

# Understanding influence and action in Learning and Action Alliances: Experience from the Newcastle Blue-Green vision

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## Funding information

Engineering and Physical Sciences Research Council, Grant/Award Number: EP/K013661/1 EP/P004180/1 EP/P004237/1

## Abstract

The Learning and Action Alliance (LAA) framework is increasingly valued as an approach to facilitate social learning and action by enabling collaboration within and between organisations, breaking down barriers to information sharing and facilitating co-development of innovative visions to address key environmental and societal challenges. While the social learning potential of LAAs has been documented in detail, the role of 'action' is relatively unexplored and there is little research into how LAAs might evolve over time to ensure longevity. Here, we explore the key achievements and limitations of the Newcastle LAA (established in 2014) through interviews with 15 LAA members. We find that interpretations of the concept of 'action' influences perceptions of the LAA's success. We update the structural framework of the LAA and expand the implementation phase to better reflect the agents of change that impact the LAAs' ability to apply their vision to demonstration projects. Finally, we explore the longevity of the Newcastle LAA and conclude that after running for 8 years, there may be a cyclical nature to whole-group visioning and a move towards greater intra-organisational learning. This demonstrates a shift in the primary role of the LAA over time, from learning towards greater influence and action.

## KEYWORDS

Action, Blue-Green infrastructure, Influence, Learning and Action Alliance, Social Learning

## 1 | INTRODUCTION

Transformative change in urban flood risk management (FRM) towards greater flood resilience acknowledges the resource potential of urban water and advocates a move from traditional 'grey' infrastructure (e.g., flood walls, underground pipes and storage tanks) towards greater implementation of Blue-Green infrastructure (BGI). This

includes swales, rain gardens, green roofs, wetlands and restored urban watercourses that deliver a range of co-benefits to the environment, society and economy (Fenner, 2017; Ghofrani et al., 2020; Liao, 2019; O'Donnell et al., 2020; Qi et al., 2020). Consequently, there is a need for a shift in ways of working to enable greater collaborative planning, governance, co-funding and delivery of multifunctional FRM infrastructure

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(Hartmann & Driessen, 2017; Margerum & Robinson, 2015; Perrone et al., 2020; Söderholm et al., 2018). Social learning frameworks are becoming increasingly valued in academia and practice internationally as mechanisms to enable intra-organisational and cross-organisational collaboration and overcome challenges with communication, resource constraints, fragmented responsibilities and siloed thinking (Benson et al., 2016; Pahl-Wostl et al., 2008). Social learning facilitates the sharing of knowledge and understanding through social interactions, leading to better-informed collective decision-making (Bos et al., 2013) and a sustained capacity of different stakeholders to effectively manage their water systems (Pahl-Wostl et al., 2007).

The Learning and Action Alliance (LAA) framework has been used internationally over the last decade to facilitate social learning by bringing together diverse stakeholders with a shared interest in innovative solutions to flood and water management challenges (Ashley et al., 2012; Maskrey et al., 2020; Newman et al., 2011; O'Donnell et al., 2018; van Herk et al., 2011). LAAs differ from other social learning environments and stakeholder platforms that rely on the 'transfer' of knowledge by emphasising the 'development' of knowledge through joint learning where there are no established experts (Gourgoura et al., 2015). LAAs break down barriers to information sharing and, through discussion and negotiation, enable shared meaning and values to be established and negotiated visions to be developed. LAAs are less constrained by regulations and normative ways of working and aim to reduce siloed activity in urban environments, 'helping to build the capacity in the professional stakeholders to do things differently' (Ashley et al., 2012: 16tt) by promoting active and group learning (see also Maskrey et al., 2020 where the role of LAAs in capacity building for local FRM is explored). LAAs are particularly effective in bringing non-traditional stakeholders into FRM discussions and creating support for multifunctional Blue-Green and grey infrastructure that deliver benefits additional to flood and water management, for example, health and wellbeing improvements, habitat enhancement, and mitigation of the urban heat island effect (O'Donnell et al., 2018).

The potential for LAAs to facilitate stakeholder collaboration and social learning in urban FRM has initially been explored through a range of European case studies, including the Don Catchment (Newman et al., 2011), Yorkshire and Humber (Ashley et al., 2012), and more widely in Europe (Dudley et al., 2013; van Herk et al., 2011). These studies focused on developing the LAA framework, documenting the progress during the early phases following establishment and providing broad recommendations in establishing and running successful

LAAs. For example, Ashley et al. (2012) present the five phases and 17 procedural steps that are often used when establishing and running LAAs, and highlight lessons learned during the first year and a half of operation of the Yorkshire and Humber LAA and Don Catchment Action Alliance. These include challenges with fostering discussion of innovative solutions to FRM issues as many members tended to 'inform' others rather than participate in dialogue. Obtaining funding for FRM projects also remained a key focus rather than exploring options to reduce the need for funding. van Herk et al. (2011) present an alternative framework for organising an LAA to support collaborative planning, verified by two case studies in the Netherlands. The framework is comprised of three types of joint activity (system analysis, collaborative design and governance), supported by three threads (establishing facts, creating images and setting ambitions) and three streams (addressing problems, developing solutions and influencing politics). More recently researchers in the United Kingdom, including some of the authors of this article, have used a series of U.K. case studies in Newcastle (Maskrey et al., 2020; O'Donnell et al., 2018), Tewkesbury (Lamond et al., 2017), and Ebbsfleet (Pluchinotta et al., 2021) to further develop understanding of the later phases and outcomes. O'Donnell et al. (2018) provide recommendations based on the first four phases of the Newcastle LAA (initialisation, searching and scoping, creating a shared vision and implementation) undertaken over a 3-year period, focusing on the need for broad membership to enhance opportunities for social learning, the importance of discipline-spanning champions and a strong core group to drive forward the LAA. Maskrey et al. (2020) focus on how learning may be translated into action through different elements of capacity building (e.g., material and human resources, structures, processes and enabling mechanisms), and evaluate the role of capacity building in the Tewkesbury and Newcastle LAAs, with associated challenges and opportunities.

