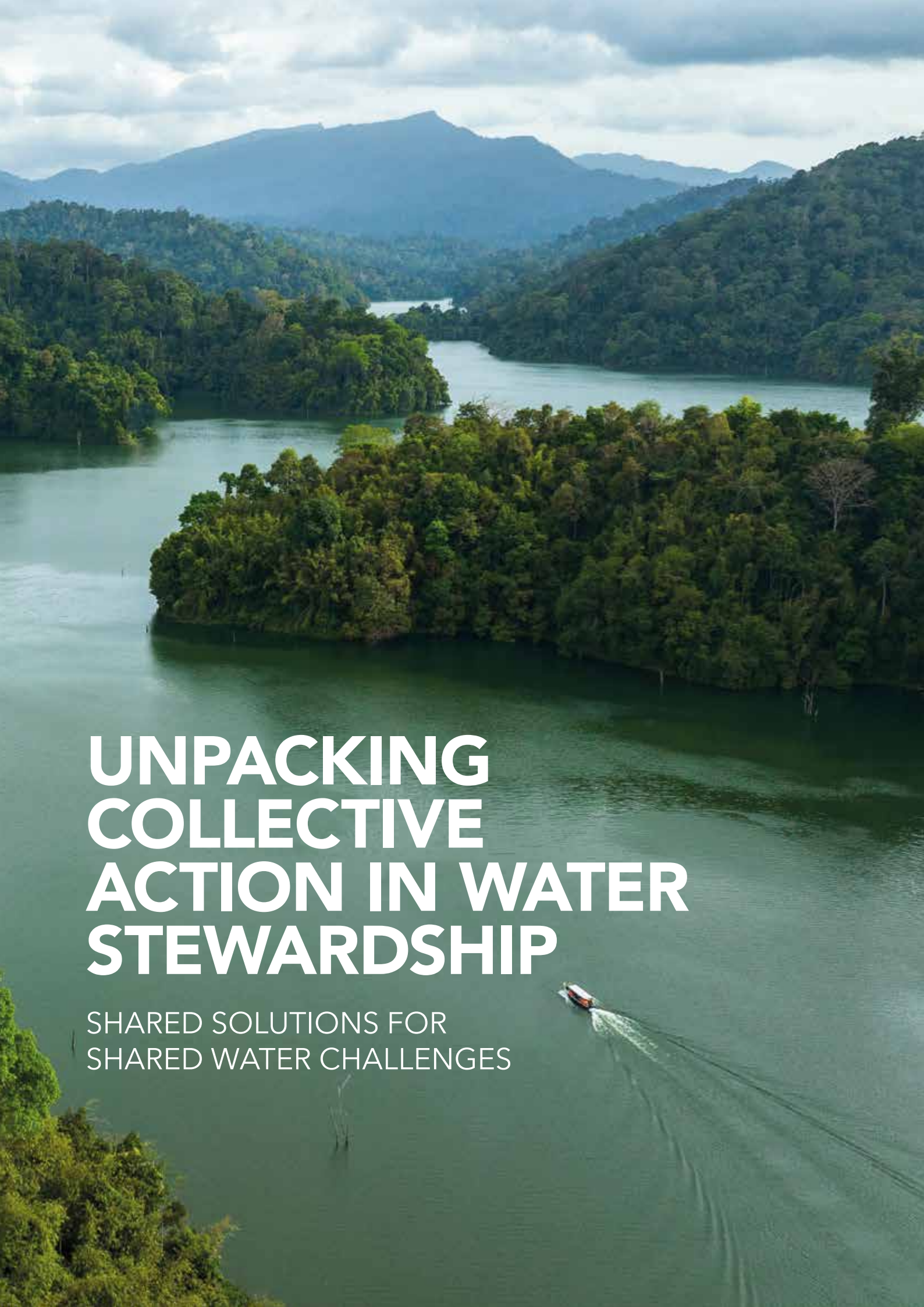

UNPACKING COLLECTIVE ACTION IN WATER STEWARDSHIP

SHARED SOLUTIONS FOR SHARED WATER CHALLENGES

Acknowledgements

The development of this paper was a group effort from an array of individuals. Specifically, organisations that have contributed to this paper include:

WWF
The Nature Conservancy (TNC)
WaterAid
IDH - Sustainability Initiative Fruit and Vegetables (SIFAV)
Global Water Partnership
Alliance for Water Stewardship
CEO Water Mandate
Good Stuff International
SHARE Sustainability
Watermarq
Water Integrity Network
AstraZeneca
The Rivers Trust
WRAP
Water Witness International

Publication of this paper was made possible thanks to contributions from ABInBev and AstraZeneca. A huge thanks to all - without your shared effort, we would not be the community that we are and this paper, which is the foundation for something quite different in the conservation world, would not have happened.

Recommended citation: Various Organizations (2024) Unpacking collective action in water stewardship: shared solutions for shared water challenges.

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FOREWORD

If you're reading this, then you're likely a professional working to solve the shared water challenges facing our planet. Every one of us has a story (or two) of why we are passionate advocates of helping to ensure sufficient water for people and nature. We all want to see things improve and we've given our lives to making that happen. Over the past decade, many of those in this group have written reports, pushed commitments, and indeed developed incredible programs on ground that HAVE made a difference.

Despite our passion and some wonderful efforts, on aggregate, we are, collectively, losing the fight. Freshwater biodiversity continues to fall - down some 83% since 1970[1]. Access to clean water and sanitation remains dire or non-existent for hundreds of millions of people, especially for vulnerable people. Climate instability only continues to grow, further exacerbating freshwater challenges. When you're already working nights and weekends, working harder isn't the solution. We need new ways of working together to achieve scale and pace. While each of our organizations, and the diversity that comes with it, is useful, powerful (indeed needed), our models of operating are getting in the way of scaling and linking up to something different and more powerful.

That is what this paper is all about: setting the basis for a new way of working together as an ecosystem of freshwater solution providers. The concept of collective action is a powerful one - rooted in the notion that by working together, we can deliver more. Few of us would question the need for greater collaboration - indeed, working on freshwater as a common pool resource, has trained us all to think in systems and work with others. Yet despite this, our own efforts on collective action have remained fractured, and so this paper seeks to initiate a process, starting with us, to bring us together. It is rooted in each of us as individuals, with a view to bringing our organizations along with us, and in turn, bringing along other actors - companies, public sector agencies, other civil society groups.

We have been on a long journey together, but hopefully the dialogues that this paper can initiate will spark the beginning of bending the curve on freshwater biodiversity, a framework for climate change adaptation on water for people, and help us all live up to the vision we set out for ourselves when we committed ourselves to water.

Looking towards 2024 and beyond, we are seeking to forge a tangible implementation pathway to tackling shared water challenges through collective action. This report offers ideas, built on our experiences, but the success or failure as we test models on the ground is down to us all - including you. Reach out and join us – ***together*** we can change freshwater for the better.

Collectively,
The Authors

1. WWF (2020) Living Planet Report

EXECUTIVE SUMMARY

For some time now, collective action has been rightfully seen as a goal to aspire to in order to deliver on Sustainable Development Goal 6 on Freshwater.

As a shared resource, collective action is critical to achieve the scale, scope and speed required to address shared water challenges in catchments. While some publications have touched upon this topic going back over a decade, recent experiences have not been captured and a path forward, based on lessons learned, has not been charted. Moreover, the shared challenges facing our freshwater systems require us to scale up our solutions – as the title indicates, shared water challenges require shared water solutions, and that means figuring out new ways to work together, collectively.

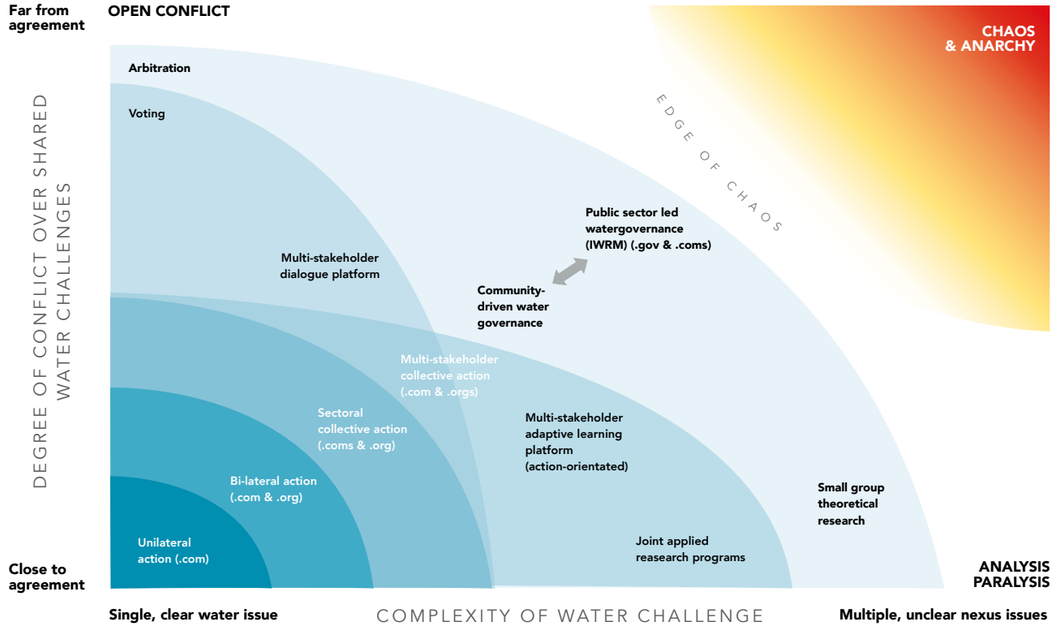
This paper outlines, in four sections, a series of frameworks, our shared experiences, opportunity mapping and a proposed pathway forward for collective action on freshwater in order to better deliver impact at scale.

