the interactions, opportunities and trade-offs across different sectors and scales, and the range of values and needs of the coastal community. Hence, opportunities to optimise synergies are often missed, which would otherwise positively impact all members of communities and maximise budgetary efficiencies through integrated approaches. To work properly in a better aligned manner, it will be important that CoBA recognises and understands what local people feel about their environment, what they want out of it and how much they are prepared to help to achieve.

ii. **A new approach to governance**

Co-ordination and collaboration are needed across scales, sectors and levels of government. A flexible and enabling framework is needed to transition and transform understanding and management of complex natural

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systems whilst taking into account local and regional scales. This will improve a shared capability through adaptive management. It will need a change in emphasis from 'government to governance' with public, private and civil society sectors working in partnership and establishing collaborative governance for collective action. This would *not* require any changes to the current legislation and CoBA groups would have no legal duties or executive role; this would remain with statutory partners. CoBA would assist the delivery of legal drivers and programmes.

3. Proposal: Collaborative governance for collective action & delivery

Collaborative governance is an arrangement where one or more public agencies directly engage non-state stakeholders and citizens in informal, cooperative decision-making. It provides opportunities for identifying how to bridge the gaps in the overlaps between sectoral approaches; capture synergies and minimise trade-offs and; promote cross-sectoral alignment in a forum for deliberation by inter-dependent stakeholders.

We now have many practical examples of effective partnership and collaboration models. When done well they can enable collaborative action on a project basis or local place based issues which generate a wide range of multiple benefits due to enabling an integrated, values based and cross-sectoral approach. They are also particularly effective at breaking down barriers between organisations and delivering effective communications between stakeholders. Current examples include the Catchment Partnerships (Note 1), Coastal/Estuary Partnerships (Note 3), Local Enterprise Partnerships, Local Nature Partnerships and the Natural Capital Pioneers.

The proposal is that there should be an approach to coastal governance which builds upon our experience of the Coastal Partnerships and the Catchment Based Approach (CaBA). CoBA is similar to CaBA and it will be important that local circumstances help to determine the best way of delivering it. In 2018, CaBA action and activities reported engagement with 27,846 stakeholders in 452 projects. They identified that for every £1 directly invested by the Government, CaBA partnerships raised £6.50 from non-governmental funders, plus £23 million of wider government funding was invested (CaBA, 2018). CoBA would build on the existing governance framework that enables coastal agencies and organisations to work together to improve service and project delivery, resulting in more integrated and better decision-making.

Every coastal community around the English coast will be represented. The lessons of the Coastal Partnerships, Coastal Groups, Catchment Based Approaches, and the Marine Pioneer (among others) will be converted into a routine communication and delivery mechanism. This will provide clear benefits to the Government and its agencies in the delivery of a wide variety of policies and programmes. It will provide leadership and assist facilitation on coastal matters at a time of growing awareness of the needs of the coast and coastal communities and the challenges induced by climate change.

3.1 Delivery of Government policies and programmes

The Coastal Based Approach will ensure systematic coverage of the entire English coast:

- Every coastal community represented through place-based governance, filling the gaps where no collaborative partnerships currently exist;
- A consistent national delivery framework with regional and local flexibility according to need;
- A governance structure to enable and strengthen collaborative working and communication between Government agencies, non-governmental organisations, and utility companies;
- The mandate and resources to assist CoBA group partners to produce clear and agreed action plans. These plans would contribute to real improvement in the coastal environment, by facilitating the exchange of ideas and information between coastal communities, such as understanding the benefits of climate adaptation, to social well-being and conservation.

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- Access to funding which would contribute to real improvements by sharing knowledge across coastal communities.

