The background of the slide is a photograph of a rural landscape. In the foreground, there is a rustic wooden fence made of vertical posts and horizontal logs, with some bare branches leaning against it. Beyond the fence is a green field, and in the distance, there are tall, thin trees and rolling hills under a cloudy sky.

Partnerships in Working with Natural Processes schemes in the UK: Identifying factors that impact & shape success

Jenny Broomby

October 2017

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Executive Summary

This report sought to explore the factors that impact and shape the success of partnerships in Working with Natural Processes schemes in the UK, analysing the drivers, barriers and enablers of both the partnership initiation and eventual success once established, with the intention of developing recommendations of best-practice guidance for future partnerships. A case-study methodology was adopted, complemented by qualitative research practices including semi-structured interviews and a survey. The findings of this research suggest that the extent to which factors are barriers or enablers to the initiation or success of a partnership is heavily context-dependent and as such, the ability to create a set of best-practice guidelines is questionable. That said, some common themes have been identified that will provide valuable guidance for the future.

Local communities, landownership and the evidence gap are examples of factors that can both drive a partnership and act as a barrier, depending upon context and proximity. Other factors that drive and enable the creation of partnerships are project champions; pre-existing relationships between partner organisations; a common vision; local organisations, authorities and democratically-elected project officials; the use of trial catchments; and the role of neutral agents such as NGOs and academic institutions. In addition, during a partnership, the use of local knowledge, governance structures and a common vision between partners further contribute to the success of the project overall.

Contents

Acknowledgements.....	i
Executive Summary.....	ii
List of Figures	1
List of Tables	1
Abbreviations	1
1 Introduction	2
1.1 Background	2
1.2 Research aims & objectives.....	3
2 Project Outcomes	4
2.1 A note on methodology	4
2.2 Selected case studies	4
2.3 Drivers, barriers & enablers: the initiation of an NFM partnership	5
2.4 Enablers & challenges: during the NFM partnership	10
3 Discussion	12
3.1 Localism	12
3.2 Proximity	13
3.3 Landowners	14
3.4 Project champions.....	14
4 Study limitations, reflection & conclusion	16
4.1 Study limitations	16
4.2 Conclusion	16
References.....	I

List of Figures

Figure 1 Extent to which flood events are drivers/motivations behind scheme initiation ...	6
Figure 2 Trial catchments as an enabler of partnership initiation.....	8
Figure 3 Previous experience working together as partners as a driver	9
Figure 4 Previous experience with partner organisations as an enabler of partnership initiation	9
Figure 5 Previous collaboration as an enabler of success	10
Figure 6 Common vision as an enabler of success	11

List of Tables

Table 1 Case studies short-listed for interviewing	5
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Abbreviations

CBFM	Catchment-based Flood Management
CP	Coastal Partnership
DEFRA	Department of Environment, Food & Rural Affairs
EA	Environment Agency
FAG	Flood Action Group
FC	Forestry Commission
FCERM	Flood and Coastal Erosion Risk Management
FRM	Flood-Risk Management
GWP	Global Water Partnership
ICM	Integrated Coastal Management
NFM	Natural Flood Management
SEPA	Scottish Environment Protection Agency
RSPB	Royal Society for the Protection of Birds
WWNP	Working with Natural Processes

1 Introduction

1.1 Background

Throughout and following the floods of winter 2015/16, much of the discourse was focused around “the impact of land use/land management upon flooding and on the utility of the ‘natural flood management (NFM)’ paradigm” (Barker et al., 2016 p. 332). In recent years there has been an increasing interest in catchment-based flood management (CBFM), involving management interventions that seek to reduce the frequency and severity of flooding by modifying “land-use and land management, river channels, floodplains and reservoirs” (Dadson et al., 2017 p. 2). This coincides with the paradigm shift away from traditional flood *defence* to the more holistic approach of flood and coastal erosion *risk management* (FCERM¹). NFM is a subset of CBFM and aims to “restore or enhance catchment processes that have been affected by human intervention” (2017 p. 2), both in fluvial and coastal systems. As well as reducing flood hazard, NFM activities can also provide significant co-benefits and enhance a broad range of ecosystem services, including greater biodiversity and improved carbon sequestration (Dadson et al., 2017). Appendices A.1-3 illustrate some of the methods and measures that are used in NFM, including fluvial measures such as debris dams, storage bunds and riparian woodland planting, and coastal measures such as managed realignment. Appendix A.4 categorises the different measures under 4 broad categories: Woodland management, Runoff management, River and Floodplain management and Coastal and Estuarine management.

In 2005 Defra released ‘Making Space for Water’ the first report that addressed the new policy emphasis of prioritising ‘sustainable flood-risk management’ over ‘hard’ engineered ‘flood defences’ (DEFRA, 2005). More recently, in a response to the Pitt Review of the 2007 floods (Pitt, 2008), the Environment Agency (EA) released the first national report of Working With Natural Processes (WWNP) to manage flood risk, bringing together scientific, environmental and engineering knowledge to underpin future plans for FCERM (Environment Agency, 2012). In 2014, as a part of the official WWNP research framework, a further report was released, which established the research and development already completed, identifying research gaps (Barlow et al., 2014). JBA Consulting has been appointed to manage and undertake the national programme of research into WWNP, which will gather together evidence for best practices in applying natural flood and coastal risk management practice².

Successful NFM necessitates wide collaboration between multiple individuals and organisations “working together in partnership to deliver a joint vision” (SEPA, 2015 p. 97; Rouillard et al., 2014; Waylen et al., 2017; International River Foundation, 2017). This is on account of the widened scope associated with NFM, which requires a catchment-wide approach and a broad range of measures, therefore demanding the involvement and skills of groups and individuals including, but not limited to: local authorities, water utilities, third sector organisations, businesses, farmers, landowners, local communities and public sector bodies (Waylen et al., 2017 p. 2). The use of partnerships as an approach to FCERM more generally has been consolidated further in the UK as a result of a movement from centralised responsibility towards local and individual through the introduction of Partnership Funding in 2011. Aimed at encouraging local and external engagement in contributing to the financing of FCERM schemes, Partnership Funding was also a recognition of the need for a new mechanism that would “enable local communities to promote schemes which otherwise would not proceed due to insufficient national priority” (CIWEM, 2016). Partnerships are promoted as a means of working to overcome issues that arise from dealing with problems or projects that transcend organisational and jurisdictional boundaries, and “that require the joint resources of state, private sector and society in order to produce more responsive and effective delivery of sustainability goals” (Stojanovic and Barker, 2008 p. 347).