PART I
COLLECTIVE ACTION: WHAT & WHY

Begins with an overview of both why collective action is critical and what we mean when it comes to collective action. It seeks to provide a common definition of the term, along with a diagnostic framework to unpack different forms of collective action, as well as when different forms are appropriate or not. We have offered up the working definition that collective action in the context of water stewardship is

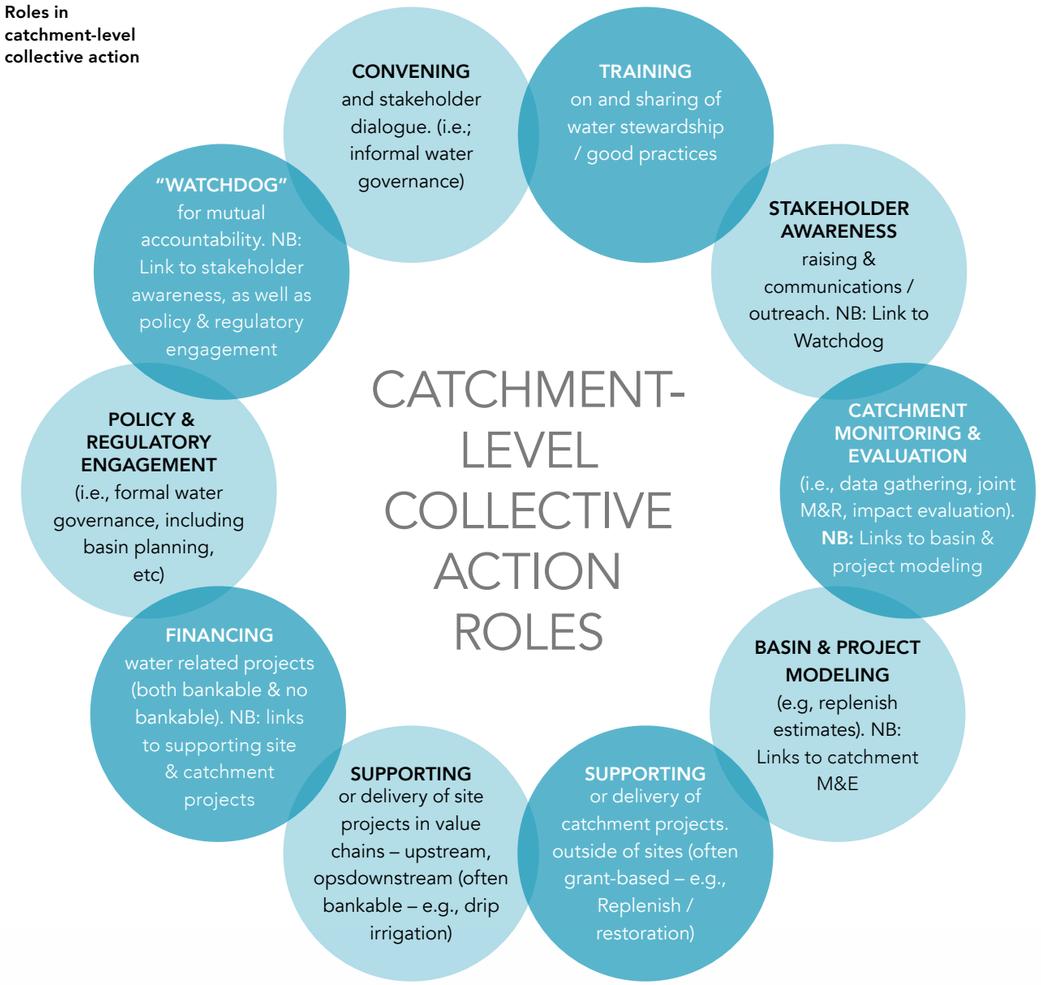
"**A coordinated set of engagements among interested parties playing complementary roles, which pools together knowledge, resources and/or expertise to jointly identify and implement solutions at various geographic scales, with the aim to address shared freshwater challenges**"

These engagements manifest in different formats as seen in Figure I and illustrate that collective action is not a single "action" but rather an array of actions, that are not a panacea and not universally appropriate. Rather specific collective actions are appropriate in certain circumstances. Given that collective action is generally quite resource intensive, it should be treated carefully and seen as a means, not an end unto itself. The intersection between stakeholder-led collective action and public-sector led water governance structures still remains fuzzy and there remains a need to more clearly link these efforts together into more cohesive water governance systems that account for formal and informal processes.



A diagnostic framework for forms of collective action

Roles in catchment-level collective action



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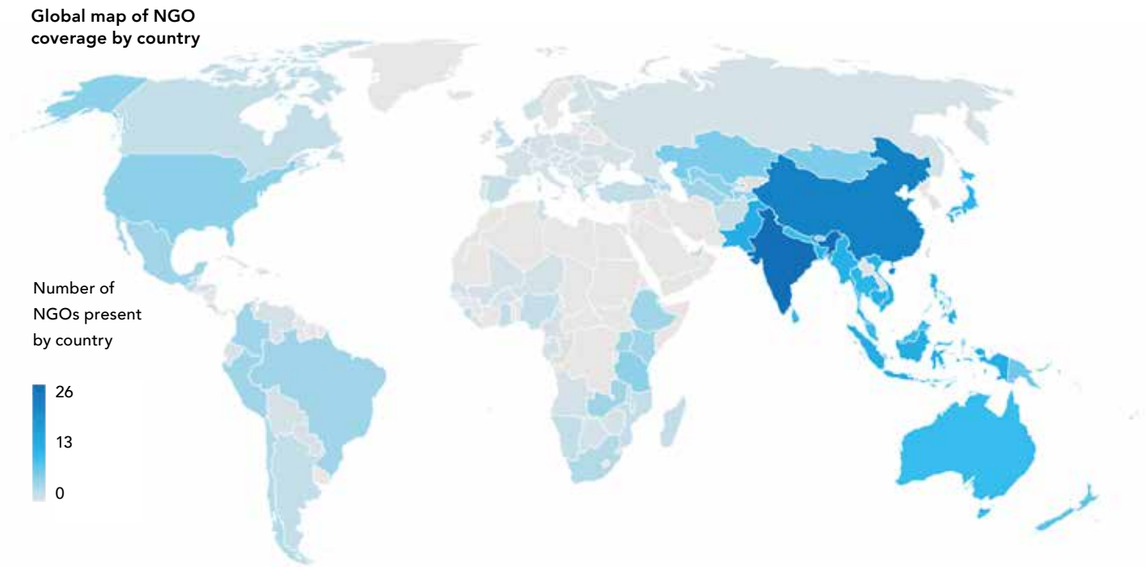
Global map of NGO coverage by country



PART II
COLLECTIVE ACTION: WHO

Moves on to provide an overview of some of the key actors who are working in this sphere and position them within a broader framework relating to roles (Figure II). Part II unpacks some of our combined learned experiences - what is working (or has worked/failed). It also offers up a proposed commitment for those working on convening in this sphere.

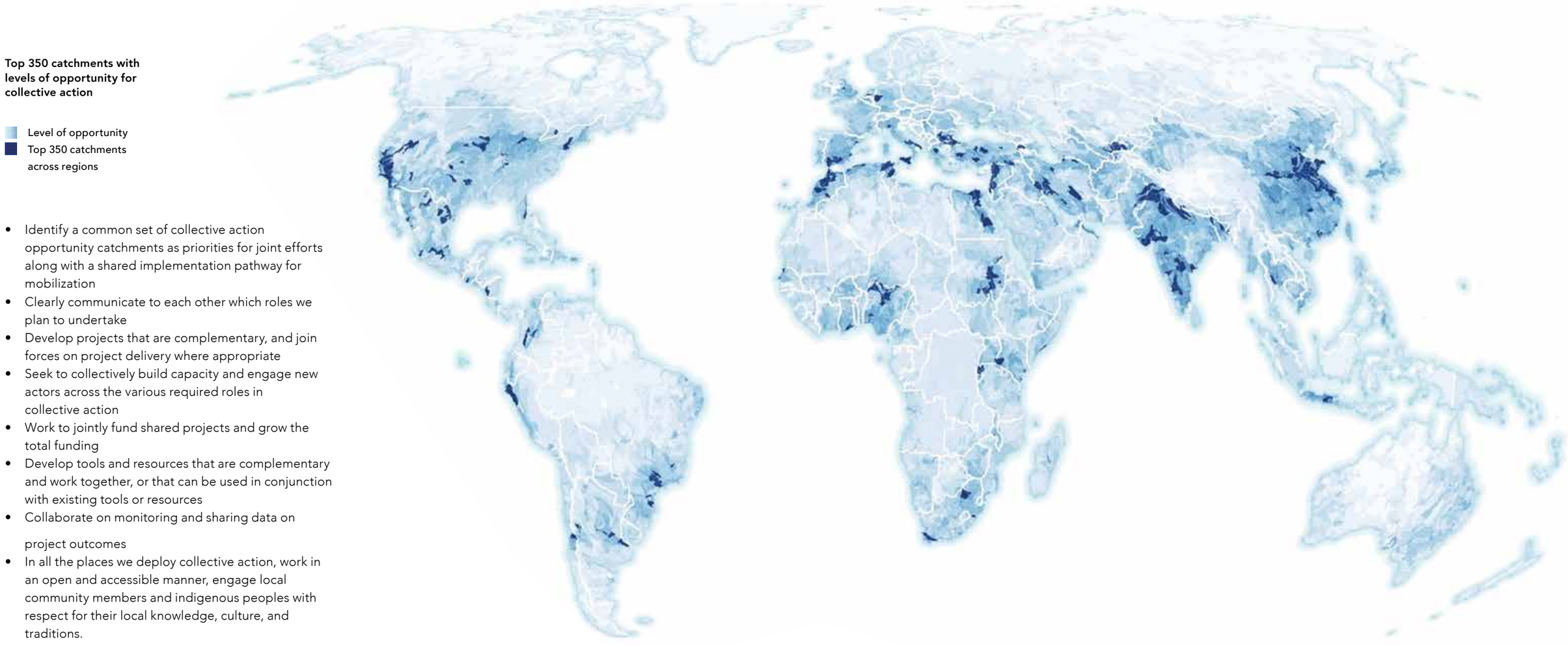
Whilst incomplete, Figure III is a first attempt to capture the national-level presence of over 50 different water stewardship-related NGOs. It highlights the significant overlaps and gaps at the national and regional levels, highlighting the need to consider how we address those issues as a community. Building on this, we offer up a draft commitment to work together:

As convenors of global organisations, investment, and expertise, that regularly implements collective action, we commit to:

- Work together to accelerate collective action for sustainable water management in at-risk river basins and catchments.
- Operate through accessible, transparent, multi stakeholder models of governance at the catchment level as well as at other appropriate scales (e.g. municipal, national, regional, global)
- Coordinate collective action projects globally and locally by working as a community, where possible via existing platforms

EXECUTIVE SUMMARY

Top 350 catchments with levels of opportunity for collective action



- Identify a common set of collective action opportunity catchments as priorities for joint efforts along with a shared implementation pathway for mobilization
- Clearly communicate to each other which roles we plan to undertake
- Develop projects that are complementary, and join forces on project delivery where appropriate
- Seek to collectively build capacity and engage new actors across the various required roles in collective action
- Work to jointly fund shared projects and grow the total funding
- Develop tools and resources that are complementary and work together, or that can be used in conjunction with existing tools or resources
- Collaborate on monitoring and sharing data on project outcomes
- In all the places we deploy collective action, work in an open and accessible manner, engage local community members and indigenous peoples with respect for their local knowledge, culture, and traditions.