3.2 Benefits to Government

CoBA will provide clear benefits to Government and its agencies in the delivery of a wide variety of policies and programmes in three ways:

- i. **Collaboration to deliver projects with multiple benefits** A platform for coastal communities to join up with businesses, local government and other partners to benefit how our coasts are managed: communities taking more ownership, helping public bodies to manage and regulate users, and protect, restore and enhance the coastal environment. A principle strength of CABA partnerships is their ability to 'convene, coordinate and collaborate'; CoBA will be designed to fully recognise this. The cost-benefit ratio has been recognised to be at least 3-1, i.e. for every £1 of Government funding £3 is raised from other organisations. CoBA will help deliver projects with multiple benefits across social, economic and natural capitals.
- ii. **Delivery of Government policies and programmes** There are many Government and agency policies and initiatives in operation at the coast. CoBA will help facilitate and enable dissemination and delivery. Some current examples include:
 - 25 Year Environment Plan, Local Industrial Strategies and Local Nature Restoration Strategies
 - Flood and Coastal Erosion Risk Management Strategy & revision of Shoreline Management Plans
 - Marine Policy Statement and delivery of Marine Plans across the land-sea interface
 - National Planning Policy Framework and Local Development Framework
 - Water Framework and Marine Strategy Framework approaches
 - Coastal concordat to improve co-ordinated, transparent, and accountable licencing.
- iii. **Communication** Bring the knowledge and experience of coastal communities into decision-making. One of the key strengths of existing Coastal Partnerships is the strong communication links maintained with key stakeholders operating across the land sea boundary. CoBA will facilitate the routine communication between Government, a huge range of stakeholders and coastal communities.

3.3 The Coastal Based Approach (CoBA): What would and wouldn't be needed?

i. No new legislative arrangements

CaBA provides a politically acceptable model that has become established over the years and has helped to create funding and consistency for local bodies to deliver. One of the main reasons for this acceptance is that no new legislative or governance arrangements have had to be introduced. Implementing CoBA would not require any legislative changes to current governance arrangements. CoBA will provide an 'enabling framework' to support stronger partnership initiatives to support delivery of existing regulatory duties and other programmes without seeking to alter the governance of coastal resources or seek new statutory arrangements.

CoBA will provide a hub around which many loose ends can be linked and a coherent approach to the delivery of existing legislation. It will be set up relatively easily to help meet the many challenges facing the coast and coastal communities. Current work on the Marine Pioneers and the Marine Park in Plymouth may provide further useful guidance on the mechanisms for establishing CoBA, as will the legacy of over fifty coastal and estuary partnerships which have evolved since the 1990s (Stojanovic & Barker, 2008; Bradshaw et.al. *in preparation*).

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ii. Coastal units

CoBA aims to cover the entire coast, rural and urban, in practical units reflecting specific geographic priorities. Unlike catchment units based on the watershed, there are a number of scale and administrative units operating across and along the coast. This issue requires investigation at the local and regional scale to identify appropriate units and fill the gaps. The idea is that we would use existing partnerships as a starting point.

There are a number of criteria at play which, once recognised and agreed, could form the basis of systematic coverage of the entire coast of England; these include:

- The new Defra administrative units outlined in the 25 Year Environment Plan;
- The recognition of existing Coastal Partnerships which span coastal Local Authority boundaries; and
- Sediment cells used for shoreline management.

A review of existing networks, gaps and overlaps, is the next step to recommending appropriate CoBA units. Preparatory work is being done by the Coastal Partnerships Network.

iii. New coverage – filling the gaps

Coastal Partnerships already exist in many areas and have demonstrated success in developing partnerships and delivering action over the past three decades. Care will need to be given to make sure that the best elements of these are brought into developing CoBA. Coastal Partnerships could be the focus for delivery in many places.

Once the gaps have been identified, as with the initial development of CaBA, there will be a call to coastal organisations to lead CoBA groups to complete the coverage of the entire coast.

iv. The funding benefits of collaborative working

Various studies such as the annual CaBA Monitoring & Evaluation (CaBA, 2018) demonstrate that there would be substantial returns on the investment. The cost-benefit ratio of working collaboratively across catchments is recognised to be at least 3-1 and is anticipated to be similar for collaboration across coastal units. Similar reviews of Coastal Partnership have highlighted the financial benefits that arise from working in partnership at the coast (Entec, 2008)

v. Funding co-ordination and facilitation of the groups

As with CaBA, hosting CoBA will need financial backing from central Government departments (probably Defra) to ensure that there is sufficient funding to enable the work. There are a number of other agencies and major stakeholders to be involved. As has been shown with CaBA, the hosting of Catchment Partnerships within local organisations has created cost efficiencies, information sharing and collaborative effort to achieve programmes of work. This ultimately leads to public sector savings and benefits exceeding costs.