While the ability and potential of LAAs to facilitate social learning and capacity building is well established, little is known of their longer-term success with regards to delivering learning and action objectives, their potential for longevity and how they might evolve over time in response to environmental, societal and political changes. The Yorkshire and Humber LAA, for example, became part of the formal process for delivery of future FRM in Yorkshire via the local government association (Ashley et al., 2012) but there is little information on how this was achieved, whether the LAA framework is still fit for purpose or evolved into something else. A mixed method approach including stakeholder workshops, and individual and group interviews, investigated the impact of two

LAAs in the Netherlands that focused on specific flood resilience projects, concluding that they had a decisive influence on urban masterplans and related policy proposals (van Herk et al., 2011).

In this article, we build on earlier research that focused on social learning around FRM in LAAs (O'Donnell et al., 2018) and the potential for LAAs to build capacity as a route to action (Maskrey et al., 2020). Here, we evaluate the progress made by the Newcastle LAA since its inception in 2014, through formal interviews with 15 members of the LAA. We present the key achievements of the LAA in relation to learning and action objectives and discuss how interpretations of the concept of 'action' influenced perceptions of success of the LAA. We update the structural framework of the LAA originally proposed by Ashley et al. (2012) based on perceived limitations of the current approach and recommendations for how the Newcastle LAA might successfully evolve. We discuss what is needed for longevity, debating how long social learning can be maintained and whether visions championed by LAAs have a finite lifespan.

## 2 | SOCIAL LEARNING AND THE LAA FRAMEWORK

LAAs stem from 'Learning Alliances', referring to a group of individuals and/or organisations with a collective interest in innovation and scaling this up around a topic of shared interest (Batchelor & Butterworth, 2008). LAAs are typically open arrangements, founded on a shared desire for transformative change, and promote collaboration between stakeholders from different backgrounds and disciplines by overcoming barriers to information sharing and co-production of new knowledge (Ashley et al., 2012; Butterworth et al., 2008). Social learning in LAAs may occur on an individual level through observation of others (Bandura, 1977), increasing members' adaptive capacity and ability to assimilate different knowledge perspectives. Learning may also occur collectively via interpersonal change within wider urban contexts, or across members of a group leading to wider social or institutional change (Gerlak & Heikkila, 2011; Pahl-Wostl, 2009). Regular interaction and deliberation at LAA meetings allow stakeholders to build the trust necessary to enable collaborative action and a sustained process of behavioural change (Pahl-Wostl et al., 2007). The second aim of Action emphasises the importance of enabling LAA members to deliver the innovative solutions identified by their collaborative learning (Newman et al., 2011) and broadens the role of the LAA to include tangible outputs and influence on wider policy and regulations (Maskrey et al., 2020).

Establishing and running LAAs often includes five phases; initialisation (forming an initial group of interested parties), searching and scoping (identifying stakeholders, coordinator, scope and boundaries), creating a shared vision (to address a particular challenge), implementation (responding to and delivering the vision) and capture (monitoring performance and reviewing the vision; Ashley et al., 2012). The procedural steps followed in LAAs, plus any additional feedback loops and cross-linkages, are dependent on the LAA's overarching goal and the steps necessary to achieve this. The framework is not intended as a rigid structure hence there is scope to develop this further. Determining the success of the LAA is a key part of the 'capture' phase and refers to the achievement of the strategic objectives, i.e., did the LAA do what it set out to do, did members learn, did they progress to better positions to inform innovative FRM discussions, and were they able to 'act'? The latter highlights the inherent link between the definitions of action and perceived success.

## 3 | METHODS

### 3.1 | Case study

Newcastle-upon-Tyne is situated in northeast England on the north-western bank of the River Tyne. The combination of recent urban flooding, significant flood risk in key areas of the city (Newcastle City Council, 2011) and an aspiration towards greater BGI meant that Newcastle stakeholders were receptive to participating in a social learning framework to explore innovation in urban FRM. Furthermore, solving Newcastle's multidisciplinary FRM challenges lay beyond traditional governance models and a learning function was needed to enable stakeholders to work outside of their disciplinary silos and collectively develop innovative solutions. The procedural steps and phases during the establishment (in 2014) and early stages of the Newcastle LAA are described in O'Donnell et al. (2018), and are based on Ashley et al.'s (2012) framework. Briefly, the LAA built on existing relationships between city stakeholders responsible for flood and water management and invited other professional stakeholders to collaborate and co-produce, debate and implement a vision: that Newcastle becomes:

city that follows the principles of a Blue-Green City by maximising opportunities to achieve multiple benefits of Blue-Green approaches to surface water management (ibid. 4)

The LAA is still active to date and is coordinated by the research project team, who were present and

participated in all LAA meetings. Core group members include Newcastle City Council, the Environment Agency, Northumbrian Water, academics, consultants, non-profit organisations and estate managers. A range of other stakeholders is part of the wider group, attending meetings in their area of expertise or interest.

### 3.2 | Interviews and respondent selection

Interviews with 15 members of the LAA were undertaken by telephone in August and September 2020. An external interviewer was employed to conduct the interviews to reduce the risk of response bias due to the existing relationships between the LAA members and research project team. The interviews lasted between 45 and 60 min and were semi-structured around seven themes: expectations; vision and strategic objectives; strengths and achievements; limitations; missed opportunities; recommendations; and hopes for the future of the Newcastle LAA. The themes were devised by the research project team and represent topics that would encourage LAA members to reflect on their experience of the Newcastle LAA and enable them to provide an evaluation of the LAA's perceived success. The interviews were recorded and transcribed. Participants read a participant information sheet and granted consent prior to the interviews. Responses are anonymised and respondents are referred to numerically.