PART III
COLLECTIVE ACTION: WHERE & WHEN

Builds on Part II, aiming to go beyond where respective organizations are landing on ground – to highlight where we have the greatest opportunities to mobilize collective action. The work maps out over 350 high opportunity catchments where we believe collective action is not only needed, but highly feasible given the concentration of economic activity and actors (Figure IV).

Building on the CEO Water Mandate's existing efforts in the Water Action Hub, those organizations linked to this paper will be revisiting shared efforts to map and coordinate collective action - both existing and newly developed initiatives in high opportunity locations in 2024 and beyond.

FINALLY, PART IV
COLLECTIVE ACTION: HOW

Concludes with the future-facing dimension of collective action, including new models of how we can more effectively deploy collective action to tackle our "common water problems". This is broken into collective action at the catchment scale, as well as collective action at the sector scale.

It offers up some ideas on how we might be able to establish new, joint business models that can fund both impact and the essential governance "glue" functions that are essential to effective collective action outcomes (but rarely appeal to donors) with an example illustrated in Figure V. It also offers up a vision of a new way of working, modeled after a river system itself with the notion of aggregating funders through a common system (the headwaters), coordinating through common initiatives at the catchment level with a coordinated governance and funding allocation mechanism (the mainstem), and then re-distributing the sediment ($) to various projects (the delta).

Common structures and incentive systems can help to align, convene, encourage public-private-civil coordination through formal and informal governance, and ultimately, grow the pie and scale impacts at the catchment scale. In that sense, establishing a series of "learning basins" where we can test implementation would be a useful next step to encourage collective action at the catchment level, including the testing of collaborative business models. Lastly, we outline a series of next steps, that include:

- **Publishing this document** and potentially repackaging content for specific audiences as well.
- **Convening global calls** on a quarterly basis to bring this community together. The first of these calls will seek to identify a series of **"collective action learning catchments"** - places identified out of the mapping work undertaken in this paper that we can put theory into practice. Such catchments can then test approaches and share lessons learned.
- Continuing the **dialogue on how to finance, operate and recognize shared common water stewardship resource portals** such as the Water Action Hub and the AWS Tool Hub.
- Building on common portals, **further mapping activity and initiatives on ground** to better understand the picture.

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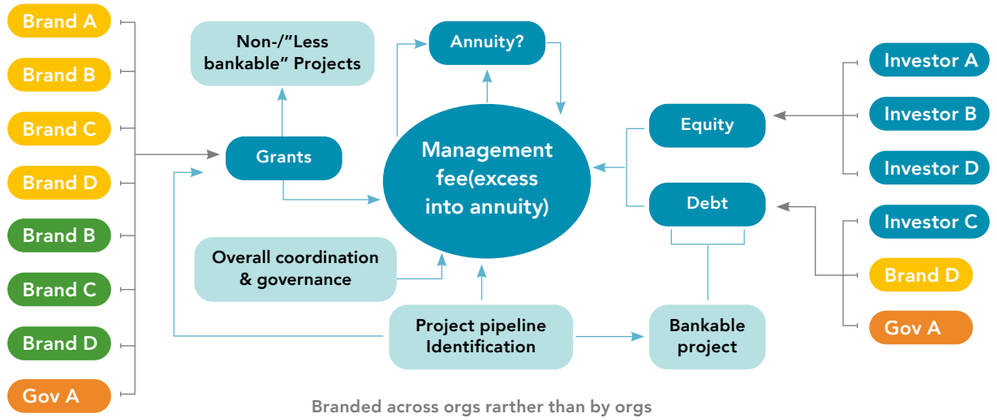
CATCHMENT COLLECTIVE ACTION BASKET FUND



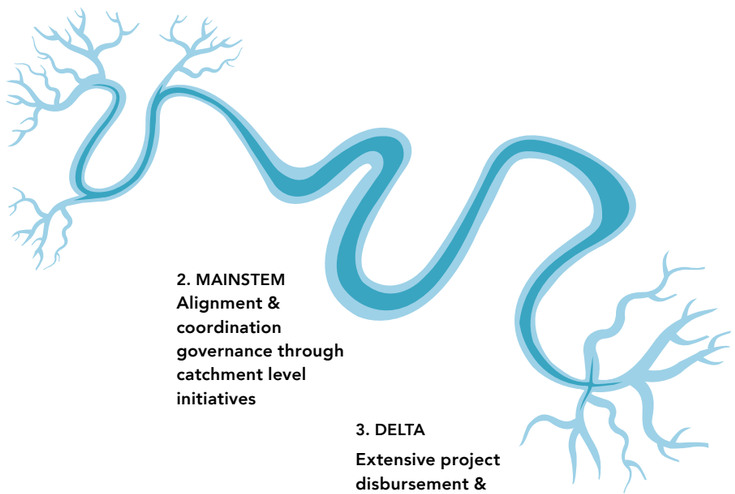
A theoretical, non-organizationally-branded catchment basket fund model

- Engaging in one or more **workshops** to unpack how, as a community, we can take this work to ground in the "collective action learning catchments". This will help ensure we have a tangible pathway to go to ground.

We face a world struggling to come to grips with the threats of both climate change and biodiversity loss along with ongoing and numerous social challenges and inequities. Water is the medium through which many of these issues manifest, and to that extent, we must come together if we are to stand a chance at bending t he curves and shifting the trajectory of our planet's future. Collective action is that call to action – to begin to think beyond organizational boundaries and work, pre-competitively, towards the delivery of SDG6.

We need to raise our game and do better. Now is the time.

A river basin model of fund aggregation and dissemination



1. HEADWATERS

Channeling resources (funder aggregation & re-distribution)

2. MAINSTEM

Alignment & coordination governance through catchment level initiatives

3. DELTA

Extensive project disbursement & implementation to multiple projects

INTRODUCTION

Water, along with air, are the most shared, common pool resources on our planet.

The recognition that freshwater is a shared resource is widely acknowledged between governments, businesses, NGOs and communities. Furthermore water is a resource that touches upon every aspect of our life, every economic activity, environmental consideration and social implication. As such, it is not a challenge that any one actor or sector can "solve" single-handedly. Solutions at a meaningful scale require collaboration. However, the process of working together to protect, manage and restore such freshwater resources has far less agreement. Efforts by governments to deploy river basin management programs have met with mixed success and in practice, our efforts continue to fail to successfully deliver at scale on ground in catchments – as evidenced by ongoing freshwater biodiversity loss, water scarcity, polluted river systems and inadequate delivery of WASH to communities. In addition to that, there is a persistent gap in the large-scale investments needed to deliver outcomes at scale.

To address the situation, many NGOs have endeavored to step into the fold and act as "convenors" of collective action. Yet we (NGOs) too have not fared much better. In particular, **often we have failed to coordinate amongst ourselves, resulting in competitive collective action and ironically, undermining our shared aim**. NGO-led corporate water commitments continue to proliferate, and we continue to lack a shared implementation pathway to unify actions, as our current mode of operation could best be described as a series of independent, but sometimes geographically clustered, efforts. Furthermore, we are still struggling to mobilize the broader ecosystem of business solution providers as allies – from startups to multinationals, there are many companies out there with an aligned mission. In short: everyone recognizes the "need to work together to solve shared water challenges", but in practice, we're all pursuing working together independently and that needs to change.

This paper seeks to face up to that reality. The objective of the paper is to initiate a dialogue and a pathway to bring together the network of freshwater solution providers into a more coherent ecosystem and offer a shared pathway forward. While this paper begins with some key building blocks, it is intended to be part of a longer process that aims to bring together not just key collective action facilitators in the NGO community, but the whole of the water stewardship community to improve how we work together to scale up and effectively deliver healthier freshwater systems for people and nature. This paper begins that journey by seeking to align on definitions, share learnings, map common priorities, outline roles and expectations, and lay out some thinking on shared revenue models. It offers a set of first steps to do better.

We hope this paper will reach three key audiences: (1) our fellow NGO partners with whom we seek to further align and collaborate on developing collective action models, (2) the private sector (both those seeking solutions, and those offering solutions); and (3) interested public sector actors seeking to enable water stewardship and collective action in their basins.

The discussion paper has been developed by a series of individuals, drawn together from key organizations in the water stewardship sphere, and while we have given recognition to two companies that helped to sponsor the report, in terms of authorship, it is intentionally "non-branded" as the concept is intended to represent a broader need – not the push of a singular non-governmental organization.

WATER IS A RESOURCE THAT TOUCHES UPON EVERY ASPECT OF OUR LIFE, EVERY ECONOMIC ACTIVITY, ENVIRONMENTAL CONSIDERATION AND SOCIAL IMPLICATION.

THE STRUCTURE OF THIS REPORT

This report is broadly structured into four parts relating to “what & why”, “who”, “where & when”, and “how”.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PART I

WHAT & WHY

Part 1 begins with an overview of both why collective action is critical and what we mean when it comes to collective action. It seeks to provide a common definition of the term, along with a diagnostic framework to unpack different forms of collective action, as well as when different forms are appropriate or not.