Work by Thaler and Priest, Waylen *et al.* (2017) and Stojanovic and Barker (2008) on partnerships and partnership funding in FRM, challenges to NFM and coastal partnerships respectively have all heavily influenced and informed the structure of this work, in particular,

¹ In this study FCERM will be referred to rather than FRM on account of its incorporation of coastal erosion and its relevance to this research, except where source documents make specific reference to FRM.

² Whilst this project is focused on WWNP schemes, which is the term coined by the EA, the term NFM will be used throughout this document on account of its wide-ranging use in and applicability to the wider academic literature and other publications.

the methodology and analysis. This study, in essence, will be working to combine these works to focus on partnerships in NFM projects, thus filling a gap currently present in academic literature as well as providing valuable, practical guidance for future NFM partnerships, a practice that is growing rapidly.

1.2 Research aims & objectives

The overall aim of this research is to identify the drivers, enablers and barriers to building successful partnerships in NFM schemes in the UK. To achieve this, the following individual research objectives have been set out:

1. *Identify* and *analyse* the drivers and motivation in the creation of partnership arrangements in natural flood management and assess what enables a partnership to be established – examples are listed below
 - Political & statutory environment
 - Effect of flood events
 - Localism
 - Funding
 - Proximity
 - Physical
 - Spatial
 - Institutional
 - Social
 - Technological
 - Relational
 - Evidence gaps
 - Upstream/downstream conflicts
2. *Identify* and *analyse* factors that may challenge or enable a partnership's success:
 - Proximity (as above)
 - Funding
 - Knowledge & technical expertise
 - Project leadership
 - Strategy
 - Upstream & downstream conflicts
 - Localism & community engagement/participation
3. *Develop* recommendations of best practice for implementing and delivering successful WWNP partnerships.





2 Project Outcomes

This chapter outlines the key findings from both the semi-structured interviews and the survey. Verbatim quotes from interviewees and survey respondents are provided in italics and quotation marks to illustrate the main themes that have been identified, and where appropriate attributed to their role in a scheme.

2.1 A note on methodology

The 65 case studies used in this project have been provided by JBA Consulting, and form the basis of the national research programme. Further research informed the initial selection criteria for the interviews by identifying case studies that had been recognised in independent awards, such as the ENDS Environmental Impact Awards and the River Restoration Centre's UK River Prize. Whilst assessing the outcomes of a project is more widely encouraged, this is complicated in the context of this study due to the complexity of judging what constitutes a successful NFM project, an area in which research is still being conducted, reviewed and debated in both academia and in the national programme of research, led by JBA. In light of this, the use of independent awards provided an objective criterion of success in terms of partnership outcome, allowing this study to focus on and assess processes.

A full description of the selection/inclusion criteria is given below:

-  At least one NFM measure has been implemented, planned or modelled under one of the broad categories defined in appendix A.4 (Woodland management, Runoff management, River and floodplain management and Coastal and estuarine management).
-  The project's NFM measures has been recognised in some capacity by an independent award process, such as the River Restoration Centre's UK River Prize or the ENDS Environmental Impact Awards.
-  The project partnership has a minimum of 2 partner organisations
-  FCERM is an aim or driver of the project.

Semi-structured interviews were used to encourage meaningful responses from interviewees through open-ended questions (Patton, 2015). By overlapping the data collection and analysis, new and emerging themes identified in earlier interviews could be checked and tested in later interviews in an iterative process (Waylen et al., 2017).

Following the interview process, an online survey was formulated based on the initial analysis and findings of the interviews. This was not as a means of identifying correlations or casual relationships through statistical analysis, but to explore the extent to which certain factors identified in the interviewing process pervaded throughout the other 55 case studies and in turn, develop recommendations for best practice as a result of the identification of the factors that are most common.

2.2 Selected case studies

Project	WWNP Category	No. of partners	Award(s)
Alkborough Flats	Coastal & estuarine management	7	CEEQUAL Whole Team Award (2007)
Belford	River & floodplain management	7	ICE Robert Stephenson Award
Blackbrook	River & floodplain management	6	Landscape Institute (Winter 2013). Highly Commended: Management Plan for Blackbrook Corridor, Stanley Beck, St Helen's.
Frome Gloucestershire	River & floodplain management	12	2017 UK River Prize Finalist: Innovation Project

(Stroud Rural SuDS)			
Haltwhistle	River & floodplain management	11	England River Prize Finalist 2014: Multi-partnership project
Haweswater	River & floodplain management; Woodland management	4	ENDS Environmental Impact Awards 2017: Project of the Year & Highly commended in partnership category
Hesketh Out Marsh East	Coastal & estuarine management	3	North West Awards for Coastal Excellence: Coastal Best Practice - Adaptation to Climate Change
Holnicote	River & floodplain management; Runoff management	7	2016 UK River Prize Finalist: Catchment category; Nigel Holmes Trophy finalist
Medmerry	Coastal & estuarine management	2	Prime Minister's Better Public Building Award, 2014; 2016 WODA Environmental Excellence Award; 2014 Civil Engineering Project of the Year
Pickering	River & floodplain management; Runoff management; Woodland management	15	RISE Awards 2016: Vision & Sustainability and Chair's Award; Civic Voice Design Awards 2015: Public Realm Category (Judge's Special Prize)

Table 1 Case studies short-listed for interviewing

2.3 Drivers, barriers & enablers: the initiation of an NFM partnership

2.3.1 Local communities

Local communities, particularly flood action groups (FAG) were often cited as being significant drivers of a scheme or a partnership coming about, especially in areas that are frequently flooded. Conversely, some projects found local communities to initially pose a barrier to a scheme being initiated, often due to their scepticism of NFM and wish for more traditional FRM strategies such as dredging and flood walls. This issue was overcome in all cases, but caused delays to the process and required a significant investment in resources and time to engage with the local communities to further explain the scheme.