Respondents were selected based on their knowledge and/or organisational responsibilities in urban FRM (5), land/estate management (3), planning (3), green infrastructure (1), catchment management (1) and community engagement (2) (Table 1). Six respondents were from the public sector, four from academia (including estate management), four private organisations and one NGO (non-governmental organisation). Respondents' organisations had remits that ranged from local (e.g., local authority) to international (e.g., consultancies). Some respondents had been members of the LAA since its inception in 2014, whereas others joined more recently, enabling a range of perspectives to be covered. The 15 LAA members interviewed have detailed knowledge of the process, objectives and vision and have displayed commitment through regular attendance at meetings, leading sessions, and have expressed a desire to continue the LAA. They are thus able to comment on the LAA's achievements, limitations and longevity.

### 3.3 | Data analysis

A thematic content analysis was employed to enable a detailed and systematic exploration of the themes addressed in the interviews and link common themes together (Burnard, 1991). This draws on the 'grounded theory' approach (Glaser & Strauss, 1967) and is inductive in nature. Briefly, transcripts were read independently by two members of the research team (to guard

TABLE 1 Interview respondent characteristics

Respondent ID	Organisation type	Professional remit	Geographical reach of organisation	LAA membership
1	Public	Planning	National	2014–2017
2	Academia	Water management	Local	2016–2019
3 and 4	Public	Community engagement	National	2019 to present
5	Public	Flood risk management	Local	2016 to present
6	Private	Water management	International	2014 to present
7	NGO	Land/estate management	Local	2014 to present
8	Private	Water management	International	2016 to present
9	Academia	Land/estate management	Local	2017 to present
10	Public	Planning	Local	2014 to present
11	Private	Wastewater strategic planning	Regional	2017 to present
12	Academia	Green infrastructure	Local	2016–2020
13	Academia	Land/estate management	Local	2014 to present
14	Public	Catchment management	National	2017 to present
15	Private	Water management	International	2014 to present

Abbreviations: LAA, learning and action Alliance; NGO, non-governmental organisation.

against researcher bias) and text was categorised into high-order categories (e.g., achievements, challenges). One researcher was relatively new to the project team so less integrated with the LAA compared with the other researcher. The transcripts were re-read by the researchers alongside their categories to ensure they covered all aspects of the interviews, and sub-categories were created to draw out greater nuance and capture specific aspects within the broad categories. The researchers then compared their data and agreed on the categories and sub-categories. This approach allowed important issues to emerge directly from the data and reduced the impact of preconceptions (O'Donnell et al., 2017). Data were imported into qualitative research software (NVivo 12) to finalise the categories and sub-categories. Some excerpts have been coded into multiple categories. Eight categories emerged through the coding, summarising the raw data (Figure 1a). Quantitative analysis of the excerpt-counts was conducted to determine the total number of references made in each category and sub-category. This measures the frequency of mention rather than the respondent's interest in the category (positive or negative).