PART II

WHO

Part 2 moves on to provide an overview of some of the key actors who are working in this sphere and position them within a broader framework relating to roles. Part II unpacks some of our combined learned experiences - what is working (or has worked/failed). It also offers up a proposed commitment for those working on convening in this sphere.

PART III

WHERE & WHEN

Part 3 builds on Part II, but offers a view not only of where respective organizations are landing on ground - painting a picture of where we have capacity, overlaps and gaps to support collective action in water stewardship - but also a template for where we are going to target going forward.

PART IV

HOW

Part 4 builds on Part II, aiming to go beyond where respective organizations are landing on ground - to highlight where we have the greatest opportunities to mobilize collective action. The work maps out over 350 high opportunity catchments where we believe collective action is not only needed, but highly feasible given the concentration of economic activity and actors.

PART I

COLLECTIVE ACTION: WHY & WHAT

1.1 INTRODUCTION: WHY IS COLLECTIVE ACTION EVEN NECESSARY?

For some time now there have been calls for "collective action", but do we all share the same belief that collective action is key to successfully delivering on the Sustainable Development Goal (SDG) 6 agenda on freshwater?

Recognizing that water is a shared resource, the authors and collaborators linked to this paper hold the belief that only through joint efforts will we be able to achieve the scale necessary to make meaningful progress towards the SDG6 targets. Not only are the challenges of water too great for any one actor to single-handedly deliver them (even government), but also pooling and coordination of capital is necessary to achieve greater scale, as well as re-thinking how different sectors and actors collaborate towards shared goals.

The calls for collective action have emerged heavily out of the water stewardship landscape, which in turn has much of its origins linked to integrated water resources management (IWRM) efforts over the last three decades, which is essentially about collective action for the common good, but is often poorly implemented in practice. Broadly speaking,[2] there continue to be calls from all parties for greater collaboration.

Beyond the logistics and scaling of delivery, collective action represents a key step towards both SDG 6.5 on water governance, but also SDG17 on cooperation. In short, it is our belief that collective action, when done well, not only enhances governance and action, and aligns investments, but represents perhaps our only true hope of success.

1.2 DEFINING AND UNPACKING COLLECTIVE ACTION: WHAT DO WE MEAN?

So if we can agree that collective action is a worthwhile pathway to pursue, it is also important to establish, from the outset, a common understanding of what we mean by the term itself. We begin here by providing a review of some of the definitions, along with a new diagnostic framework to begin to tease apart the concept in the hopes of shedding more light on a concept that has become a catch all for many (and often quite different) ways of working.

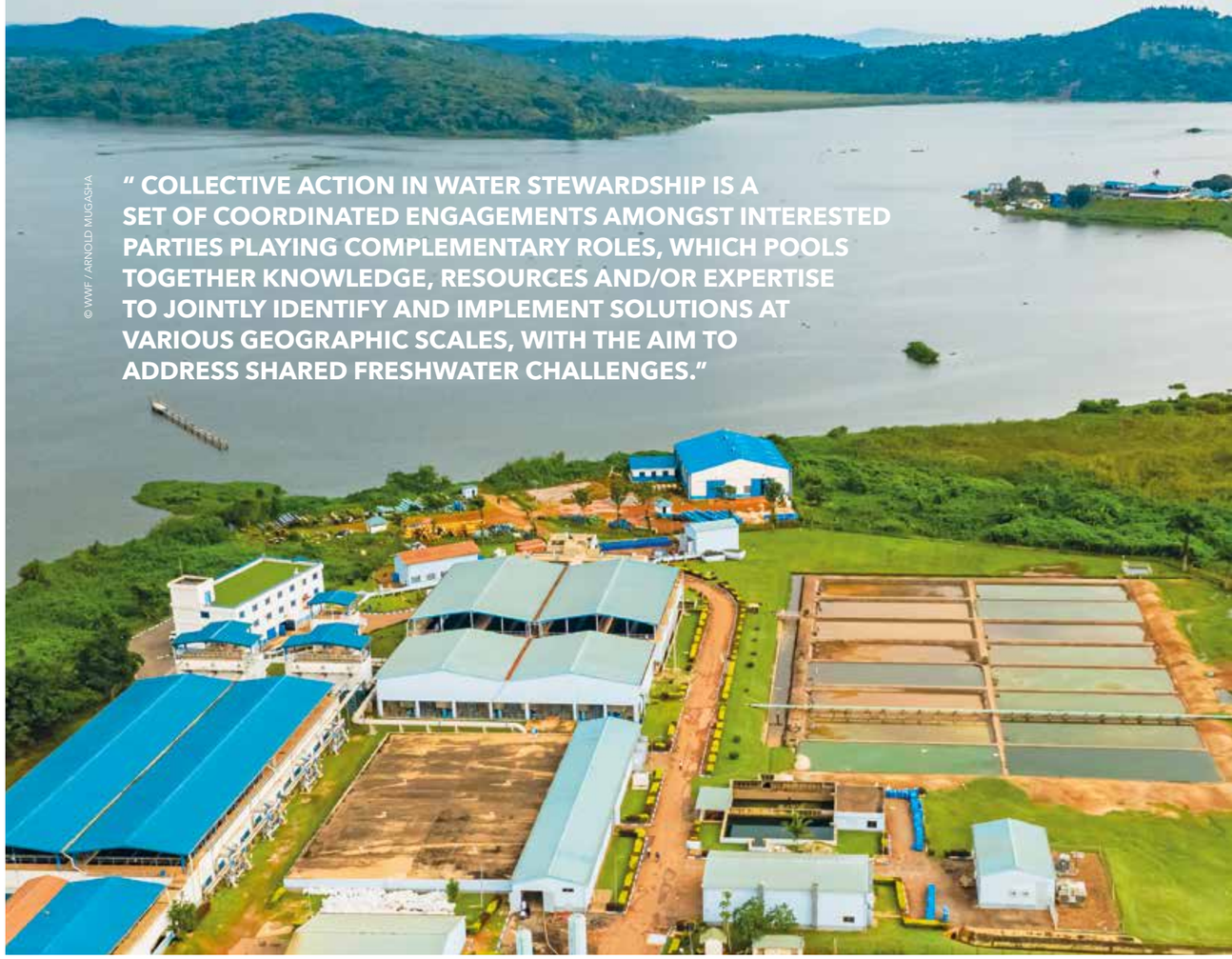
1.2.1 Definitions of "collective action"

While the concepts of both collective action and common pool resources span decades, the terms themselves were heavily popularized through the work of Elinor Ostrom. The key to much of Ostrom's research was in the recognition that common pool resources can be (and are) managed most effectively through those who use the resources, rather than governments or private companies. Ostrom was particularly interested in new forms of entrepreneurship, focusing on how people could innovate and form new ways of tackling "common problems". Ostrom's belief that the public sector may not be best suited to tackling common problems, has largely proven prescient. Despite the emergence of IWRM, or the similar notion of integrated river basin management (IRBM), which came into vogue in the 1990s on the back of the Earth Summit, we have continued to witness growing water challenges, and have seen ongoing declines in freshwater biodiversity globally.

The ongoing growing freshwater challenges, combined with limited performance and funding for environmental management by governments in the early 2000s, led the private sector and NGOs to lay the foundation for "water stewardship", defined by the Alliance for Water Stewardship (AWS) as "*the use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions*". Indeed, even the latest data from the Edelman Trust Barometer suggests that trust in government continues to wane, while businesses and NGOs are seen with more faith[3]. Through this definition of stewardship we see the concepts of both "stakeholder-inclusive" and "catchment-based", which when combined, form the basis for notions of collective action. The water stewardship community has continued to develop guidance, tools and fora to consider how to work together. The NGOs reflected in the authorship of this paper have a long history of working not only as individual entities organizing collective action in catchments, but also together, whether through formal memberships under AWS, joint thinking and methodology development under the Science-Based Targets Network (SBTN), or through engagement and joint guidance published under the CEO Water Mandate.

Between 2010 and 2020, a number of NGOs collaborated to develop, and publish, an array of water stewardship guidance documents under the UN Global Compact's CEO Water Mandate. One of these guides was the "Guide to Water-Related Collective Action" published in 2013. The work built on insights by companies, NGOs and others to outline not only a definition of collective action, but also some frameworks and guidance, all of which this report seeks to build on nearly a decade later. This publication defined collective action as "A coordinated engagement among interested parties within an agreed-upon process in support of common objectives." While this definition suffices at a high level, it is sufficiently broad as to create confusion for users of the concept. Moreover, while the original guide (and definition) was very squarely targeted at a corporate audience, it acknowledged that "effective collective action requires establishing non-conventional relationships with non-traditional partners, and involves a commitment to shared goals and the recognition of the potential for tradeoffs between company interests and broader public benefits… Collective action requires the development of new skills and knowledge, such as a more in-depth understanding of community needs and values, and enhanced capabilities to connect with government and NGO actors."[4] In short, while a broad definition ensures coverage of all forms of collective action, it also creates a lack of coherency about what the concept truly is.

2. United Nations (2021) **Progress on Integrated Water Resources Management – 2021 Update | UN-Water (unwater.org)**
3. Edelman (2023) 2022 Edelman Trust Barometer. Available online: **https://www.edelman.com/trust/2022-trust-barometer** Last accessed: May 24, 2023.
4. CEO Water Mandate (2013) **http://bit.ly/32nqlO5**



Building on these concepts and recognising our collective knowledge and experience to date, we propose an adapted definition of collective action within the water stewardship context: **"A coordinated set of engagements among interested parties playing complementary roles, which pools together knowledge, resources and/or expertise to jointly identify and implement solutions at various geographic scales, with the aim to address shared freshwater challenges".** Perhaps most simply, collective action for water can be loosely defined as "working together to solve shared water challenges and mitigating catchment water risks".