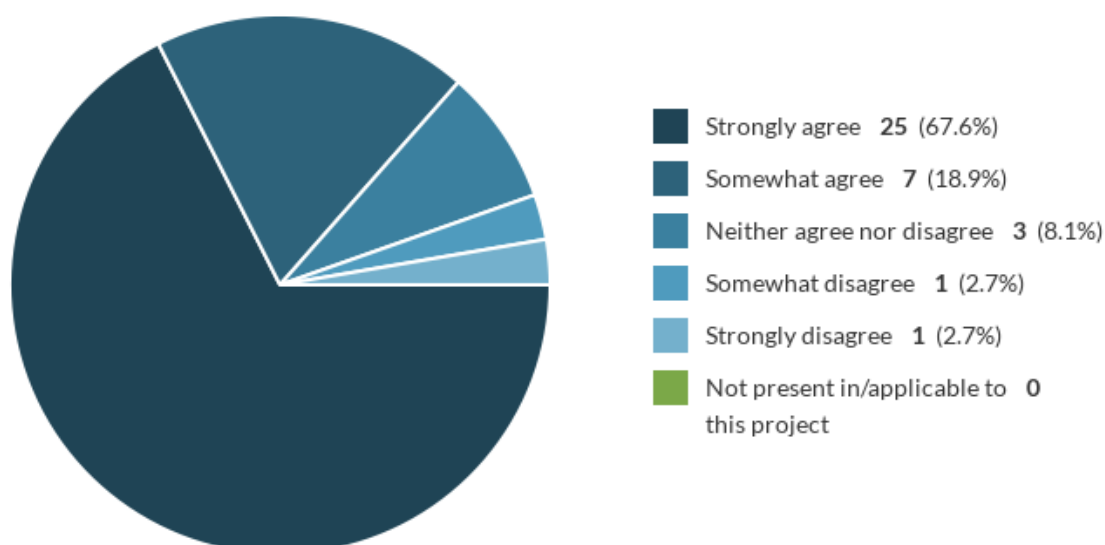


Figure 1 *Extent to which flood events are drivers/motivations behind scheme initiation*

2.3.2 Upstream/downstream conflicts

Some schemes came across conflicts between communities located at different points along a catchment and who therefore wanted different things from the design. This frequently caused delays to the overall buy-in of a local community due to ongoing disputes between different FAGs or members of a town/village. This was highlighted in Pickering and Stroud and in the survey 1 respondent strongly agreed and 7 somewhat agreed this to be a barrier.

2.3.3 Landowners

Landownership appears to be the cornerstone of every NFM scheme. One interviewee described it as being “integral” to the selection of a catchment or stretch of coast, with many partnerships targeting areas with large areas of public ownership as means of avoiding any potential barriers that arise from building schemes on privately owned land. Without willing landowners, a scheme cannot go ahead and so their inclusion as a partner early on is crucial to the development and establishment of the partnership. The National Trust, Forestry Commission (FC), Natural England, RSPB and local authorities are all involved with numerous partnerships across the UK owing to their roles as landowners. Furthermore, the multiple benefits that arise from NFM tend to align with the corporate objectives of these organisations, who are therefore willing to be involved actively, rather than passively as a landowner.

NFM in river catchments tends to involve more barriers and issues with landownership due to much of the land being owned privately, particularly by farmers. Often, farmers are less willing to engage with NFM projects on their land on account of the measures being seen as ‘at odds’ with traditional land management practices, for example the temporary storage of water. Some partnerships have had to relocate their schemes or significantly reduce the scale of them, due to the reluctance of private landowners. This could be viewed as a form of upstream/downstream conflict, whereby the landowners upstream are unwilling to be involved. On the other hand, where private landowners have been willing to engage with the project, they have been invited to join the project steering group and once fully engaged, significantly enable a project to go ahead successfully by adapting land management practices, providing large sections of land or capital in-kind.

2.3.4 Knowledge mismatches & social learning

The extent to which a local community was a barrier or drive to a project tended to be impacted by the knowledge level mismatch between local actors and flood authorities/organisations. As outlined above, this mismatch was eventually overcome through engagement and social learning processes to inform the community about NFM.

Most significant is the case of Pickering, whose community was the focus of an extensive social science study with Oxford University, prior to the NFM project taking place. Local residents were given the opportunity to learn how to understand catchment flood management plans, along with other formal documents and “how to read between the lines and interpret [them]” (Local community member). They worked collaboratively with scientists “to interrogate the science that informs local flood management” (Whatmore and Landstrom, 2011 p. 582) and created Ryedale Flood Research Group (RFRG), which published Making Space for People in Flood Risk Management (RFRG, 2008) and eventually went on to design and push through an FRM scheme that drew on the techniques and premise of NFM. When the DEFRA Multi-Objective project arrived in Pickering, the local community were in a unique and empowered position to engage with those managing the scheme thanks to their knowledge of FCERM and how to ‘navigate’ the institutional setup.

2.3.5 Evidence gap

Whereas the NFM evidence gap caused issues for some schemes in areas such as persuading communities, organisations and funding providers alike to support and engage in an NFM partnership scheme, for some, this evidence gap was the primary motivation of the project. The most obvious examples of this are Pickering and Holnicote which were both demonstration projects, funded by Defra to help prove the benefits NFM measures can achieve.

On the topic of the evidence gap, one project officer commented that it was, “*irrelevant to the flood community groups. It's a fascination between professionals but what I've discovered, is it's not a barrier towards people wanting natural flood management projects*”. This demonstrates that whilst some communities may initially have concerns about the effectiveness of an NFM scheme, once the premise has been explained to them and they understand the logic, they are supportive. The availability of ‘official’ academic evidence is of less importance to communities and instead tends to cause issues with the funding process and getting professionals on-board, who as practitioners of traditional FCERM, need more persuading.

2.3.6 Trial catchment

The use of a trial catchment or a small-scale demonstration was used by a number of project teams as a means of overcoming some of the barriers “*mainly linked to implementation of measures and buy-in by the private sector*” and other more sceptical members of the partnership, by demonstrating the benefits and mechanics of an NFM scheme. One project put measures in place in a small valley of the tributary of the main project location to test their effectiveness and in the process, succeeded in gaining the support of a team of engineers who had previously been unconvinced by the idea of the NFM. In the interview, the project manager spoke of the importance of being able to physically demonstrate a scheme's benefits beforehand,

“From a demonstration point of view our engineers said, “wow, this works!”. You could see the morphology of the brook changing, the enhanced storage that was coming about and so they came on board very positively. They're really into the idea, now, of multiple benefits. It's really important to have something to show people because you can talk about it all you like, you can show pictures but it's getting them involved and actually saying “look this is what it's doing” and they can see it and it's a really central part of it I feel, that you have to have something to point to and say, “look, that's how it works”.”