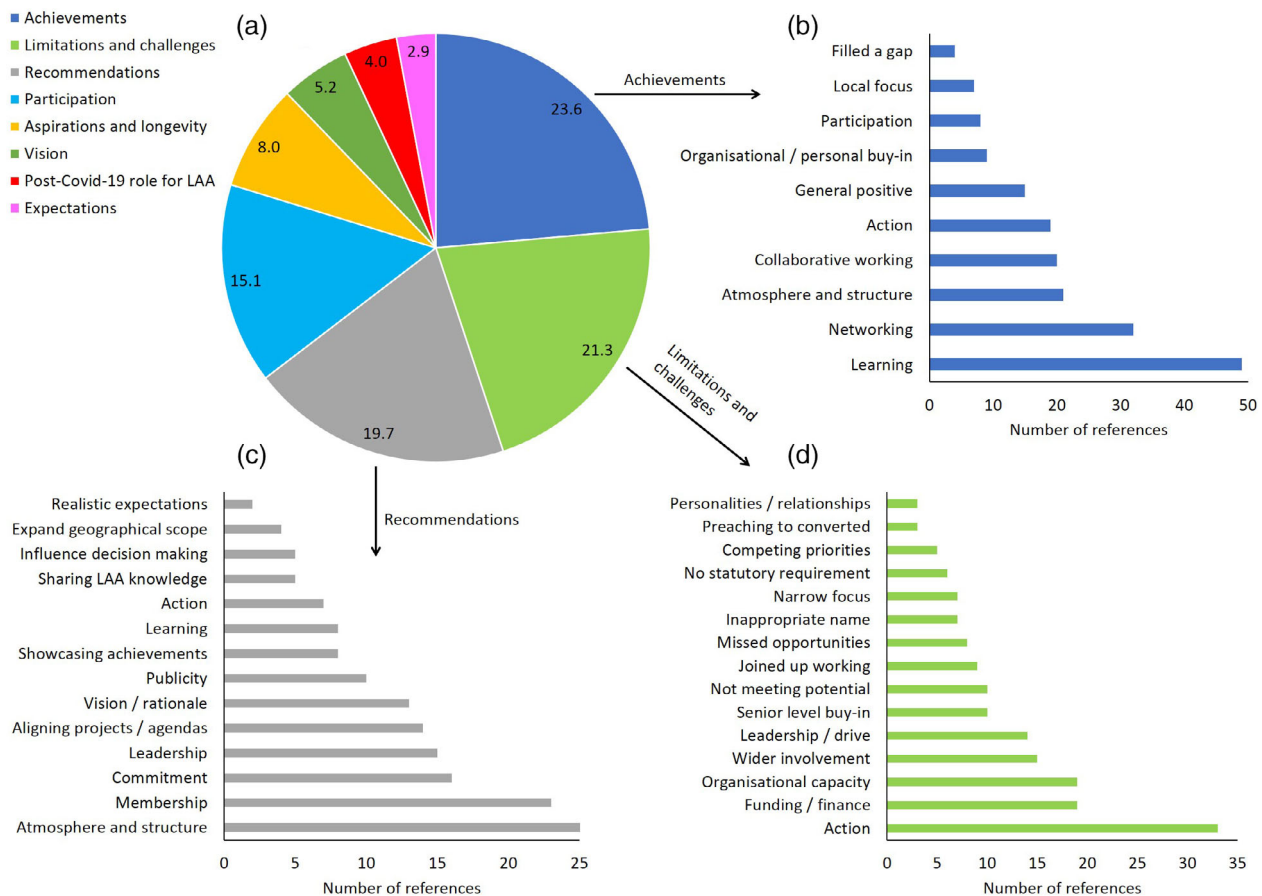
## 4 | RESULTS

This analysis focuses on the three categories that characterise the majority of the responses from the interview respondents when questioned about the Newcastle LAA: achievements (24% of references, 176 comments), limitations and challenges (21%, 159 comments) and recommendations (20%, 147 comments) (Figure 1a).

### 4.1 | Achievements of the Newcastle LAA

Achievements relating to learning and knowledge exchange were the most prevalent, mentioned by all respondents and accounting for 49 references (Figure 1b). Responses referred to both personal learning and propagation of that learning more widely into their respective organisations:

I think there has been some brilliant discussions about different subjects and how we



**FIGURE 1** (a) The percentage of participant responses in the eight main categories and number of respondent references in (b) sub-categories relating to achievements, (c) sub-categories relating to recommendations, and (d) sub-categories relating to limitations and challenges.



could make things happen and great learning from the different organisations that have come along and presented, and that has possibly led to some discussions outside of the LAA between individual organisations so that has certainly been beneficial to me (Respondent 14).

usually there is a couple of nuggets that really stick in your head and I definitely still carry three or four of those along with me from the research meetings I have been to which I have regurgitated out to others in terms of the benefits of schemes (Respondent 15).

The LAA successfully encouraged wider thinking around FRM issues, which was facilitated by the range of organisations involved, and enabled members to identify common barriers and opportunities between organisations, learn about best practice BGI being piloted by other members' organisations, and encouraged thinking about mutual goals. Learning was facilitated by networking and the bringing together of potentially disparate stakeholders. In total, 79% of respondents (accounting for 32 references) stated that they perceive networking opportunities as a key incentive to attend LAA meetings, whether meeting new stakeholders from varied organisations with potentially competing interests with regards to urban FRM, or with existing connections and developing those relationships further:

I think that one big, big benefit of the LAA is that it is a forum to bring together disparate knowledge and disparate projects in to an overall or holistic plan or approach (Respondent 7).

Other prevalent achievements of the LAA included the positive atmosphere created at LAA meetings (partly due to the LAA being coordinated by a research project with no vested interests in Newcastle FRM, and the friendly, open nature of meetings), meeting structure that was conducive to learning and networking, and opportunities for collaborative working.

I think for me it allowed people to see that there are a lot of other people thinking along the same lines and can essentially create some opportunities for joined up working and partnership working to get things done that maybe as an individual council or an individual organisation would have been out of reach (Respondent 3).

Interestingly, only 67% of respondents recognised the achievements of the LAA as relating to action. 'Action' has been described by the respondents as the translation of words into practice, policy change, the movement of BGI and FRM up political agendas, raising standards and awareness, and the branching of splinter projects from the main LAA. Respondents often focused on the interplay between learning and action, the varied success of each, and the different timescales:

for me personally I think I got a lot more learning out of it rather than action, as a direct result of the LAA. The learning bit myself and colleagues took on board perhaps helped to stimulate some action in our own organisation. But in terms of joined up collaborative action, I think that is obviously a lot harder to achieve (Respondent 13).

## 4.2 | Limitations, challenges and barriers

Limitations, challenges and barriers relating to the Newcastle LAA are subdivided into 15 sub-categories (Figure 1d). The lack of action, accounting for 33 references, was a common theme identified by all respondents (Figure 1d):

when I first got involved and very quickly it seemed to be a bit... and I don't mean this in a disparaging way, but it did seem to me to be a bit of a talking shop... there were quite a lot of nice presentations about what individual organisations were going to do, without really addressing the reason why we were there which was to try and collectively push a blue-green infrastructure agenda, starting with our own organisation. (Respondent 5)

I think the slight frustration has been erm lack of action on the ground. (Respondent 8)

However, several respondents reflected on what 'action' means and the intended role of the LAA with regards to promoting innovative FRM, for example:

sometimes I was hoping for more sort of action so to actually get something done but erm maybe the LAA should be considered the sort of catalyst for creating these relationships and actually get things done, rather than actual actions to come out of the group itself. (Respondent 13).

Respondents highlighted a range of external factors that hamper action, including limited funding and finance (which also represents a separate limitations sub-category with 19 references), existing regulations and legislation, and challenges with translating learning into changes in FRM practice:

whilst the learning action alliance may sort of have come up with some brilliant ideas about you know how a collective effort would look and how it would deliver big benefits, the reality of the situation is it doesn't translate into real life development coming forward (Respondent 5)

Other limitations referred to issues with staff turnover and time constraints (organisational capacity, 19 references), a lack of inclusion of key groups who have a voice in FRM discussions, particularly community groups and developers (wider involvement, 9 references) and limited leadership and drive (14 references) including the lack of buy-in from senior stakeholders within LAA member organisations:

I think it struggled for I guess a natural leader (Respondent 15).