vi. Overall national co-ordination

To assist in developing successful approaches and expertise, CoBA will benefit from the development of an umbrella body similar to Wildlife & Countryside Link or The Rivers Trust to provide co-ordination and assistance to local delivery. This could evolve from the strong relationship between three existing Coastal networks – ‘the triumvirate’ - which includes the Local Government Association Special Interest Group, the Coastal Communities Alliance and the Coastal Partnerships Network (see Note 2).

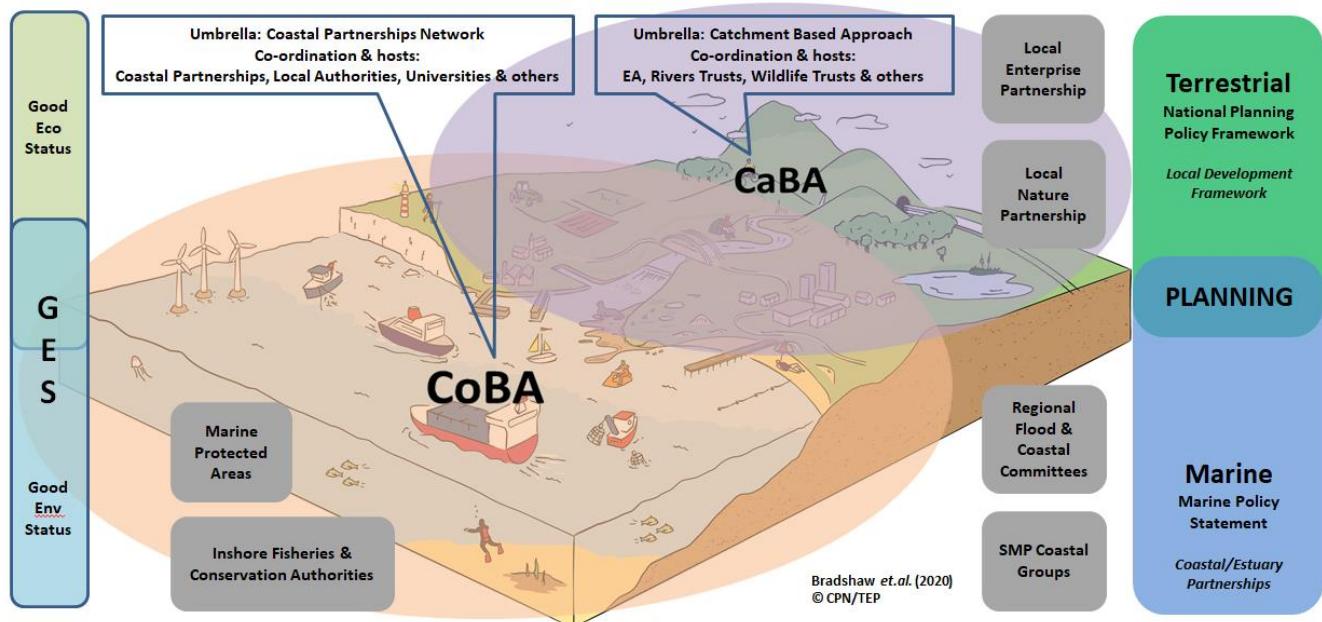
4. Conclusion: What are we asking for?

Put simply we are asking for the idea of the Catchment Based Approach to be applied to the entire English coast.

More specifically the CoBA vision calls for the Government to:

- Show leadership and vision to take the initiative forward, providing the political credibility for the coast by backing delivery of the Coastal Based Approach for the entire English coast.
- Provide considerable financial assistance to kick start the process (as with CaBA) to support the establishment of CoBA in 2021 – the start of the three year programme culminating in a celebratory and inclusive Year of the Coast 2023 (see Note 6).