Beyond this definition, there are many other elements that provide nuance to the term. Collective action:

- Always requires trust, while notions of reciprocity, joint communication, and a shared vision are all valuable elements that can enhance effectiveness
- Must be inclusive, and recognise diverse perspectives held by stakeholders working to address shared water challenges
- Includes formal and informal partnerships between governmental bodies, non-profit organizations, businesses, academia, and local communities to foster inclusive decision-making share best practices, and mobilize joint projects in catchments with the objective of achieving greater shared water security and enhance climate resilience
- Often includes a range of actions by different stakeholders at different scales, all of which come together to add value through collective action

Even with such a definition, we need to recognize that "collective action for water" is not a singular approach or "thing". Rather, collective action is a "set of engagements" and may take on many different forms (see 1.2.2 and 1.2.3). To further understand its various forms, we have provided a series of frameworks to help break down these "sets of engagements" which may also help to know when to apply which type of engagement.

5. Adapted from Mosimane, Breen, & Nkhata, 2012; Ostrom, 1998; Ostrom & Walker, 2003; Smith, 2010; .

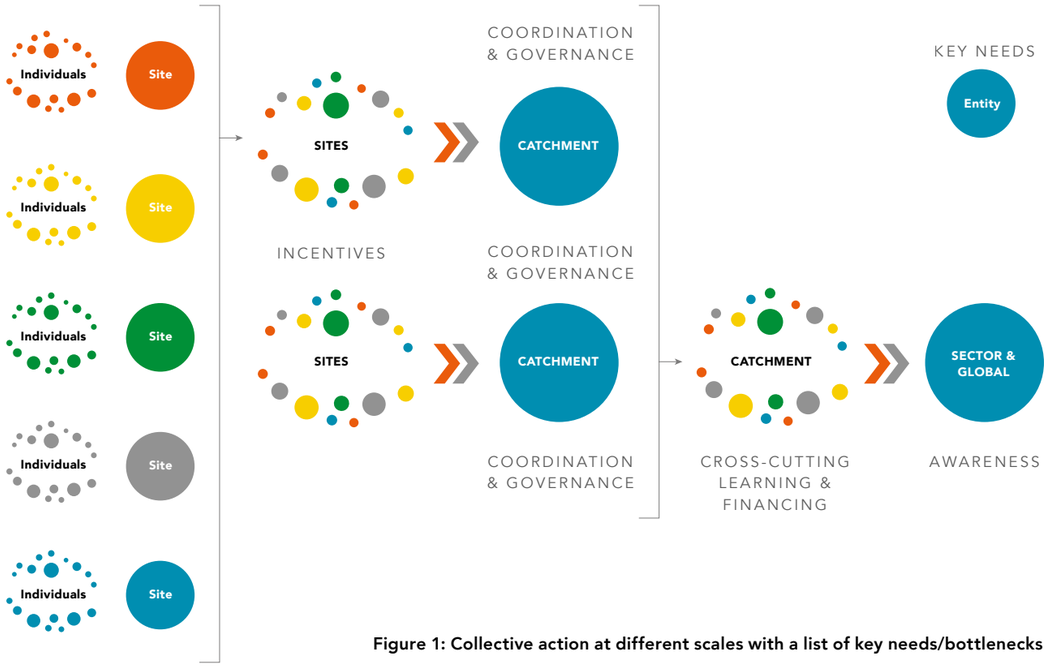


Figure 1: Collective action at different scales with a list of key needs/bottlenecks

1.2.2 A framework to understand different scales of collective action

Collective action is inherently a concept that operates at multiple, nested scales. At one extreme, multiple organizations may come together even at the site level to implement a project at a facility or similarly a site may begin its journey into collective action by engaging with stakeholders just outside of the facility. As sites begin to better understand their impacts and dependencies - both upstream and downstream - the need and desire to embrace collective action grows. Experience from those who have supported collective action has shown that as sites mature, they often begin work together at an industrial park level; industrial parks and other actors work together at the catchment scale; brands work together with supply chains at a broader basin or national scale, and companies and industry associations work together at the sector and global scales. For any given actor, and for any given collective action effort, it could also start at one scale and shift to another. We each begin our journeys at different places, and the logic needs to be such that we are preparing people, sites, catchments and sector groups with the necessary language, capacity and incentives to go from being "collective action ready" to "participants in collective action" at a scale that is appropriate given their level of ambition, and the nature of the water challenges at hand.

This framework offers a few insights regarding collective action, notably that it:

1. **Requires different scales of organization:** from local (neighbourhood) to catchment (HydroSHED level 7-9 - see Part III) to national/regional/global levels. These forms are unpacked further in Part IV of this document.
2. **Is fractal in nature and builds between scales:** Various forms of collective action are nested within one another and can evolve through time to be larger or smaller as need be. This is important because it also flags the fact that collective action need not be static.
3. **Faces different bottlenecks at various scales:** As shown in Figure 1 below the circles, there are key capabilities that act as bottlenecks or enablers at different scales. Without these building blocks in place, collective action is unlikely to be successful and/or scaled.

Experience from our respective organizations also suggests that while some sites and companies may face hurdles around developing the skills, capacity and motivation to mobilize sites, and that there still remain challenges around mobilizing sector associations or the global community, in general, the biggest hurdles sit in the inbetween scale - i.e., at the catchment and/or national level.

1.2.3 A diagnostic framework for freshwater-related collective action

In addition to different scales of collective action, there are also a massive array of forms of collective action. Often collective action is referred to generically, and is perhaps most often used as a shorthand to describe joint, non-public-led sector platforms at the catchment level, although it can include government-led platforms too (often these are described as basin organizations, participatory multi-stakeholder platforms or part of IWRM), as well as national level engagement. Despite this, collective action has a broad array of forms and not all of these forms are suitable for every context.

Critically, it is important to recognize that collective action takes considerable time, energy and resources, so it is essential to understand the wide array of scales and opportunities for collective action before embarking on a new undertaking. Figure 2 (below), which builds upon an adapted version of Stacey's complexity matrix, seeks to unpack under which circumstances one might want to consider a given form of collective action (with various shades of blue representing different forms of collective action).

The framework operates along two axes: (1) the **degree of conflict over shared water challenges** in the catchment, and (2) the **level of complexity** of the shared water challenges.

With simpler, clear issues where there is agreement, (i.e., the bottom left) collective action is in fact not really required (or if it is, it can be implemented quickly). However, as complexity grows (i.e., to the right), which could be a function of the issue being not just water scarcity, but water quality, flooding, governance, etc., then the speed of collective action tends to slow. Similarly, as conflict increases (i.e., to the top), the nature of engagement tends to go from action to dialogue to listening and ultimately to a breakdown in communications. The core of the concept here is that more complex water challenges require more complex forms of collective action.

If conflict is low, and the focus of the issue is clear, then there is no need for collective action. Note that it may still be desirable to engage stakeholders, even where unilateral action is determined. For example, the decision to restore a wetland on a company's property may be clear and agreed upon, but the company may still opt to communicate with local stakeholders about the project. As water challenges grow more complex and conflictual (outward in both directions), the need for more nuanced forms of collective action tends to grow, as do resource needs (time and money). At first, this may be bilateral action between a company and an NGO, and in time, perhaps even an entire sector or an array of sectors within a given catchment or country. However, if the issue gets too complex, there is often the need to gather more

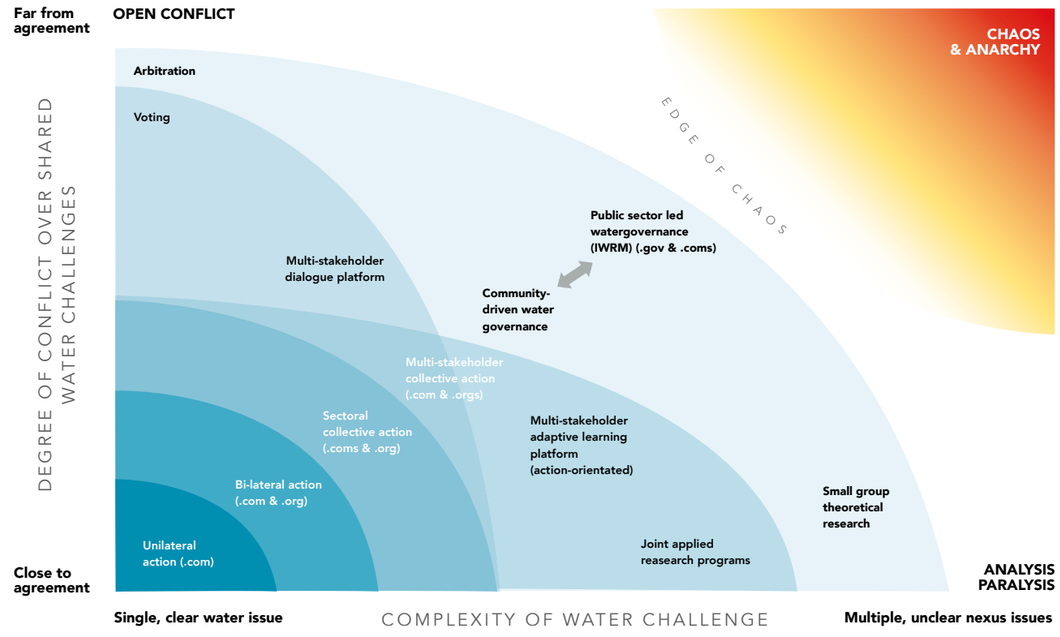


Figure 2: Diagnostic framework for forms of collective action

information about the situation (data to inform context is critical for water), or in other words, build research structures. Conversely, if the issue gets too conflicted, there is the need to enhance governance structures to enable tensions to dissipate. At the extremes, if complexity becomes too great, we tend towards analysis paralysis, while if conflict grows too great, agreements fail and open conflict emerges, sometimes violently. Taken to the extreme in both directions, we arrive at chaos.

Various examples of collective action can be placed into this diagnostic framework. For example, TNC's water funds represent a form of ***sectoral (or catchment) collective action***, while a WASH program between Diageo and WaterAid may represent a ***bi-lateral action***. The Alliance for Water Stewardship represents a ***multi-stakeholder dialogue platform*** designed to learn from other members about how to tackle complex, conflicted challenges. Even this report itself represents a form of collective action unto itself: ***small group research***.

Such a framework can be helpful in guiding those implementing and supporting collective action to determine the degree of collective action required, with the aim to only to go as complex as necessary since the greater the form of complexity, the slower and less-action-oriented the collective action is likely to be.