The people who are attending the LAA, they are senior members of staff but they are not really senior managements of those organisations... I think it is inevitable that you are going to get people at that level who are mostly going to participate in entities like an LAA because it needs to be somebody who is senior enough that you know they can represent their organisation, but they are not so bogged down in endless management meetings that they never even make it along to the meetings. (Respondent 8)

### 4.3 | Recommendations for the Newcastle LAA and LAAs more widely

Recommendations are subdivided into 14 sub-categories (Figure 1c), referring to both recommendations for continued functioning of the Newcastle LAA and for other cities establishing their own LAAs. With regards to new LAAs, 93% of respondents (29 references) provided recommendations on the structure and atmosphere of the LAA, including meeting frequency (frequent enough to maintain momentum but not be a burden), leadership, and regular reviews of

objectives, vision and membership, and the importance of managing expectations. Being politically neutral was seen as paramount for longevity of the Newcastle LAA and new LAAs:

I think it is important that the LAA is practical and not politically motivated or driven...the LAA is an opportunity to pick out practical opportunities and make them happen. It is not going to change the world from the top, but it can change it from the bottom. (Respondent 7)

In total, 79% of respondents (23 references) highlighted the importance of a varied membership (a mix of academic people and actual delivery people [Respondent 12]) including developers, major landowners, community groups, and representatives on local authority planning committees that actively influence decision-making, and inclusion of organisations outside of existing FRM or BGI fora to avoid 'preaching to the converted'. Varied membership was also cited as a recommendation in an earlier study of the Newcastle LAA (O'Donnell et al., 2018). Commitment from LAA members to regularly attend meetings, strategies to manage personnel changes and regular attendance of core members who are passionate about the LAA vision and could influence others within their respective organisations were also advocated by 57% of respondents (16 references):

what you need is champions within each of those key organisations who are really willing to stand up and say this is important and drive those things forward because I think they would need to bring other people with them within their own organisation so to enable those things to happen (Respondent 8).

Aligning similar projects to enable more productive collaboration was also mentioned to intertwine aspirations of different groups and develop more holistic solutions. Another interesting point raised by several respondents refers to increasing publicity for the LAA (10 references) and showcasing achievements (8 references). This would help attract new members (particularly senior-level stakeholders), illustrate the potential of the LAA framework in achieving learning and action, and show existing members that their commitment to the LAA, and social learning throughout the process, is ultimately leading to action:

if we're trying to capitalise more we need to get more people interested so potentially

some local media pieces might have been useful, maybe some sort of exhibition (Respondent 6)

the action does take longer to happen, so there is a risk that the actions end up slightly removed from their beginnings in the group. But by the time something is delivered on the ground you forget that it started there. And then you can end up with slightly disenfranchised group who think they only talk about ideas and don't deliver anything. (Respondent 12)

## 5 | DISCUSSION

The structure championed by LAAs exemplifies stakeholder participation, collaborative working and deliberative governance by bringing together different organisations and individuals to negotiate a shared vision for innovation on a topic of mutual interest (Ashley et al., 2012; Newman et al., 2011; O'Donnell et al., 2018; van Herk et al., 2011). For Newcastle, this involved focusing on BGI solutions to urban FRM challenges. We now discuss the success of the Newcastle LAA in delivering learning and action objectives, before updating the structural framework and debating evolutionary pathways and longevity.

Wenger (2010) states that the main outputs of LAAs is knowledge. The integrated and holistic approach fostered by the Newcastle LAA was recognised by all interview respondents as building shared knowledge and contributing to their own, and others', learning. The coupling of this emergent, contextualised and multi-stakeholder knowledge with carefully designed social interactions facilitated by the LAA structure created potential for practice-driven policy processes and action (Jiggins et al., 2007; van Herk et al., 2011). Learning opportunities were enhanced by networking, the strong association of the LAA with an academic research project, and the inclusion of a wider range of stakeholders who may typically be outside of FRM discussions, although community groups and developers remained underrepresented. The co-production of the LAA's vision demonstrates community interaction learning, whereby collaborative working facilitates the development of trust within groups and helps stakeholders with different knowledges and expertise learn from each other (Koontz, 2014). It provides a focal point for organisations to buy-in to the LAA and is an enabler for learning.

### 5.1 | Defining 'action'

The interpretation of 'action' varies in the context of LAAs; it could be regarded as a tangible output, such as the creation of a new FRM policy (Maskrey et al., 2020), or the integration of FRM in selected urban development planning projects (van Herk et al., 2011). Alternatively, successful action may be regarded as influencing decision-making within LAA members' organisations, as Verhagen et al. (2008) propose with regards to institutional change.

The Newcastle LAA was purposely not solely established as a 'Learning Alliance' (a group of individuals and/or organisations with a collective interest in innovation and scaling this up around a topic of shared interest (Batchelor & Butterworth, 2008)). This is because there was a specific focus on social learning leading to action through the co-production of knowledge and enhanced social interactions between stakeholders (O'Donnell et al., 2018). However, it is clear from the interviews that a shared definition of action was absent, with mixed views regarding the action potential of the LAA. We can infer that many LAA members regard action as implementation of new urban FRM infrastructure 'on the ground'; indeed, implementation is the fourth phase in the Ashley et al. (2012) framework for establishing and running LAAs and includes the procedural step of 'apply response to demonstration project'. As the LAA has no budget or formal mandate for implementation of FRM infrastructure this was never an intended output of the Newcastle LAA. This is generally acknowledged by LAA members who instead express disappointment and frustration at the slow pace in which BGI is implemented by LAA members' organisations, recognising that external factors, such as funding cycles of organisations with FRM responsibilities, competing demands for resources and limited senior-level buy-in, have hampered the implementation potential stemming from actions of the LAA:

If it was purely an action group, then the actions are constrained by the willingness of the organisations represented by the group, so I think the balance is about right. Collectively we can learn together and then use that learning influence to then try and influence organisations. (Respondent 9)

Alternatively, action can be defined as the potential to influence decision-making within LAA members' organisations (Verhagen et al., 2008) and change approaches, policies and practices (Maskrey et al., 2020; van Herk et al., 2011). Using this definition, there are several examples of the Newcastle LAA delivering concerted action, notably the launch of the 'Newcastle Declaration on Blue and Green



Infrastructure' in 2016 (O'Donnell et al., 2018), and relaunch in 2019, that demonstrates a change in mindset of Newcastle stakeholders towards greater collaborative FRM and a prioritisation of BGI. The Declaration champions new ways of collaborative working to promote and realise the multiple benefits of BGI (UFR, n.d.) and is a 'process' product output (Carr et al., 2012). The Declaration empowers the LAA to include BGI in FRM projects pursued by the respective organisations and partnerships. For example, the Newcastle Local Flood Risk Management Plan (Newcastle City Council, 2016) cites the LAA and Declaration when stressing a change in mindset to managing flooding. Nonetheless, there were mixed views regarding its success in practice:

...setting up the blue green cities declaration, I think that was key to ensuring commitment and action to delivering those projects (Respondent 2)

The blue green declaration is probably the most positive element that shows a commitment of those larger organisations. Whether or not that is carried through I am sceptical (Respondent 9)

To limit potential misunderstanding regarding the action objective of LAAs and manage expectations of outputs, we recommend that 'action' is defined through discussion and negotiation during the early stages of the LAA, and embedded into the objectives that sit alongside the overarching vision.

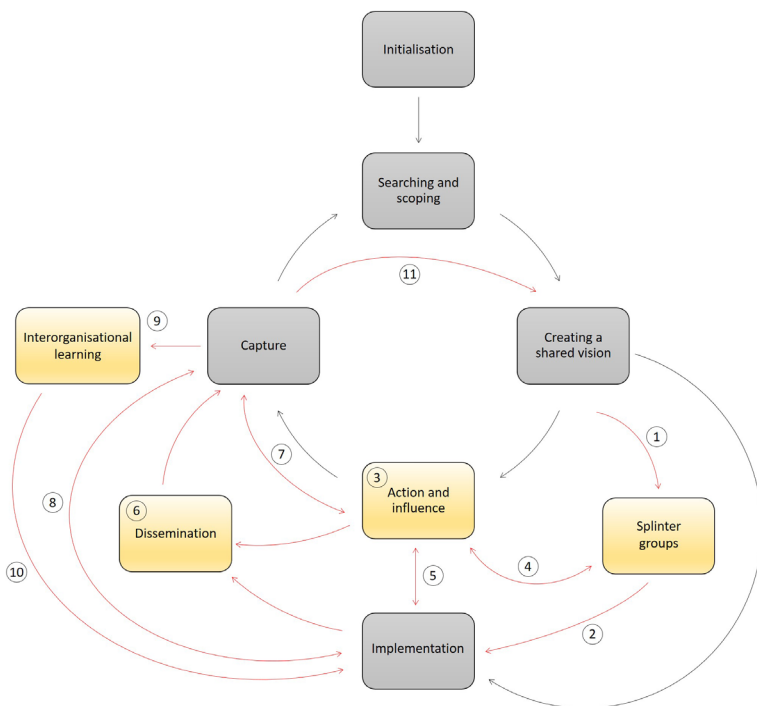
## 5.2 | A revised LAA framework

Data from the Newcastle LAA member interviews (limitations and recommendations) are used to update the structural framework of the LAA originally proposed by Ashley et al. (2012), acknowledging that the original framework was not intended to be a rigid structure and internal feedback loops are implied. Similarly, the new steps are optional and should be discussed and negotiated with the LAA during early meetings to ensure that each LAA is structured in a way that enables their strategic objectives and vision to be achieved.

Three key changes are made (Figure 2 and Table 2). First, new procedural steps are added to support key stages in the LAA's establishment and evolution (Figure 2, red text). This includes agreement of expected outcomes and expectations during 'creating a shared vision', and defining more specifically what is implied in the 'implementation' phase (i.e., BGI on the ground). Consideration of the need

for a figurehead has been added to the 'searching and scoping' phase, to raise the profile of the LAA, recruit new members and provide the LAA with a form of validity to help members justify their time attending meetings. Several LAA members felt that the lack of a leader limited the progress and achievements of the LAA. The perceived need for a leader likely stems from members' experience in attending other groups and fora that adopt a more formal, hierarchical structure, for example, chaired by a high-level stakeholder. The concept of the LAA is founded on mutual ownership and co-development of knowledge where there are no recognised experts (Gourgoura et al., 2015), hence there is no leader. It is possible that LAA members interpret 'leader' as 'coordinator' (responsible for organising and facilitating meetings, thus essential to the effective running of the LAA in a practical sense) or 'champion', a role that arises organically due to enthusiasm and personal commitment towards delivering the LAAs vision (O'Donnell et al., 2018).