Bridging the gap in the overlap through a Coastal Based Approach: CoBA



NOTES

Terrestrial & Marine Plans are statutory. Catchment Partnerships and Coastal Partnerships are non-statutory but support statutory requirements including plans, policy and Good Eco/Env Status.

Grey boxes are sector/issue-focused groups, committees or partnerships. CaBA/CoBA are cross-sector collaboration networks.

CaBA delivery is supported by over 100 Catchment Partnerships. The equivalent mechanism exists in around 60 Coastal/Estuary Partnerships.

Umbrella bodies exist for catchments and the coast to provide information sharing, support learning, dissemination of best practice, and a conduit to national agendas.

5. NOTES

Note 1 The Catchment Based Approach (CaBA): Some Essentials

The prompt for the Catchment Based Approach (CaBA) derived from two main events. The first was the very poor response to the Water Framework Directive (WFD) River Basin Plans which was developed by the EA in the first planning cycle. The second prompt was the NGO-led infringement proceedings taken out against the UK Government because it had failed to consult properly on the River Basin District Plans. The Government response to this criticism was to set up what became the Catchment Based Approach which sought to address a number of points by setting up a pilot with 55 catchment groups. Each was charged with producing a catchment plan which they accomplished successfully. Volunteer hosting organisations were sought and included a wide range of organisations such as Rivers Trusts, Wildlife Trusts and Coastal Partnerships (Thames). This provided useful experience which was also built into the CaBA approach, which went on to establish over 100 CaBA catchment partnerships throughout England and Wales.

CaBA essentially embodies the following ideas:

1. CaBA embed collaborative working at a river catchment scale, delivering a range of environmental, social and economic benefits. It is an inclusive, civil society-led initiative that works in partnership with Government, Local Authorities, water companies, businesses and more, to maximise the natural value of our environment. CaBA Partnerships are actively working in all 100+ river catchments across England and cross-border with Wales directly supporting achievement of many of the targets under the Water Framework Directive and the UK Government's 25 Year Environment Plan.
2. Catchments were fully recognised as being a well understood geographic management unit in the water sector and the watershed boundaries of the catchments (units) are now reasonably well established and clear. This has helped to enable cohesive and collective effort to improve water quality, river restoration and habitat improvement through more integrated catchment management.
3. CaBA has no statutory footing *per se*, nor does it tell stakeholders what they should be doing; it is an 'enabling framework' providing a centre for information exchange and expertise to assist the delivery of regulatory duties.
4. CaBA groups bring key stakeholders together (in particular those with budgets) who are working on projects and programmes within the catchment. They enable collaboration and when asked, provide advice as well as provide a focal point for joint projects/initiatives. Having said that, volunteer involvement is also key to the success of CaBA delivery body organisations.
5. CaBA facilitates communication and information sharing between a wide range of stakeholders in the catchments through Catchment Co-ordinators supported by the Environment Agency. In addition, the Rivers Trust has taken an increasingly prominent role in supporting the EA delivery of CaBA, and hosting Catchment Partnership teams.
6. Agencies provide a high level of technical support on programmes to underpin CaBA involvement and funding is also available for projects which can deliver real benefits. This may be leading to a longer-term and more place-based approach to governance.

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Note 2 Three major networks operating in the coastal setting

There are now **three major networks** operating in the coastal setting:

- i. **Local Government Association (LGA)** Coastal Special Interest Group (SIG). Local Authority led planning and engineering work (in conjunction with the Environment Agency) covers each major coastal sediment cell around the coast of England and Wales (HR Wallingford, 1993). Together with the Environment Agency, they are closely aligned with the Regional Coastal Committees and Coastal Groups for flood protection and coastal erosion.
- ii. **Coastal Communities Alliance (CCA)** is a partnership of Coastal Local Authorities and partners seeking to drive long-term and sustainable socio-economic development for coastal communities. It does this by:
 - Providing a voice for socio-economic regeneration in coastal areas within Government;
 - Drawing together a wide network of resources / contacts for coastal authorities and partners.
- iii. **The Coastal Partnerships Network (CPN)** voluntarily co-ordinate the efforts of Local Coastal and Estuary Partnerships promoting sustainability across the UK.