One key challenge, and open question, sits in the center of the diagram: at which point do voluntary-led collective action efforts (community- or even NGO-led processes) transition over to and/or interface with public sector-led water governance structures ("public entrepreneurship" as Ostrom would call it)? This bottom-up vs. top-down set of approaches to multi-stakeholder water governance remains an ongoing question and approaches vary across jurisdictions and catchments around the world. While there is no easy answer to this question, we would suggest that alignment with public policy needs to be established at as early a stage as possible, and that the establishment of competing initiatives that could undermine or fragment government effort should be avoided. The collective action initiative will be able to adequately address policy and regulatory challenges, depending on how well it has considered these elements from an early stage. If that happens, then as informal processes grow more complex, the need to engage and support formal government processes increases and at some point benefit from more formal linkages in order to help ensure both legitimacy and sustainability of the initiative. At the same time, top-down approaches can clearly benefit from more bottom-up approaches filling institutional gaps in a more dynamic way than may be enabled by mandate or budgetary constraints. This lives at the heart of one of the recognized challenges facing IWRM implementation, which continues to be perceived as a "top down" process, despite efforts to stimulate inclusive, "bottom up" elements. Collective action can be considered and communicated as the active participation in resource management by water users which has always been sought as a fundamental component of effective IWRM.

In summary, there are a few key takeaways from the diagram above, including that collective action is:

A. **Not a single "thing"** (or action), but rather **an array of actions**;

B. **Not a panacea**, but rather is suitable in certain circumstances (but perhaps is not the right course of action in others);

C. **Resource intensive** (especially as it grows more complex) requiring time, money, relationships and trust which can slow progress. Refer to the *Guide to Water-Related Collective Action* for more information including the array of implementation roles associated with collective action. While that may be necessary at times, it is not necessarily the "goal".

D. **In need of clearer pathways to link stakeholder-led collective action with public-sector led water governance structures**. Ultimately tackling shared water challenges needs strong governance processes, and while water stewardship collective action is a form of informal water governance, it is not always synonymous with water governance, nor should it be a replacement for formal water governance structures. Rather, collective action efforts need to interface with water governance – be it formal or informal water governance, in a mutually beneficial manner. In particular, early engagement or alignment with public policy needs is advantageous.

6. CEO Water Mandate (2013) Guide to water-related collective action. Available online: https://ceowatermandate.org/wp-content/uploads/2019/07/Water_Guide_Collective_Action.pdf Last accessed November 17, 2023.

"COLLECTIVE ACTION IS A CONCEPT THAT OPERATES AT MULTIPLE, NESTED SCALES"

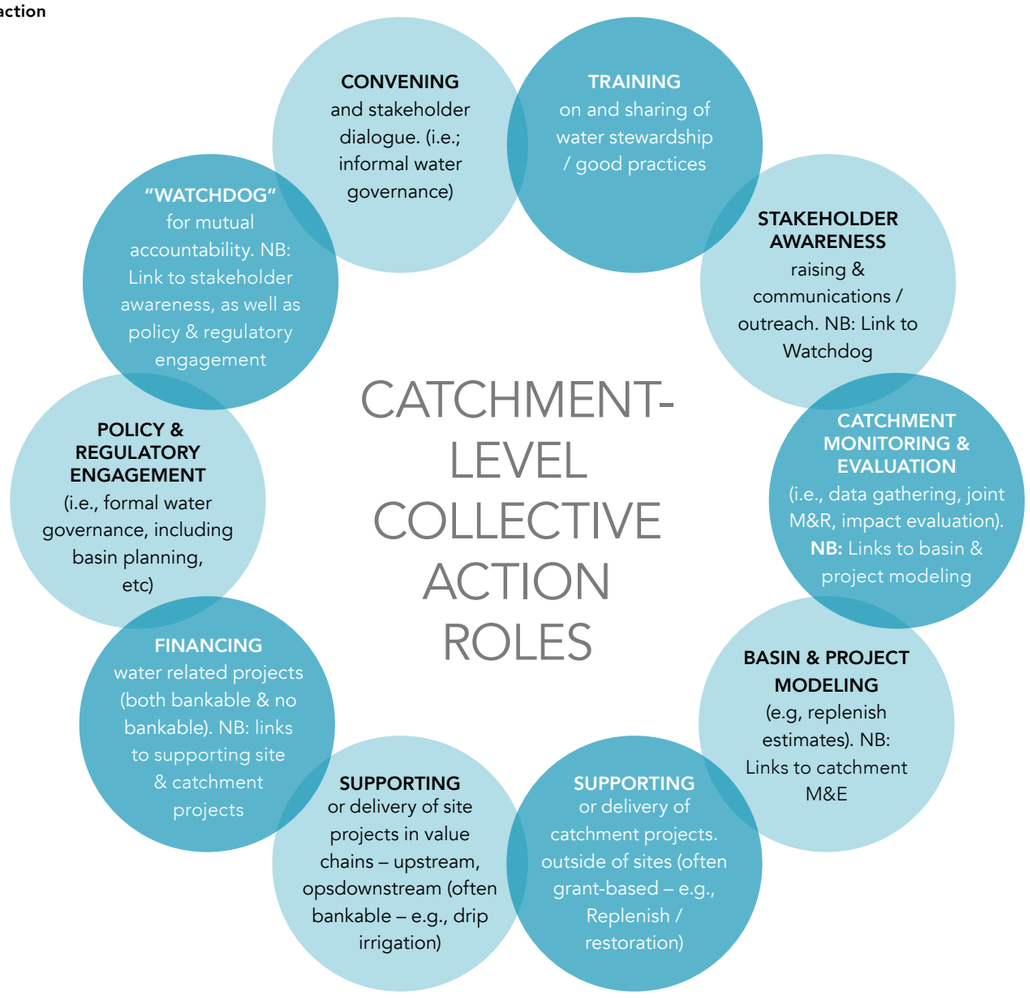
PART II

COLLECTIVE ACTION: WHO

2.1 INTRODUCTION: WHO IS HELPING TO ADVANCE COLLECTIVE ACTION?

Collective action is, by definition, not something undertaken in isolation. It is also not something that is exclusive – its nature aims to be inclusive. So when it comes to the "who" of collective action, it is less important to provide a "directory" of actors involved in collective action. Instead, we believe it is more important to understand the different roles that are required to deliver effective collective action on water. Accordingly, this section begins with a draft framework of the various roles in collective action, and then follows this with some lessons drawn from our experiences.

Figure 3: Roles in catchment-level collective action



2.2 A FRAMEWORK FOR UNDERSTANDING ROLES IN COLLECTIVE ACTION

Core to the thinking proposed here is that any given actor can play one or more functional roles when it comes to collective action and that this may shift through time and space. Our collective experience suggests that certain types of organizations tend to lean towards specific roles (e.g., civil society organizations have often acted as conveners since they generally represent an actor that can be trusted by multiple parties), we have seen different types of actors (e.g., public, private, civil society) sometimes play other roles (e.g., Charco Bendito where beverage companies acted as conveners; civil society organizations being brought in for project implementation, etc.).

Figure 3 (pxx) outlines nine different roles that we believe are important in the development and delivery of collective action. These roles are broken down into the following categories, recognizing that some these categories can be broken down further into specific functions, and that these categories are not always mutually exclusive:

1. **Convening:** This role includes mapping or identifying stakeholders, and the initial outreach to the different groups as well as organizing and facilitating ongoing dialogue amongst all actors, general coordination and continued support for all parties. The role of convening is critical for trust building, relationship development and success of outcomes. This has often been a key role held by civil society organizations (specifically larger NGOs) and IGOs; although convenors can run the range from private sector to public sector too (particularly where it crosses into IWRM). The role requires diplomacy, integrity and adequate resourcing given the political sensitivity and often contested nature of water problems.
2. **Training and institutional capacity-building:** To align language, understanding and build knowledge and capabilities, training is often a required key function. Based on our shared experiences, gathering together to share water stewardship/best practices is not only a form of collective action unto itself, but an important prerequisite for more collaborative and comprehensive forms of collective action as well. Generating and sharing knowledge, and building a common understanding of the water challenges faced and potential solutions - as well as agreeing the rules and processes for engagement - are under-emphasised priorities and pre-cursors to effective collaboration.
3. **Stakeholder awareness raising:** While training covers specific (and often detailed) aspects of water stewardship in the context of collective action, there is also a need for more broad based stakeholder communications and outreach. This helps to expand the base of actors involved, encouraging collaboration, and building upon local knowledge and partnerships, leading to increased demand and participation in collective action. Stakeholder awareness raising efforts can grow through time, while continuing to communicate project successes and failures. These communications may include campaigning and can be undertaken centrally by the group, or independently (with guidelines for coherence).
4. **Catchment monitoring & evaluation:** Determining success or failure of collective action (i.e., "impact") requires shared data gathering and results sharing. There are several dimensions to this role from gathering data to analysis to independent (3rd party) evaluation and sometimes each of these are undertaken by different actors. Technically, M&E can (and does) happen at both the site and catchment level, but while the former may be undertaken on a proprietary basis, the latter is of interest to multiple stakeholders and therefore has a key place in collective action.
5. **Basin & project modeling:** Similar to the above, modeling can be undertaken at the site or catchment level. It differs from M&E, in that modeling is not based on solely gathering data, but rather it is about using observations to estimate (and calibrate) values. Modeling is critical for many aspects of water management from scarcity models to flood models to water quality models and also to the broad spheres of water benefit (i.e., "replenish" estimates) as well as Science-based Target basin models.
6. **Engagement:** While Implementation and Engagement can be lumped together, we are opting to split them apart, to provide differentiation between the focus of the types of projects. Although, there is crossover between the actors that deliver on projects inside sites within value chain, and on projects outside sites within the community or catchment, it should be recognized that the project objectives or focus influence the role that those actors play in the collective action. Implementation and project delivery outside of project sites, termed "engagement" and implementation and project delivery inside of project sites, termed "implementation". Accordingly, engagement covers a mix of activities, such as Nature-based Solutions, many Replenish projects, community WASH projects, or the like. Note that projects to enhance governance could fall under #1 above, (Convening) as well, because such projects are often undertaken by NGOs or the public sector.
7. **Implementation:** Building on the above, supporting or implementing projects inside sites across the value chain (upstream, operations, downstream) are often quite technical in nature, such as installing water purification systems in manufacturing facilities, improving irrigation practices on farms, or projects of the like. Most often such projects are undertaken or initiated by the private sector, though again, sometimes civil society organizations or the public sector can play such roles as well.
8. **Financing:** The provision of capital is a critical dimension of scaling projects and is true for collective action as well. When financing is considered for water-related projects, they can in turn be broken into bankable and non-bankable (or grant-based) financing, where the latter is often more commonly referred to as "funding". Note that while financing can come from financial institutions, again both the public sector and even NGOs can play this role. Both equity and debt, as well as grants, are all usable when it comes to collective action projects.
9. **Policy & regulatory engagement:** There are also more formal forms of interacting with policy makers and regulators. While again this could sometimes fall

under #1 (convene) and even under #3 (awareness raising), engagement in formal (water) governance is a key aspect of collective action. Politically influential actors have a key role to play in this regard, and these interactions can be undertaken from a more political sphere (with senior bureaucrats and politicians), and all the way down through government departments (e.g., ministries of water, agriculture, etc.).