Second, additional links between phases have been added to the framework to illustrate the feedback more clearly and show where phases may be unnecessary as the LAA cycles through the framework after the first iteration, for example, after the capture phase the LAA may not need to return to searching and scoping and instead move to creating a shared vision (Figure 2, red arrows). Third, the implementation phase has been subdivided into four sub-phases which refer to the agents of change and activities typically needed before (and after in the case of dissemination) implementation occurs (Figure 2, yellow boxes), recognising that implementation is inherently complex and open to interpretation. Action and influence is a separate sub-phase in recognition of the varied definitions of action and influencing role that the LAA can play in wider discussions of FRM, influencing policy and practice prior to implementation of innovative BGI. Splinter groups have been added in recognition of longer-term social learning and new actor networks pursuing issues of specific interest that were too specialised to be of interest to the wider LAA. This raises the question of whether the LAA is still needed if discussions are taking place elsewhere while recognising that the opportunities for collaboration may not have arisen without the LAA. Splinter groups can feed into action and influence by separately championing a change in policy and practice, and implementation by sourcing funding for specific projects. Dissemination has been added to document the importance of showcasing the achievements of the LAA and has multiple advantages, including helping to attract new members, showing existing members that their contributions have led to tangible outputs, and assisting with the development of new solutions and policies. Finally, intra-organisational learning has been added, somewhat outside the main structural loop, and



Phase	Procedural step
Initialisation	Form initial group of interested parties ( <i>champions</i> ) <i>Decide group name</i>
Searching and scoping	Identify scope and boundaries (physical, political, etc.) of LAA Identify coordinator and core members ( <i>revolving chair?</i> ) Stakeholder identification and <i>drivers for joining LAA</i> <i>Nominate a figurehead/leader</i> <i>Get buy-in from senior stakeholders</i>
Creating a shared vision	Form a steering group Identify stakeholder interests and how they affect/affected by LAA Formulate LAA terms of reference Form shared vision and assessment of problem(s) Identify existing stakeholder network and potential improvements – <i>regular review of membership (and community involvement)</i> Identify demonstration project(s) Define ‘action’, ‘learning’, expected outcomes and expectations Develop a high-level commitment/declaration for organisations to sign up to Collaborate with other similar groups, align organisational agendas Establish a digital platform for ongoing communication
Splinter groups	Facilitate the creation of splinter groups to tackle specific issues
Action and influence (was implementation)	Identify and act upon potential ‘quick-wins’ Develop longer term vision including scenarios for future changes Formulate initiatives to respond and to deliver the vision Develop mechanisms for informing higher level stakeholders of progress <i>Influence policy and practice</i> <i>Regular review of vision, objectives and membership</i>
Implementation	Apply response to demonstration project <i>Actively implement Blue-Green infrastructure on the ground</i> <i>Regular review of vision, objectives and membership</i>
Dissemination	Showcase achievements (e.g., using media) Wider knowledge sharing outside of the LAA (and with other LAAs) Facilitate joining of LAA by new organisations/individuals
Capture	Monitor and evaluate performance of response(s) Draw lessons and define changes to policy, practice and culture Review and revise vision and goals <i>Determine leadership/coordination going forwards</i>
Interorganisational learning	No longer need to learn as the LAA Use learning from LAA to inform learning within organisations

**FIGURE 2** A revised framework for Learning and Action Alliances (LAAs) based on the original framework of Ashley et al. (2012), shown in grey. Four sub-phases (yellow boxes) have been added and feed into the implementation phase. Procedural steps have also been updated (new steps in red). Additional links between phases have been added to the framework (red arrows) and key changes (denoted by numbers) are explained in Table 2.

an optional sub-phase for when the LAA reaches the point where the group no longer needs to learn collectively, and learning from the LAA is subsequently used to inform learning within organisations.

### 5.3 | Longevity of the Newcastle LAA

The recommendations suggested by Newcastle LAA members generally align with the concept of the LAA suggesting that the framework is still suitable for progressing Newcastle’s Blue-Green vision. However, modifications to the LAA framework are suggested, based on the changes highlighted in Figure 2 and Section 5.2. Notably, this includes the option for intra-organisational learning. Some organisations may feel that they have achieved all they can from being a member of the LAA and will focus more on learning within their organisation. This may apply to LAA members who were involved in the early stages and felt that their own personal and organisation’s expectations for attending LAA meetings were met after the production of the ‘Newcastle Declaration on Blue and Green Infrastructure’, which provides them with a rallying point around which policy and practice related to BGI and FRM can be developed.

While the Newcastle LAA may have begun to challenge norms, values and assumptions in wider society with regards to BGI and FRM, the impact on formal decision-making processes has been limited and institutional change has yet to be achieved. Traditional approaches to urban FRM governance are still evident, also observed in the Yorkshire and Humber LAA and Don Catchment Action Alliance whereby consultants were typically engaged independently of the LAA to develop solutions to specific FRM problems (Ashley et al., 2012). The Newcastle LAA is still required to provide the social learning opportunities that are needed in later stages of the FRM transition towards more sustainable BGI solutions (van Herk et al., 2011). There further remains a place for social learning within the LAA to deal with uncertainty and change (Folke, 2006), for instance, in exploring how the LAA might align with other city groups and initiatives exploring Newcastle’s post-Covid recovery and the changes needed to better facilitate access to high-quality Blue-Green space for urban residents. Nonetheless, we acknowledge that different types of learning may be more relevant and beneficial for the Newcastle LAA; rather than learning together about the multiple co-benefits of BGI and challenges in delivering BGI from the perspective of different city stakeholders, the LAA could focus more on sharing

**TABLE 2** Explaining the additional sub-phases and links added to the Learning and Action Alliance (LAA) framework as illustrated in Figure 2