The three networks come together annually through the **Coastal Challenge Summit** to address common issues. Concern about funding is an issue for all these groups and that reduces the long-term effectiveness of their projects and initiatives. Other networks such as the National Coastal Tourism Association and other groups such as Coastal Action Groups, could be engaged in a collective network through the Coastal Challenge Summit initiative.

Note 3 The Coastal Partnerships

The Coastal Partnerships have extensive experience of developing voluntary cross-sectoral partnerships (30+ years) and the development work on CaBA was informed by this model. National knowledge exchange to support the (often isolated) work of local Coastal Partnership Officers was initiated in 2006 with the first Coastal Partnerships annual Forum, leading to formation of the long-standing volunteer run Coastal Partnerships Network (CPN). The CPN now connects 70+ Coastal Partnerships and other coastal initiatives around the UK. Through collaborative leadership, the CPN has attracted funding over the past two years to stabilise, grow and employ a small dedicated team to accelerate CPN into a legal entity with a clear, long term strategy. This investment indicates the growing awareness and need for partnership working around the coast. Increasingly, both Coastal Partnerships and Catchment Partnerships have also recognised the importance of engaging local industries and communities for both financial and volunteer support, which has helped to counter the funding issues of austerity and led to significant partnership actions; however, funding remains a major issue for all these bodies. The current Marine Pioneer projects have used a very similar collaborative approach and propose sustainable financing. Significant opportunity exists to build on the longevity of existing Coastal Partnerships and identify the gaps in existing network provision.

Note 4 The Rivers Trust

The Rivers Trust has grown to provide central leadership and delivery support on the ground. Like the local Rivers Trusts and other CaBA delivery bodies, they are non-governmental organisations with a long term perspective; they are less subject to political/government agency re-organisations and they provide an independent and local voice for the river/catchment.

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Note 5 **Collaborative governance for collective action - *common cause commission by*** **Damian Crilly, Environment Agency**

Position - *complex natural systems*

England is a densely populated, highly inter-connected landscape, with a diverse mix of property rights and competition between diverse legitimate interests. It is increasingly recognised that sustainable management of our natural infrastructure assets and improving community resilience to natural hazards pose complex systemic challenges.

1 Systemic challenges are beyond the capability, mandate and remit of any one government agency or organisation alone. They involve problems that are dynamic and result from multiple component interactions (biophysical, economic and social). These interactions operate across spatial and temporal scales. Such challenges are compounded by climate change and population growth creating 'wicked problems' (Rittel and Webber, 1973) and 'resource dilemmas' (Ison and Collins, 2008; Smith and Porter, 2010).

2 Silo approaches focus on managing individual issues or isolated components and reduce environmental systems to their constituent elements (Glasbergen and Driessen, 2002), under the assumption that managing individual elements will lead to an overall improvement in ecosystem health (Glasbergen and Driessen, 2002) to increase stability and predictability (Holling and Meffe, 1996).

3 National government in England, sets top-down policy and strategic direction. Local authorities and many other organisations operate at more regional and local levels. At each level, sectoral interests, power dynamics and conflicts can occur (Smith *et al.*, 2015). Decisions at one level or scale can have impacts at others (Daniell *et al.*, 2014). Local government often lacks the necessary capacity and civil society organisations lack the necessary status and delegated authority and responsibility for effective land and water management (Smith *et al.*, 2015).

4 Development of more resilient and sustainable approaches under a national governance framework will require a review of strategies and structures (Argyris, 1978; King and Jiggins, 2002; Medema *et al.*, 2014; Pahl-Wostl, 2009) and governance arrangements (Ostrom, 2010) to address complex systemic challenges.

5 In such a transition public, private and civil society actors, will need 'distributed' responsibility and authority (Rosenau, 1995). This will entail citizen participation and mechanisms for 'open' governance (Defra 2013, OECD, 2016), with public scrutiny, transparency and accountability of decision making. It needs to be inclusive, engage stakeholders, and facilitate knowledge exchange and deliberation, avoiding organisational, budgetary and disciplinary 'silos' (Cash *et al.*, 2006; Emerson and Gerlak, 2014; Medema *et al.*, 2014; OECD, 2011; OECD 2015; Sjah and Baldwin, 2014; Richard-Ferrondji, 2014). This will reduce risks for society (Pahl-Wostl, 2009), through more effective solutions (Bizikova *et al.*, 2013; Benson *et al.*, 2015; Medema *et al.*, 2008).