(Project Manager)

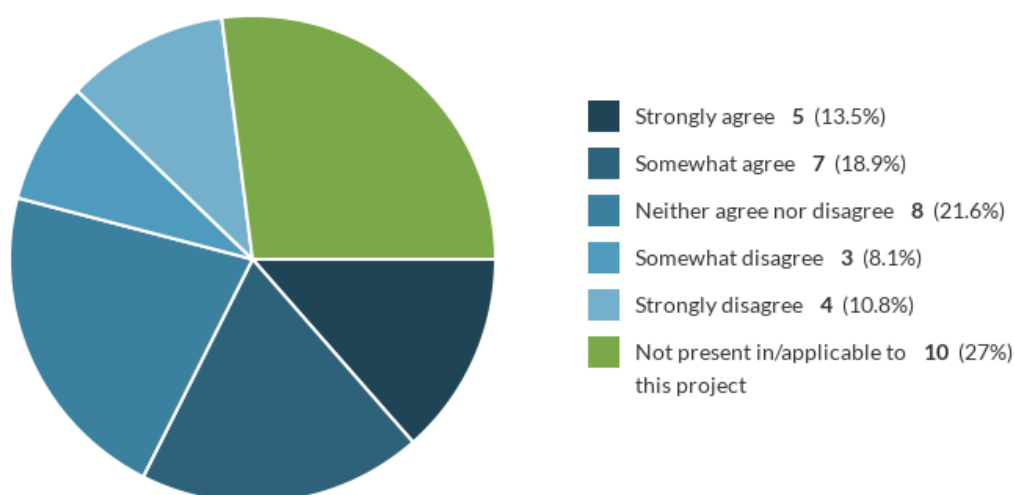


Figure 2 Trial catchments as an enabler of partnership initiation

2.3.7 Project champions

In many cases, a project partnership has been driven significantly by one individual who (often unofficially) becomes the project's champion and works to push it through the necessary phases to be implemented and completed successfully. In some cases, the project champion was a local community member and in others, the project manager was also the project champion, not because it was in their job description, but because they truly believed in the scheme and its outputs. Individuals and partnerships tend to evolve, and *"take time to gather momentum and trust, so that person [project champion] isn't necessarily always there from day one"* but eventually takes on the role as the project progresses. Similarly, *"there isn't always a single entity that will always satisfy"* specific criteria to be a project champion, hence some are the project managers employed by a council, some are community members and others are aligned to a Rivers Trust.

2.3.8 Previous & existing relationships

The *"Defra family"* was referenced frequently, as interviewees spoke of the ease with which partnerships have been brought about thanks to *"previously established elements"*. In the case of Pickering, partnership leaders Forestry Research already had direct links with *"key player"*, the FC, of whom they are an agency. The strong pre-existing links and contacts between the two, at both a national and local level, helped pull the project build together and submit a funding bid. Having these government agencies involved with the partnerships also helps schemes to overcome any institutional issues, whether it is changing land-use, applying for funding or gaining the relevant permissions, due to their experience and role in facilitating these matters.

"Networks of people who know one another" can naturally lead to a partnership building up, with one interviewee admitting *"it's kind of who you know, really"* (Project manager, local council). This is often the case for local government or councils who work with a wide variety of organisations in a *"day-to-day partnership"* setup, so that any new project that requires collaboration is essentially an *"extension"* of pre-existing partnership working. Figures 3 and 4 show the survey responses regarding the extent to which previous experience with partner organisations both drove and enabled partnership initiation, the majority of which agreed that it was an important factor.