Addition to LAA framework	Explanation
1. New sub-phase: Splinter groups	Splinter groups may form after the creation of a shared vision to address specific issues of mutual interest for specific LAA members or organisations
2. Splinter groups leading to Implementation	Splinter groups may act together and apply for joint funding for a BGI FRM implementation project
3. New sub-phase: Action and influence	A step is needed between visioning and implementation to enable action and influence of policy and practice prior to active implementation of new BGI or FRM strategies
4. Linking Splinter groups with Action and influence	Splinter groups may act together to influence a specific policy, practice or future BGI FRM project
5. Linking Action and influence with Implementation	Demonstrating the bidirectional link that allows the LAA to influence implementation projects and also for implemented projects to lead to further scope for action and influence on future schemes
6. New sub-phase: Dissemination	Following implementation and action and influence, is dissemination to showcase the achievements and outputs of the LAA
7. Linking Action and influence with Capture	There is a bidirectional link – actions and influence of the LAA may be evaluated before reviewing the vision, and capture may lead to further action and influence based on lessons learned
8. Linking Implementation with Capture	This previously was a unidirectional link – a link from capture to implementation suggests that the LAA need not return to the searching and scoping, or visioning stage, after capture, but may focus on further implementation based on other LAA objectives
9. Capture leading to Intra-organisational learning	Recognising that the learning potential of the LAA has changed from group learning to learning within organisations
10. Intra-organisational learning leading to Implementation	Learning within organisations, facilitated by shared knowledge from LAA discussions, can lead to implementation of new BGI projects either by sole organisations or in partnerships
11. Capture leads to Creating a shared vision	After the progress of the LAA has been evaluated in the capture phase there may not be a need to return to searching and scoping if the parameters of the LAA have not changed; instead, the group can move to visioning (either a new vision or revision of the original)

Abbreviations: BGI, Blue-Green Infrastructure; FRM, flood risk management.

opportunities for collaboration, joint applications to funding streams, and facilitating the establishment of splinter groups to address specific issues. While there are always opportunities for continued learning about BGI and its role in FRM as, for example, modelling software is advanced, new data are generated and different national policies and guidelines are released, the LAA may focus more on influencing local and regional policy and practice, which aligns with several of the Newcastle LAA members' definitions of 'action'. Ultimately, there may be a cyclical nature to whole-group visioning after which the focus of the LAA could shift towards influencing and opportunism. The LAA could meet less frequently with the majority of learning continuing within individual organisations rather than collectively. Once enough implementation has occurred, further inter-organisational learning and visioning may be needed. A key challenge for the

Newcastle LAA will be to resource this as the accompanying research project comes to an end. As Gourgoura et al. (2015) suggest, successful functioning requires potential sources of funding in order to ensure sustainability, whether aligning with other academic research projects, other partnerships active within the city, or private or government initiatives. Political neutrality is also paramount for longevity and ensuring that the LAA remains open and inclusive.

## 6 | CONCLUSION

The role of LAAs in facilitating social learning and capacity building is well established in the literature. We build on this evidence and advance new knowledge regarding the role of 'action' in LAAs and how the

LAA framework may evolve over time to account for the fluidity in how 'action' is interpreted and the changing nature of learning. Using the well-established Newcastle LAA as a case study, we find, through semi-structured interviews with 15 LAA members, that key achievements relate primarily to learning, knowledge exchange and networking opportunities. The ability of the LAA to enable action is less recognised and dependent on members' interpretations of the concept of action. Those who regarded action as 'on the ground' implementation of BGI to address Newcastle's flood and water management challenges viewed the LAA as less successful. In contrast, the action potential of the Newcastle LAA was viewed more favourably when interpretations of action leaned towards 'influence' (e.g., changing policy and practice and helping move BGI up political agendas).

To reflect the changing role of the LAA over time we updated the original framework for establishing and running LAAs. New procedural steps were added to support key stages in the LAA's evolution, notably expanding the implementation phase and creating sub-phases that represent agents of change and activities typically needed before (and after in the case of dissemination) implementation of the LAA's vision occurs. We conclude that after running for 8 years, there may be a cyclical nature to whole-group visioning within the Newcastle LAA. This is inferred by the establishment of several splinter groups (new actor networks pursuing issues that are too specialised to be of interest to the wider LAA) and a move towards intra-organisational learning, reached when the group no longer needs to learn collectively but uses that prior learning from within the LAA to enable future learning within organisations. We conclude that social learning is a crucial part of LAAs, yet the type of learning must expand to enable the LAA to evolve and continue to work towards achieving its vision. In Newcastle, the LAAs focus has shifted from whole-group learning towards using that learning to influence policy and practice, which we regard as essential for its longevity. To overcome the ambiguity associated with the 'action' objective of LAAs and manage members' expectations of outputs and success, we highlight the importance of defining 'action' through discussion during the early stages of the LAA and embedding this into the strategic objectives. Further research could build on our suggestions for how LAAs may evolve over time to ensure longevity and whether aligning with other active City partnerships, for example, is a viable approach. Tracking the longevity of LAAs beyond a research project presence would be a key contribution to LAA theory.

## ACKNOWLEDGEMENTS

This research was performed as part of an interdisciplinary project undertaken by the Urban Flood Resilience Research consortium ([www.urbanfloodresilience.ac.uk](http://www.urbanfloodresilience.ac.uk)). We express our thanks to the Newcastle Learning and Action Alliance (LAA) and specifically to the LAA members who participated in the interviews. We are also grateful to Christopher Farrell for conducting the interviews and Claire Lowe for transcription. For ethical reasons, the transcripts and audio files cannot be made openly available. Parties interested in this data should in the first instance contact the corresponding author. The associated metadata is available at <http://doi.org/10.17639/nott.7111>.

## DATA AVAILABILITY STATEMENT

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**How to cite this article:** O'Donnell, E. C., Snelling, A. M., & Lamond, J. E. (2022). Understanding influence and action in Learning and Action Alliances: Experience from the Newcastle Blue-Green vision. *Journal of Flood Risk Management*, e12868. <https://doi.org/10.1111/jfr3.12868>