Problem - *conventional governance arrangements*

Conventional land and water management policies and practices in England tend to operate in 'top-down' discipline-specific 'silos'. These traditional approaches are predicated upon a command and control paradigm that consider issues in isolation when setting objectives (Voulvoulis *et al.* 2017). They do not consider: the complexity of natural systems; the interactions and trade-offs across different sectors and scales or; the impacts of a changing climate (Galloway, 2011; Grigg, 2008; Milly, 2008; Müller-Grabherr *et al.*, 2014). Hence, they miss opportunities to optimise synergies or maximise budgetary efficiencies.

Coordination and collaboration are needed across scales, sectors and levels of government³ (Benson *et al.*, 2013; Berkes, 2009; Cook *et al.*, 2017; Smith *et al.*, 2015). A flexible and enabling framework⁴ is needed to transition⁵ and transform understanding and management of complex natural systems (Van der Wal *et al.*, 2014). This will improve a shared capability through adaptive management (Ison and Collins, 2008). It will need a shift from 'government to governance' (Jager *et al.*, 2016) by public, private and civil society sectors working in partnership. Collaborative governance for collective action.

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Proposal - collaborative governance for collective action

Collaborative governance is an arrangement where one or more public agencies directly engage non-state stakeholders in formal, cooperative decision-making (Ansell and Gash 2008). It provides opportunities for identifying how to: bridge the gaps in overlaps; capture synergies and minimise trade-offs (Leck *et al.*, 2015) and; promote cross-sectoral alignment in a legal forum for deliberation by inter-dependent stakeholders (Smith *et al.*, 2015).

The establishment of '*community interest companies*' could provide the legal status, legitimacy and power to deliver the means and objectives for the government's 25 Year Environment Plan.

References

Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice Journal of Public Administration Research and Theory, 18(4): 543-571.

Argyris, C. and Schon, D., 1978, *Organizational learning: A theory of action perspective*, Addison Wesley, Reading, Mass.

Benson, D., Jordan, A., Cook, H. and Smith, L., 2013, Collaborative environmental governance: are watershed partnerships swimming or are they sinking? *Land Use Policy*, 30, 1, 748-757.

Benson, D., Gain, A. and Rouillard, J., 2015, Water governance in a comparative perspective: From IWRM to a 'nexus' approach? *Water Alternatives* 8, 1, 756-773.

Berkes, F., 2009, Evolution of co-management: Role of knowledge generation, bridging organizations and social learning, *Journal of Environmental Management* 90, 1692-1702.

Bizikova, L., Roy, D., Swanson, D., Venema, H. and McCandless, M., 2013, The water-energy-food security nexus: Towards a practical planning and decision-support framework for landscape investment and risk management, *The International Institute for Sustainable Development*, Manitoba, Canada.

Cash, D., Adger, W., Berkes, F., Garden, P., Lebel, L., Olsson, P., Pritchard, L. and Young, O., 2006, Scale and cross-scale dynamics: governance and information in a multilevel world, *Ecology and Society*, 11, 2, Art.8 [online].

Cook, H., Couldrick, L and Smith, L., 2017, An assessment of intermediary roles in payments for ecosystem services schemes in the context of catchment management: An example from South West England, *Journal of Environmental Assessment Policy and Management*, 19, 1.

Daniell, K. and Barreteau, O., 2014, Water governance across competing scales: Coupling land and water management, *Journal of Hydrology*, 519, 2367-2380.

Defra, 2013, *Catchment Based Approach: Improving the quality of our water environment: A policy framework to encourage the wider adoption of an integrated Catchment Based Approach to improving the quality of our water environment*.

Emerson, K. and Gerlak, A., 2014, Adaptation in Collaborative Governance Regimes, *Environmental Management*, 54, 4, 768-781.

Galloway, G.E. (2011) If stationarity is dead, what do we do now? *Journal of the American Water Resources Association* 47, 563-570.