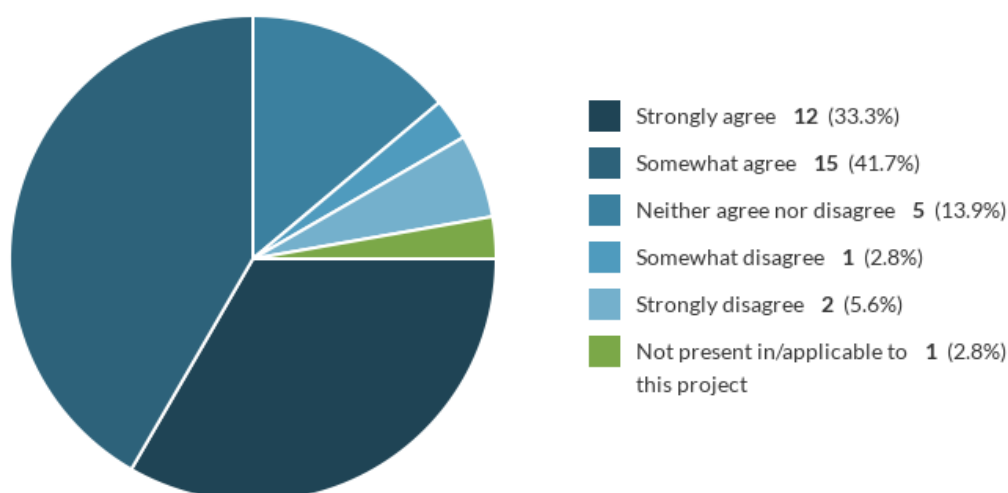


Figure 3 Previous experience working together as partners as a driver

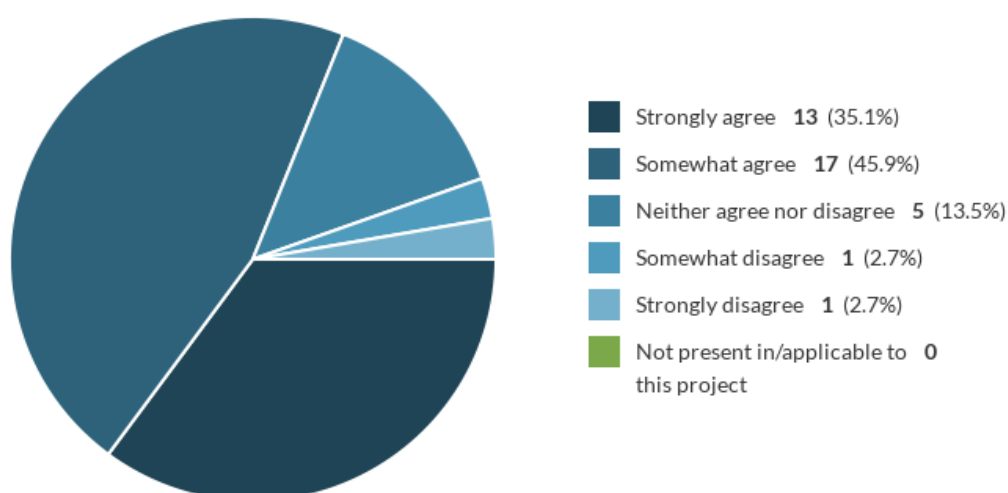


Figure 4 Previous experience with partner organisations as an enabler of partnership initiation

2.3.9 Neutral agents: NGOs & academic institutions

NGOs such as Rivers Trust who are not affiliated to any form of government can add a different form of legitimacy to a project that encourages the engagement and buy-in of local communities who feel they are trustworthy. One interviewee said *“the reason I like working for a rivers trust is that we do appear to be neutral and therefore able to broker ideas that [the community] won't discuss with regulators”*. Additionally, one survey respondent stated that *“trust in NGO leadership”* had helped to enable the initiation of the project. Whilst the majority agreed that the presence of an NGO enabled success in their partnership, however, 2 strongly disagreed, whilst 6 neither agreed, nor disagreed.

2.3.10 Local organisations

The role of local organisations and project managers, or the local offices of national organisations were cited as both enablers and drivers of partnerships, bringing a wealth of local knowledge and local contacts. Local communities tend to feel more amenable to a representative from a local organisation or office, smoothing the process of engaging community support for a scheme. Interviewees that used a local project team expressed doubt when asked if an ‘outside’ organisation would have been able to achieve the same successes, primarily on account of the level of engagement with the local communities.

2.3.11 Democratically-elected project managers & the role of local authorities

Having local authorities involved in the design and implementation of an NFM scheme as an addition to their everyday function gives a scheme greater legitimacy, particularly when having to engage a large number of landowners and gain their support of or agreement to new, sometimes alien, land practices.

“When you want to engage and work with 50 landowners, you start to make more of a political impact because you need to work at it a different way and when you start stomping around countryside asking people to do things you attract the attention of local politicians and local people so you need to have the buy-in of democratically elected councillors”

(Project officer, local council)

Local councillors have control, or at least influence over and knowledge of, planning decisions and land management and often local land owners have positions on the council, therefore “*you can’t start stomping around the countryside doing this sort of stuff [NFM] without having that basis for doing it*”. To create this basis, when the Stroud Rural Sustainable Drainage Systems (RSuDS) project appointed their project officer, a Chair of a local FAG sat on the interview panel alongside the EA and the District Council.

The issue of jurisdictional boundaries was highlighted by one interviewee, however, who expressed the difficulty he/she had experienced in engaging neighbouring local authorities in creating a catchment management plan, explaining that there is a “*mismatch between government rhetoric on catchment based management and the setup on the ground which is very much based on local authorities*” whose remit is their main priority.

2.4 Enablers & challenges: during the NFM partnership

2.4.1 Previous & existing relationships

Just as previous collaborations enabled a partnership to be initiated and started, many interviewees attributed the ‘smooth-running’ of the partnership working to existing relationships and familiar structures, such as the previously mentioned Defra ‘family’ under which the FC, Natural England and EA all fall. Collaboration between these agencies tended to reduce the number of political and institutional boundaries. The importance of previous collaborations to the success of the partnership was also reflected in the survey responses (fig.5).

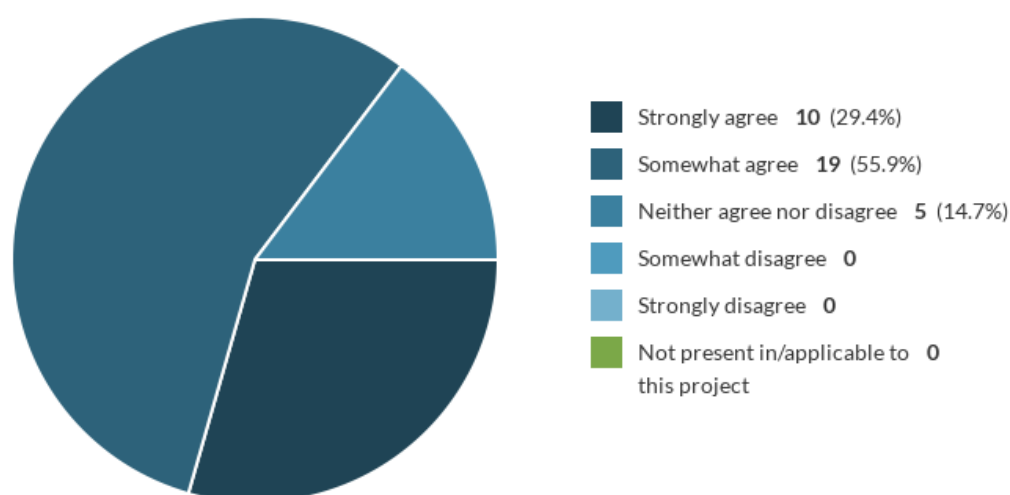


Figure 5 Previous collaboration as an enabler of success

2.4.2 Project champions

Often the project champion is vital to the success and survival of a project, to the extent that “*if that person for whatever reasons goes, then that project potentially could end up going into a state of uncertainty because we don’t have that sort of person who’s guiding us from both sides of the table*” (Consultant)

2.4.3 Common vision

In the survey responses (fig.6), 18 strongly agreed that common vision with the other partner organisations enabled and contributed to the success of the project and 13 somewhat agreed, with one respondent attributing the success of his/her project to the “*common goal to find good evidence for NFM*”.