10. **Watchdog:** Lastly, there is a role around providing mutual accountability of all actors within the basin in the form of a "watchdog" role. This links to multiple other roles in Figure 3 and can manifest in terms of monitoring, advocacy, and formal or informal governance engagement.

Ultimately which roles are undertaken, and by whom, is a function of the context in question. Some places will need some of these roles more than others, and not all roles are always required. Sometimes these roles overlap and sometimes they are distinct. There is no "right" or "wrong" way to assemble such roles, but when considering collective action, it is useful to consider who will be playing which roles and the expectations and responsibilities of each.

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2.3 COLLECTIVE ACTION: REFLECTIONS FROM SELECT CONVENERS

Of all the different roles involved in collective action, if there is one that is "at the centre", one could argue it is the role of the convener. Those charged with, or given the responsibility, of bringing together stakeholders to address shared water challenges must fulfill a key task that is central to the notion of collective action.

The development of this paper was initiated by a group who often play such a role and as such, it is important to briefly touch upon not only who those actors are, but also why we've come together, and how we see ourselves going forward.

At the heart of the convening function is trust. To convene, one must be seen by various stakeholders as trustworthy. While Edelman research[7] suggests that companies are in fact the most trusted actors, corporations do not see convening as a core function of their business. Also, while international brands might be trusted on a global level, they may lack the trust of local stakeholders due to e.g. (alleged) power imbalances, vested interests, and lack of local knowledge and networks. Accordingly, the convening role has often fallen to the second most trusted actors, NGOs. Since many companies operate globally across many locations, they have been drawn to working with NGOs who also span a broad range of geographies, and who corporations see as having a core function of convening. NGOs are seen not only as trusted organizations, but also holding the influence and stature that is needed to bring the necessary stakeholders to the table. Thus, leading us to where we find ourselves now: many large, global NGOs being requested to, and volunteering, to take on the role of conveners.

Yet while our missions largely align (delivery of SDG6+), our financial models are often in competition, which has led to an uncomfortable reality which has been the elephant in the room for some time now: competing for collective action.

WWF, The Nature Conservancy, the CEO Water Mandate, the Alliance for Water Stewardship, the World Business Council for Sustainable Development, World Resources Institute, Water Resources Group 2030, GIZ and several others are amongst those who not only regularly perform this convening role, but who have also both collaborated and competed simultaneously on this issue.

When we consider the breadth of the challenge facing freshwater on our planet, we need to be realistic, in that we need (more than) all hands on deck. Even collectively, we represent a drop in the bucket of the capacity required to tackle the shared challenges facing catchments. We must embrace new ways of working that leverage our aligned missions, but also drive aligned models of revenue generation in a way that harnesses our diversity and also grows our collective capacity.

2.3.1 Conveners for Shared Water Challenges

While this is far from a global list of conveners, we felt it may be useful to compile a list of some of the key actors involved in convening, and the countries in which we operate. The full breakdown may be found in Appendix A, but a summary table may be found below.

Furthermore, a geographic breakdown of presence (varying levels of roles) may below in Figure 4. This map, which illustrates coverage of organizations by country, visually demonstrates how certain geographies (e.g., India, with 26, denoted in deep blue) have extensive coverage, while others (e.g., many of the countries in the Middle East, with 0, denoted in grey) have very little, or at least very little presence amongst those who have contributed to this paper (largely larger NGOs). This points to the importance of identifying and engaging smaller actors in these geographies to gain a more comprehensive picture of who can play which roles in which countries and basins.

2.3.2 Open Declaration of Conveners for Shared Water Challenges:

With this in mind, we have proposed a declaration here - an open call amongst conveners, both those listed above and any others who wish to join us – to do better:

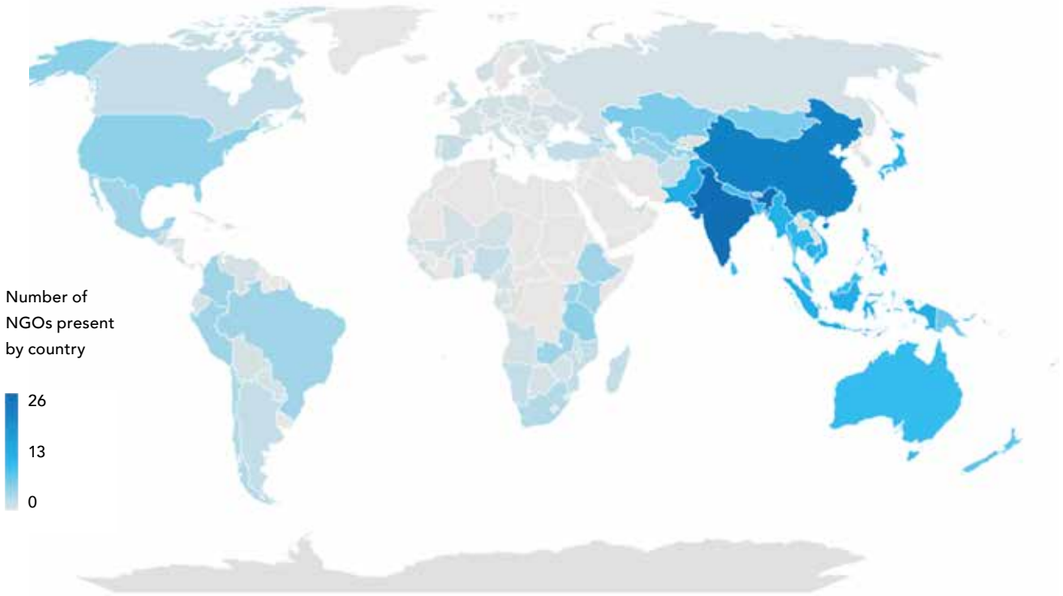
As convenors of global organisations, investment, and expertise, that regularly implements collective action, we commit to:

- Work together to accelerate collective action for sustainable water management in at-risk river basins and catchments.
- Operate through accessible, transparent, multi-stakeholder models of governance at the catchment level
- Coordinate collective action projects globally and locally by working as a community, where possible via existing platforms
- dentify a common set of collective action opportunity catchments as priorities for joint efforts along with a shared implementation pathway for mobilization
- Clearly communicate to each other which roles we plan to undertake
- Develop projects that are complementary, and join forces on project delivery where appropriate
- Seek to collectively build capacity and engage new actors across the various required roles in collective action
- Work to jointly fund shared projects and grow the total funding
- Develop tools and resources that are complementary and work together, or that can be used in conjunction with existing tools or resources
- Collaborate on monitoring and sharing data on project outcomes
- In all the places we deploy collective action, work in an open and accessible manner, engage local community members and indigenous peoples with respect for their local knowledge, culture, and traditions.

This declaration represents a starting point for how we seek to operate together, but will likely evolve through time, and may manifest differently in various catchments as we implement efforts. It is meant to signal a direction, rather than reflect an absolute way of operating. Beyond this, PART IV of this document outlines more details on the proposed pathway forward as we seek to work together in the spirit of this declaration.

7. Edelman (2023) Edelman Trust Barometer. Available online: https://www.edelman.com/trust/2023/trust-barometer Last accessed: Dec 21, 2023.

Figure 4: Global map of NGOs coverage by country



Source: **Organizational database** – compiled by group

Actor	Convening locations
WWF	Africa, Asia, Europe, North America, South America
TNC	Africa, Asia, Europe, North America, South America
WRAP	Africa, Europe
GIZ	Africa, South America
CEO Water Mandate	North America
Alliance for Water Stewardship	Asia, Europe, North America, South America
2030 Water Resources Group	Africa, Asia, South America
Global Water Partnership	Africa, Asia, Central and Eastern Europe, Mediterranean, South America, Central America/Caribbean
WaterAid	Africa, Asia and Pacific, South America
Water.org / WaterEquity	Africa
Good Stuff International	South America, Europe
Fair Water Footprints	Europe, Asia, Africa, South America

Table 1: Select global conveners and broad regional coverage

PART III

COLLECTIVE ACTION: WHERE

3.1 INTRODUCTION: WHERE OUGHT WE IMPLEMENT COLLECTIVE ACTION?

While in theory one could apply collective action anywhere, the reality is that the opportunities to engage in collective action depend on a critical mass of conditions to be present. Collective action takes place at various scales (cf. Figure 1), and while all of these are valuable, collective action at the functional scale of water (i.e., at the catchment level) is perhaps the most critical. The success or failure of SDG6 targets will be determined largely at that scale; not by singular activities at the site level, nor by policies at the national to global scale, but by coherent and cumulative activities at the nested catchment level. Accordingly, in Part III, we turn our attention to where we need to self-organize to undertake collective action at the catchment level.

3.1.1 Mapping the opportunity of collective action for water stewardship

Collective action is often needed due to the scale of pressures in some catchments, but to make collective action work in practice, it requires businesses and other stakeholders playing the various roles (cf. Figure 3) to be present and motivated to act. From the outset, it is important to recognize that efforts over the past decade, such as the **Water Action Hub** (WAH), have sought to map out such activities in catchments around the world, which we will return to in 3.2 below. However, while the WAH builds bottom up from existing efforts, opportunities to map out where could (and arguably should) we undertake collective action had not yet been realized. In short: where are the opportunities for catchment-based collective action evaluated across the planet?