Glasbergen, P., Driessen, P.P.J., 2002. The paradigm shift in environmental politics. Towards a new image of the manageable society. In: Driessen, P.P.J., Glasbergen, P. (Eds.), *Greening Society the Paradigm Shift in Dutch Environmental Politics*. Kluwer Academic Publishers, Dordrecht, pp. 3-25.

Grigg, N., S., 2008. Integrated water resources management: balancing views and improving practice, *Water International*, 33:3, 279-292

Holling, C.S., Meffe, G.K., 1996. Command and control and the pathology of natural resource management. *Conserv. Biol.* 10 (2), 328-337.

Ison, R. and Collins, K., 2008, Public policy that does the right thing rather than the wrong thing righter. *Analysing Collaborative and Deliberative Forms of Governance*, The Australian National University, Canberra.

Jager, N., Challies, E., Kochskamper, E., Newig, J., Benson, D., Blackstock, K., von Korff, Y. (2016). Transforming European Water Governance? EU Water Framework Directive implementation in 13 member states. *Water*, 8(4), 156.

King, C. and Jiggins, J., 2002, A systemic model and theory for facilitating social learning. In: Leeuwis, C. and Pyburn, R. (Ed), *Wheelbarrows full of frogs. Social learning in rural resource management*. Koninklijke Van Gorcum, Aasen, p85-104.

Leck, H., Conway, D., Bradshaw, M. and Rees, J., 2015, Tracing the water-energy-food nexus: description, theory and practice, *Geography Compass*, 9, 8, 445-460.

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Medema, W., McIntosh, B. and Jeffrey, P., 2008, From premise to practice: a critical assessment of integrated water resources management and adaptive management approaches in the water sector, *Ecology and Society* 13, 2, Art.29 [online].

Medema, W., Wals, A., Adamowski, J., 2014, Multi-Loop Social Learning for Sustainable Land and Water Governance: Towards a Research Agenda on the Potential of Virtual Learning Platforms, *NJAS - Wageningen Journal of Life Sciences* 69, 23–38.

Milly, P.C.D., Betancourt, J., Falkenmark, M., Hirsch, R.M., Kundzewicz, Z.W., Lettenmaier, D.P. and Stouffer, R.J. (2008) Stationarity Is Dead: Whither Water Management? *Science* 319, 573–574.

Müller-Grabherr, D., Valentin Florin, M., Harris, B., Crilly, D., Gugic, G., Vegter, J., Slob, A., Borowski, I., Brils, J., 2014. Integrated river basin management and risk governance. In: Brils, J., Müller-Grabherr, D., Négrel, P., Vermaat, J.E. (Eds.), *Risk-informed Management of European River Basins*. Springer, Berlin Heidelberg, pp. 241–264.

OECD, 2011, Water Governance in OECD Countries: A Multi-level Approach, *OECD Studies on Water*, OECD Publishing, Paris.

OECD, 2015, Water and Cities: Ensuring Sustainable Futures, *OECD Studies on Water*, OECD Publishing, Paris.

OECD, 2016, Open Government: the Global Context and the Way Forward, *OECD Publishing*, Paris.

Ostrom, E., 2010, Beyond markets and states – polycentric governance of complex economic systems, *American Economic Review*, 100, 1–33.

Pahl-Wostl, C., 2009, A conceptual framework for analyzing adaptive capacity and multi-level learning processes in resource governance regimes, *Global Environmental Change*, 19, 3, 354–365.

Richard-Ferroudji, A., 2014, Rare birds for fuzzy jobs: a new type of water professional at the watershed scale in France, *Journal of Hydrology*, 519, 2468–2474.

Rittel, H. and Webber, M., 1973, Dilemmas in a general theory of planning, *Policy Science*, 4, 155–169.

Rosenau, J., 1995, Governance in the Twenty-first Century, *Global Governance*, 1, 1, 13-43.

Sjah, T. and Baldwin, C., 2014, Options for future effective water management in Lombok: a multilevel nested framework, *Journal of Hydrology*, 519, 2448–2455.