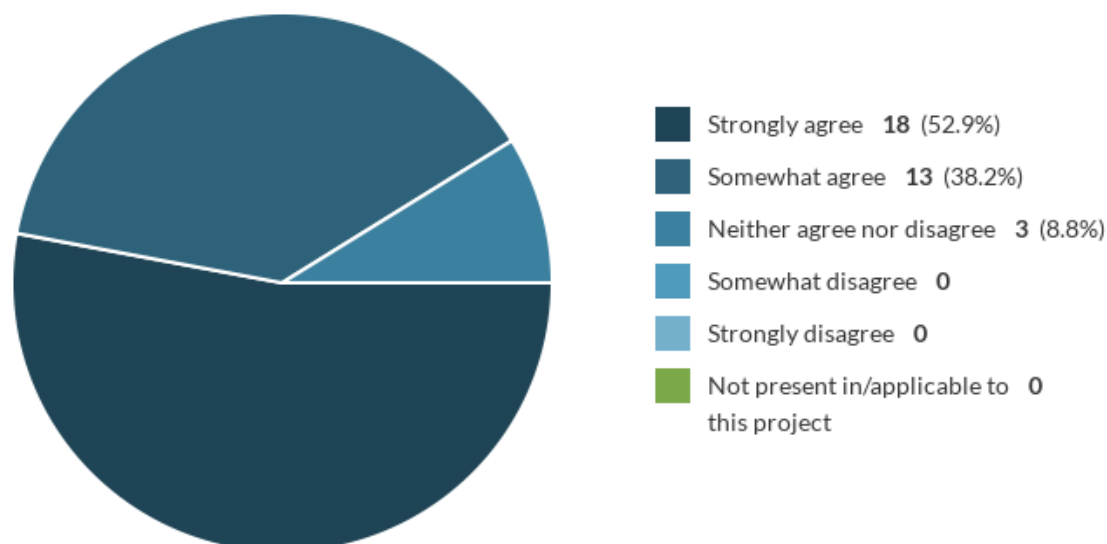


Figure 6 Common vision as an enabler of success

2.4.4 Intra & inter-organisational mismatch

Whilst many interviewees spoke of a common vision and language between the partners, some acknowledged that issues had become apparent during the phases such as design and construction whereby partner organisations' individual corporate objectives and priorities differed. In the survey results, 3 respondents strongly agreed that conflicting vision with other partner organisations was a barrier or challenge to project success, whilst 4 somewhat agreed. Similarly, mismatches *within* individual partner organisations, in particular, the EA, were cited as causing sometimes significant delays. Interviewees spoke of miscommunications within the EA that they believed were due to the scepticism surrounding NFM and a lack of understanding in some departments. One survey respondent also noted that in his/her scheme, there was a large number of EA staff who were involved but not necessarily well coordinated.

2.4.5 Governance structure

Not all of the projects had an official governance structure, however, those that did cited it as being beneficial to the long-term management of the project, providing a means of outlining each partner organisation's responsibilities. Some projects that did not have an official governance structure conceded that were they given the opportunity to do the project again, a governance structure would have been put in the place as early as possible.

2.4.6 Use of local knowledge

Many schemes engaged with local communities to gain further insight into the local area and use the knowledge of local actors to adapt their measures and adapt the design to local needs, filling in any 'gaps' that any pre-study modelling may have missed out. One study was based primarily on the flood memories and experiences of residents, with no modelling conducted at all.

3 Discussion

This section will discuss the themes identified in the previous chapter in relation to the relevant wider literature and interpret the findings to develop recommendations of how the partnership process can be improved. The themes discussed below have been singled out on account of their perceived importance to the partnership process, as identified by interviewees and survey respondents, and their significance to wider literature.

There is overlap between the enablers, drivers, barriers and challenges at the two stages being concentrated on in this study: partnership initiation and the partnership whilst the project is in progress. This is on account of their contribution to the overall proximity within a partnership, which itself can act as a driver, barrier or enabler in both stages. Similarly, localism and landownership, as highlighted above, can have positive or negative impacts depending upon the context and location of a partnership scheme.

3.1 Localism

The role of localism was a common theme throughout many of the interviews, with some projects manifesting a more cooperative, statutory arrangement, and others a wholly collaborative relationship.

Whilst the case of Pickering is an ‘anomaly’, in that it had previously been subject of an extensive social-science study by Oxford University, it highlights the role that partnerships with academic institutions and the subsequent process of social learning play in allowing local actors to collaborate and participate successfully in the design and implementation of an FCERM strategy. By ‘slowing down’ the reasoning behind and processes of a FCERM scheme, members of the group were able to “collectively interrogate explanations for, and solutions to, flooding in the locality” (2011 p. 586) by using policy documents, computer models and video footage to “mediate or objectify the knowledge claims and practices of different members of the group and those informing local flood management” (2011 p. 586). This familiarity with engaging with FCERM authorities and the associated documents and materials, and a reduction in the knowledge level mismatches meant that when the Defra project began, the already established Ryedale Flood Research Group was able to collaborate fully, and to an extent equally, with other partners.

Ideally, this extensive process of social learning would be provided to all communities at risk of flooding, however such a task would be practically impossible. There are however, lessons that can be taken away from the study, that have also been highlighted in this one. Little research has previously been conducted into the role universities play in facilitating collaboration between authorities, organisations and local communities in FCERM, however this study has shown that the trust instilled in them by local communities combined with their resources and knowledge, mean that their role can be invaluable not only to the physical outcome of the project, but the relationships that are forged within the partnership. Similarly, the Haltwhistle case-study used civic-science to engage the community, who were taught how, and given the responsibility to, “make spatially-detailed observations about their local water environment” (Starkey and Parkin, 2015) by Newcastle University and the Tyne Rivers Trust. As well as contributing valuable data to the monitoring phase of a scheme, this form of engagement can contribute to “bridging the gap between professionals and stakeholders, increasing locals’ awareness and understanding of catchment connectivity, and empowering and supporting decision making on a local level” (2015 p. 5). Both examples demonstrate the benefits that academic and NGO collaboration with local communities can bring, but at different key points, in accord with existing literature which found that a “neutral agent facilitated collaboration by redefining community resources and knowledge” (Geaves and Penning-Rowsell, 2014 p. 450). Academic literature has also proven the value that local knowledge can contribute in building computer simulations of flood events (Lane et al., 2011). It is acknowledged that whilst such approaches are time intensive, they are particularly beneficial to communities who experience recurrent flooding, who become more empowered and informed (Geaves and Penning-Rowsell, 2014). Additionally, the form civic engagement takes is also influenced by “previous interactions with authorities”, hence the social study in Pickering which also taught local actors how to engage with the authorities is, whilst time and resource heavy, very important.

Despite the often-significant role local communities play in either bringing about, driving and contributing to a scheme, some case studies have not listed them as project partners. This was attributed by some to the fact that there was no established FAG until part way through the project, often resulting from some form of collaboration during the scheme. Some may see this merely as a formality, but given the importance local communities play in so many of these projects, it seems logical to include them ‘officially’ on paper. In doing this, their contribution is further legitimised and more widely recognised in the NFM community, empowering the community itself and communities elsewhere who are striving to achieve similar feats. It would, therefore, be beneficial for a FAG to be incorporated onto the project delivery or steering group from the beginning, and where there is not an official group setup in the first place, a FAG should be actively established where there is local interest. Despite so much research demonstrating the benefits of local and participatory approaches to FCERM, the most recent NFM literature seems to omit local communities as participants of NFM schemes and views them as external stakeholders (Waylen et al., 2017). Whilst their importance is acknowledged as means of permissions and buy-in (Holstead et al., 2014), there is little reference to their role in planning, designing, constructing and monitoring.

3.2 Proximity

The role of the “Defra family” provides an effective means of reducing the spatial and political boundaries within a partnership, owing to the regular collaboration and similarities between the agencies. In this respect, the familiarity and relationships between many of the individual employees of these organisations contribute to the social proximity within the partnership, which was commented on by a number of interviewees. This does not just extend to the Defra network, however, with a number of interviewees and survey respondents highlighting the benefits of “building organically on existing collaborations” (Rees et al., 2012 p. 35), which is a “key mechanism to raise the social proximity within a group of project partners” by enhancing trust between partnering actors that develops over a longer period of time” (Skute, 2016 p. 6). Furthermore, the shared mutual understanding that is created helps to increase institutional proximity through the development of routines, rules and procedures that govern and structure social interactions, supporting the decision-making process and minimising transaction and coordination costs (Boschma, 2005; Barajas and Huergo, 2010; Thaler et al., 2016a). Social proximity is also considerably higher when local organisations or authorities, or local representatives from national organisations, are involved in the partnership initiation, particularly when attempting to initiate community interest, because local residents and landowners have greater trust in them over distant organisations, as was also found by Howgate and Kenyon (2009). Local authorities, however, can often face issues of spatial proximity and jurisdictional boundaries when attempting to partner with neighbouring authorities to implement a catchment management plan that transcends local authority boundaries. Whilst the interviewee who highlighted this issue has now been successful in persuading neighbouring authorities to agree to the plan, it demonstrates the complexities of implementing catchment management in a local authority setup and the “gap between policy guidelines and the implementation processes (Cowell and Owens, 2006)” (Thaler and Priest, 2014 p. 419).

Relational proximity is an important element of the initiation process, heavily influencing the composition of a partnership. However, where a common vision between organisations may be a positive means of creating and implementing a partnership (Miles and Trott, 2011), each organisation “has its own perspectives and priorities for management depending on their remit and objectives” (Bracken et al., 2016 p. 223) which can sometimes be at odds with one another, complicating the partnership relationship and progression further down the line, particularly in design and construction, whereby partners attempt to influence the scheme according to their priorities. This is particularly an issue with NFM, as many measures have multiple benefits for habitats and eco-systems services, hence attracting organisations who would perhaps not have ordinarily engaged with a FCERM scheme. This again highlights the issue of institutional proximity, whereby, as Hajer (2003) argues, “there is a simultaneous activity at play which involves the negotiation of new institutional rules” (Bracken et al., 2016 p. 223) whilst trying to deliberate an NFM scheme design and policy. Where partnerships recognised this issue at an early stage, a meeting was conducted to outline the partnerships’ core, collective objectives as well as each organisation’s individual objectives, which allowed for compromises to be made early on, prior to design and construction to avoid future complications. This process could be further aided by high levels of social proximity to “reduce the risk of partner opportunism”

(Skute, 2016 p. 6), together with a detailed governance structure and memorandum of understanding which outline partners' responsibilities, and most importantly, who has the final word on any disagreements.

Given the nature of NFM and the uncertainties surrounding the exact levels of flood protection and other benefits it provides (Dadson et al., 2017), technological proximity can pose a barrier to a partnership's initiation, when organisations do not have the same technological experiences, knowledge or expertise. This was an initial issue for some partnerships when trying to engage local, public and private actors, however, proximity was increased and the barrier removed, through the use of trial catchments and demonstrations which helped to communicate the logic and benefits of NFM, as well as extensive stakeholder engagement. It is also important to remember that technological proximity relates to local actors, as highlighted by Thaler (2016a) with the issue of knowledge level mismatches between communities and flood 'experts', and the role of social-learning processes as a means of overcoming such mismatches to increase technological proximity. Perhaps most significantly, the issue of technological proximity in the EA presently poses a challenge to many schemes due to the miscommunications that occur within the EA and the lack of cohesion and understanding between those departments who are proponents of NFM, and those who are more familiar with traditional flood defences. This is an ongoing issue in the EA and one that is in the process of being addressed, but other organisations should be aware for future schemes.

Whilst physical proximity was acknowledged as being helpful for regular meetings, it was not noted as being particularly crucial to a project's success, as regular face-to-face meetings and site visits were commonplace even in partnerships where partners were geographically distant from one another. Physical proximity does bring its benefits, however, where other types of proximity are strong, physical distance is more easily overcome.

3.3 Landowners

A common criticism of participation and collaboration is the issue of fair and equal dissemination of power. In flood partnerships, Thaler et al. (2016) also stress the problems relating to the fair sharing of power, particularly in the context of upstream and downstream conflicts, whereby downstream communities have disproportionate representation power and influence in the project steering group relative to upstream communities. This study appears to contradict this claim, and instead upstream communities, namely, landowners (farmers), often have a greater ability to influence or steer a project on account of the reliance of NFM implementation on their good will (Howgate and Kenyon, 2009; Holstead et al., 2014). That said, in many cases farmers were very supportive of NFM schemes, feeling a "sense of obligation to help communities downstream" (Howgate and Kenyon, 2009 p. 338) and a responsibility for sustainable land management practices.