Smith, L. and Porter, K., 2010, Management of Catchments for the Protection of Water Resources: Drawing on the New York City Watershed Experience, *Regional Environmental Change*, 10, 4, 311- 326.

Smith, L., Porter, K., Hiscock, K., Porter, MJ. and Benson, D. (Ed.), 2015, *Catchment and River Basin Management: Integrating Science and Governance*, Earthscan Studies in Water Resource Management, Routledge.

Van der Wal, M., De Kraker, J., Offermans, A., Kroese, C., Kirschner, P. and Van Ittersum, M., 2014, Measuring Social Learning in Participatory Approaches to Natural Resource Management, *Environmental Policy and Governance*, 24, 1, 1–15.

Voulvoulis, N., Arpon, K., D., & Giakoumis, T., The EU Water Framework Directive: From great expectations to problems with implementation *Science of the Total Environment* 575 (2017) 358–366

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Note 6 Year of the English Coast

The CPN is working alongside the Coastal Communities Alliance, the Local Government Association Coastal SIG, Natural England, the National Coastal Tourism Academy and the New Economics Foundation on a designated 'Year of the Coast' programme.

The original premise centred around using the opening of the amazing new England Coast Path National Trail – which not only opens new access routes but will physically connect coastal communities along its length from 2021 onwards - as an opportunity and catalyst to raise awareness of much needed solutions for our complex coastal challenges.

The timeline is changing due to Coronavirus and our aims our becoming more targeted to the new context in which we find ourselves, but the original intent to support, raise awareness of and celebrate all our coastal communities have to offer remains as integral as ever.

Due to the devastating impacts of Covid-19, Year of the Coast has been reframed to help with providing the support our coastal communities need into 2021 and beyond.

It is now a three-year programme:

2021 – A year of supporting green recovery and collectively shaping a better future.

2022 – A year of exploring cultural connections and consolidating action.

2023 – A year of celebration. Highlighting all our diverse coast and communities have to offer.

We believe this will deliver a larger-scale, more impactful, context and community-tailored programme, culminating in celebration in 2023.

References

CaBA (2018) CaBA Monitoring & Evaluation 2017/2018: CaBA Benefit Assessment Working Group, September 2018.

Defra (2013) Catchment Based Approach: Improving the quality of our water environment (accessed 11.09.2019)

Defra (2019): Water management catchment map and catchment coordinator list.

<https://www.gov.uk/government/publications/map-of-water-management-catchments> (accessed 11.09.2019)

Entec (2008) Profiting from Partnership: Putting a Price on Member Benefits. *The Financial Benefits to Working in Partnership at the Coast*. A report prepared by Entec consultants for the Coastal Partnerships Working Group with support from Defra, the LGA Coastal Issues Special Interest Group and Kent County Council.

Environment Agency (2020) National Flood and Coastal Erosion Risk Management Strategy for England (accessed 24.08.2020).

House of Lords Report (2019) Government response to the Report of Session 2017-2019 of House of Lords' Regenerating Seaside Towns and Communities Select Committee: the Future of Seaside Towns.
<https://www.parliament.uk/regenerating-seaside-towns> (accessed 11.09.2019).

HR Wallingford (1993) Coastal Management: Mapping of littoral cells (accessed 11.09.2019)

Coastal defence management planning is led through Shoreline Management Plans which are high level, non-statutory policy documents.

Maltby (2009) Functional Assessment of Wetlands. Towards evaluation of ecosystem services. Woodhead Publishing Ltd.

Stojanovic, T. and Barker, N. (2008) Improving governance through local coastal partnerships in the UK *Geographical Journal* 174.4 (2008): 344-360. <https://doi.org/10.1111/j.1475-4959.2008.00303> (accessed 25.06.2020).

The Coastal Communities Alliance is focused on socio-economic challenges around the coast of Britain:
<https://www.coastalcommunities.co.uk/> (accessed 11.09.2019)

The Catchment Based Approach is an inclusive, civil society-led initiative that works in partnership with Government, Local Authorities, Water Companies, businesses and more, to maximise the natural value of our environment: <https://catchmentbasedapproach.org/> (accessed 25.06.2020)