There is, however, a limit on how many schemes can be done on publicly-owned land. Many schemes have avoided the issue of engaging with private landowners by targeting large publicly owned sections of land, but there will come a point when NFM measures are needed in areas owned privately. The introduction of Partnership Funding has also called into question the nature of FCERM schemes, which Geaves and Penning-Rowse argue have become club goods, rather than public goods because they are "excludable by their geographic scale and by the distribution of culpability for their implementation and maintenance across a region" (2015 p. 287). This is where the advice of Holstead et al. (2014) must be considered, who suggest that long-term financial incentives; advice in the context of individual farms; and joint responsibility for flood management if farmers are to be engaged successfully in implementing and supporting NFM. Our exit from the European Union leaves opportunities open for agricultural policy to be reformed and farming subsidies to incorporate land management practices including NFM measures, at a time when "FRM policy in England rests on a hinge point where it is unclear whether FRM should be delivered as a public good or re-delegated as the private issues of property owners" (Geaves and Penning-Rowse, 2015 p. 281).

3.4 Project champions

Literature acknowledges the role project champions play in gaining intra-organisation buy-in in environmental projects (Gattiker and Carter, 2010), but this study further suggests that project champions play a crucial role in a wider sense. As the interviewees stated, a project champion

needn't fit a strict set of criteria and could be a local actor, a project manager or an employee from a partner organisation. In accord with Gattiker and Carter, this study has found that "when key stakeholders commit to a project, they are more likely to strive to overcome barriers to make that project succeed" (2010 p. 78). They are crucial to all stages of a project and not only help to overcome barriers when bringing the partnership together, but they strive to ensure the project stays on track. The one criteria that each of the project champions discovered in this study did have in common is that they were local, further demonstrating the importance of localism to NFM schemes and particularly the role local organisations play in securing buy-in from a wide-range of actors. The project champion is often an unofficial, organic role that is not recognised officially by any governance structures, but instead widely-accepted amongst the partnership and other key stakeholders. It is organic growth that makes the role so special, even when the project champion happens also to be the project manager. Without these key people, whilst not possible to empirically prove, one must ask whether some of the schemes would have been successful as they have been.

4 Study limitations, reflection & conclusion






4.1 Study limitations




The case studies provided by EA and JBA for this project do not include every WWNP/NFM project in the UK and are a representative sample, therefore other schemes not included in the national programme of research may have also met the criteria used in this study. The time constraints of this study have limited the scope of this study, which was only able to conduct 14 interviews. Survey responses were also lower than hoped, with 37 responses after the survey being online for a month. It is not possible to calculate the response rate as a percentage because when the first set of 76 emails were sent out, the contacts were requested to forward the survey to their fellow partner organisations as a means of reaching as broad an audience as possible. Therefore, in addition to the 76 people who were initially contacted, an unknown number of contacts were sent a link to the survey. The survey also highlighted some case studies that met the interview selection criteria but had not been initially identified, however, there was not enough time to interview the few that had been flagged. Were this project to have a longer time-frame, more extensive interviewing would have been conducted across a wider range of schemes with as many partners as possible.

4.2 Conclusion

Whilst this study was being conducted, the government announced that NFM schemes across the country would receive £15 million in funding (GOV.UK, 2017), adding further to the momentum behind this innovative, sustainable form of FCERM. Given the popularity and apparent success of the partnership approach to NFM, it is crucial that those embarking on future partnership projects “look to the experiences from other [partnerships] as a deliberate learning strategy” (Challies et al., 2016 p. 278). That is what this study has sought to do, aiming to identify the drivers, enablers and barriers to building successful partnerships in NFM schemes in the UK. Whilst collaborative partnership working is by no means a new concept, the application of partnerships to NFM schemes is relatively recent and unique in its nature, therefore, this study has endeavoured to compare the experiences of such schemes with those referenced in literature more broadly, highlighting the similarities, but more importantly, the differences, whereby the context of NFM must be carefully considered.

Below is a summary of the best-practice recommendations for WWNP partnerships, drawn from the discussion above and suggestions from both the interviews and survey.

-  Funding should take into account the cost of project management as well as the cost of physically constructing NFM measures, or at least the cost of project management needs to be closely considered from the outset, to allocate some resources to building up proximity in every form, within the partnership.
-  An “official partnership induction event” (suggested by a number of interviewees and respondents) is crucial to starting the project cohesively and identifying a common goal as well as individual priorities that could complicate the process further along the line. This should be further supported by a Memorandum of Understanding between project partners to formalise all decisions and compromises that have been agreed.
-  As far as possible, insist on the continuity of staff throughout the project to maintain social and institutional proximity as much as possible. As one respondent stated, “*tacit information amongst project staff becomes vital for projects running over several years*”.
-  Where a scheme involves local communities, establish a FAG as early as possible to be officially included in the project partnership rather than conduct statutory stakeholder engagement. Such contractual approaches can “limit the longevity of flood group activities and prevent good understanding of the probabilities and aims of FRM strategies” (Geaves and Penning-Rowell, 2014 p. 450).
-  A project champion may not always be present in a scheme, but where there is such a person who is ‘external’ to an official partner organisation, it would be beneficial to make their role more official to support and legitimise the often-crucial work they do on the ground.

-  Local organisations or local offices should be used where possible to capitalise on community trust, networks of local contacts and local knowledge.
-  Where possible, a trial catchment should be used as a means of overcoming the issue of the evidence gap, to demonstrate to more participants, the benefits of NFM. This should be taken into account during the funding processes, by both those applying, and those allocating. It should also be considered relative to the time-frames of the project, particularly when funding sources come with time constrictions.
-  Landowners must be engaged as early on as possible and be fully integrated into the project steering group, given their crucial role in allowing a scheme to go ahead.

Whilst context is important to consider, and this guidance is by no means universally applicable, it is hoped that by drawing awareness to the experiences of previous partnerships, future partnerships may learn from both their mistakes and successes to contribute towards their own success.

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