This joint mapping effort reflects a first attempt to identify those catchments with a stronger need for and potential of collective action for water stewardship (i.e., "opportunity"). The simple version of the approach (outlined in greater depth in 3.1.2 below) was as follows: on the "need" or "demand from catchments" side we considered a selection of water and biodiversity risk layers from the WWF Risk Filter Suite. On the "potential" or "supply of actors" side, we considered economic factors such as value of crop production, density of business facilities (assets), and potential for cross-industry collaboration or multiple industry overlap. The result is a global map of collective action opportunities, highlighting 350 catchments, across 100 river basins and 7 regions of the world, where multiple NGOs and the private sector have the opportunity to work together to accelerate collective action for water stewardship. This data can be downloaded **here** or visualized in an interactive map here.

This exercise was an iterative group process amongst the authors, in which we explored multiple data inputs, scale of analysis, approaches, and assumptions, until a point that we, as a group, felt comfortable with the output as an initial version. We collectively acknowledge that limitations exist and still remain and this is intended as a first effort, which may be improved upon through time (see subsection Assumptions & Limitations). We expect conditions on the ground to evolve, as well as more data to become available. Accordingly, this mapping is intended to be updated in time and become more of a living document. For transparency, reproducibility, as well as for future enhancements, the code is publicly available at **https://zenodo.org/record/7782485#.ZEahknZByUk**

3.1.2 Data & Methods

The structure of this data started basically with the shapefile of **HydroSHEDS HydroBASINS (Lehner & Grill 2013)**, at the spatial resolution level 6, which represents 16,397 catchments of ~8,200 km^2 average size. This global dataset of catchments delineation was then enriched with environmental and economic information, and finally with a collective action opportunity index, i.e., the main output. This index was produced following the same approach for all catchments globally, however, created region by region[1], to account for the contrasts in environmental and economic conditions among regions, and to ensure in the end an even global distribution of the index.

The index was based on two equally weighted layers – 1) economic factors (Figure 5) and 2) water & biodiversity risk factors (Figure 6) – but each layer based on multiple criteria, which were previously harmonized to same spatial resolution,

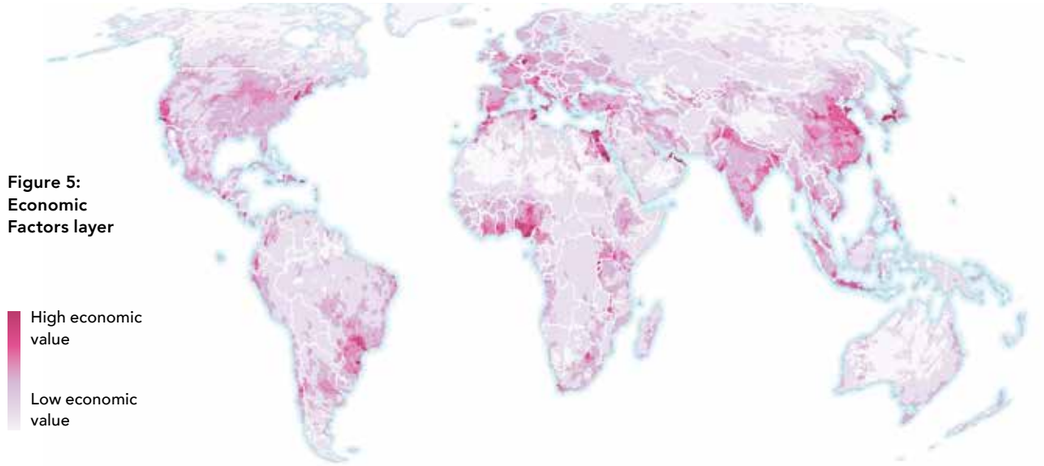


Figure 5: Economic Factors layer

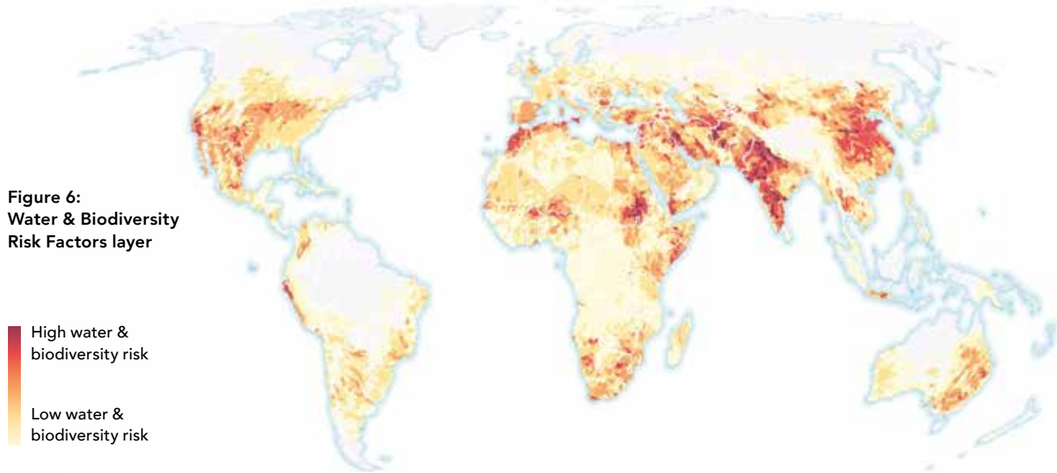


Figure 6: Water & Biodiversity Risk Factors layer

i.e., HydroBASINS level 6, and same range of values, i.e, from 1 (low opportunity) to 5 (high opportunity).

The economic factors layer was created as the result of the maximum value between the criteria: A) Value of crop production, B) Assets density, and C) Number of industries with high assets density.

A. Value of crop production

This criterion was used to depict the agriculture industry presence. Based on the **Global Spatially-Disaggregated Crop Production Statistics Data for 2010 Version 2.0 (IFPRI 2019)** we used the average value of production of all crops within catchments, and further classified it to values 1 (low value of crop production) to 5 (high value of crop production) based on natural breaks (Jenks)[2], excluding zeros to adjust for skewness, due to the fact that large regions of the world have basically no agricultural production.

B. Assets density

This criterion was used to depict all other industries' presence. Based on the **compilation of open asset-level data (Camargo, Salazar & Morgan 2023)** [3] we used the density of business facilities within catchments, and further classified it to values 1 (low assets density) to 5 (high assets density) based on natural breaks (Jenks), excluding the lower 50th percentile to adjust for skewness, due to the fact that large regions of the world have no or very little economic activity, e.g., deserts, forests, ice caps.

C. Number of industries with high assets density

This criterion was used to depict the potential for cross-industry collaboration. Again based on the **compilation of open asset-level data (Camargo, Salazar & Morgan 2023)**, this time we counted the number of industries which have high assets density within catchments, and at the end, catchments with more than 5 industries with high assets density were capped to 5, so that values range from 1 (low potential for cross-industry collaboration) to 5 (high potential).

D. Number of risk layers above medium risk

This criterion was used to depict where there are multiple water & biodiversity risks (challenges) to nature, people, and businesses. Based on the selection of risk layers from the **WWF Risk Filter Suite** (see below), we counted the number of risk layers above medium risk, and at the end, catchments with more than 5 risk layers above medium risk were capped to 5, so that values range from 1 (few challenges) to 5 (more challenges).

D1) Water Scarcity[4]

D2) Flooding[5]

D3) Water Quality[6]

D4) Ecosystem Condition[7]

D5) Infrastructure & Finance (WASH)[8]

D6) Projected Change in Physical Water Risks[9]

As mentioned above, the structure of this data is the **HydroSHEDS HydroBASINS (Lehner & Grill 2013)** level 6, which have unique ids for the 16,397 catchments, but unfortunately (at the time of publication) no names for the catchments. Therefore, to improve understanding and applicability of this data, we use the **WMO Basins and Sub-Basins (GRDC 2020)** to add to the final output the name of the river basin in which the catchments are located, e.g., to help users locate themselves.

For consistency, across this document we use the term "catchments" to refer to the **HydroSHEDS HydroBASINS (Lehner & Grill 2013)** level 6, and the term "basins" or "river basins" to refer to the **WMO Basins and Sub-Basins (GRDC 2020)**.

There were an array of assumptions that went into this exercise. These included the assumptions that:

- **Data quality of all input datasets is uniform for all geographies in the world.**

  However, this is most likely untrue. Systematic validation whether global input datasets are representative of reality on the ground was not performed, so data quality is most likely skewed to further developed regions, which may create bias in the output. To mitigate this, we used our expert eyes and experience in the field to assess whether the outputs "generally do make sense" and when so, we assumed that it is representative. However, local or regional datasets may provide some nuances. Continuous improvements and validation of input datasets are critical to the improvement of this mapping exercise.

- **The three criteria in the economic factors are equally important.**

  This may be generally true when considering the economic factors layer to depict opportunity for engagement of stakeholders. However, when considering the economic factors layer to understand the impact of industries on water, then agriculture generally has a much larger impact than other industries, therefore, criterion A should probably have higher weight than criteria B and C. A sensitivity analysis would help understanding potential differences and would provide a route for correction.

- **The six risk layers are equally important.**

  However, this is also most likely untrue. Water Scarcity often drives other water and biodiversity risks. A sensitivity analysis would help understanding potential differences and would provide a route for correction.

- **Putting together economic and risk factors (each with their underlying criteria) results in the best understanding of the opportunity for NGOs and the private sector to address shared water challenges through collective action.**

  While this sounds logical, we shall acknowledge what the resulting map really is. It is neither the catchments with highest economic factors nor the catchments that are most at risk. It is a map of catchments where the sum of economic and risk factors is highest. The notion that the resulting map depicts collective action opportunities is a clear assumption, however, it may not hold true. Other non-economic and non-risk factors may exert strong influence on the opportunities for collective action, e.g., freedom in society or level of capacity, including the NGOs capacity on the ground. Therefore, non-economic and non-risk enabling factors shall

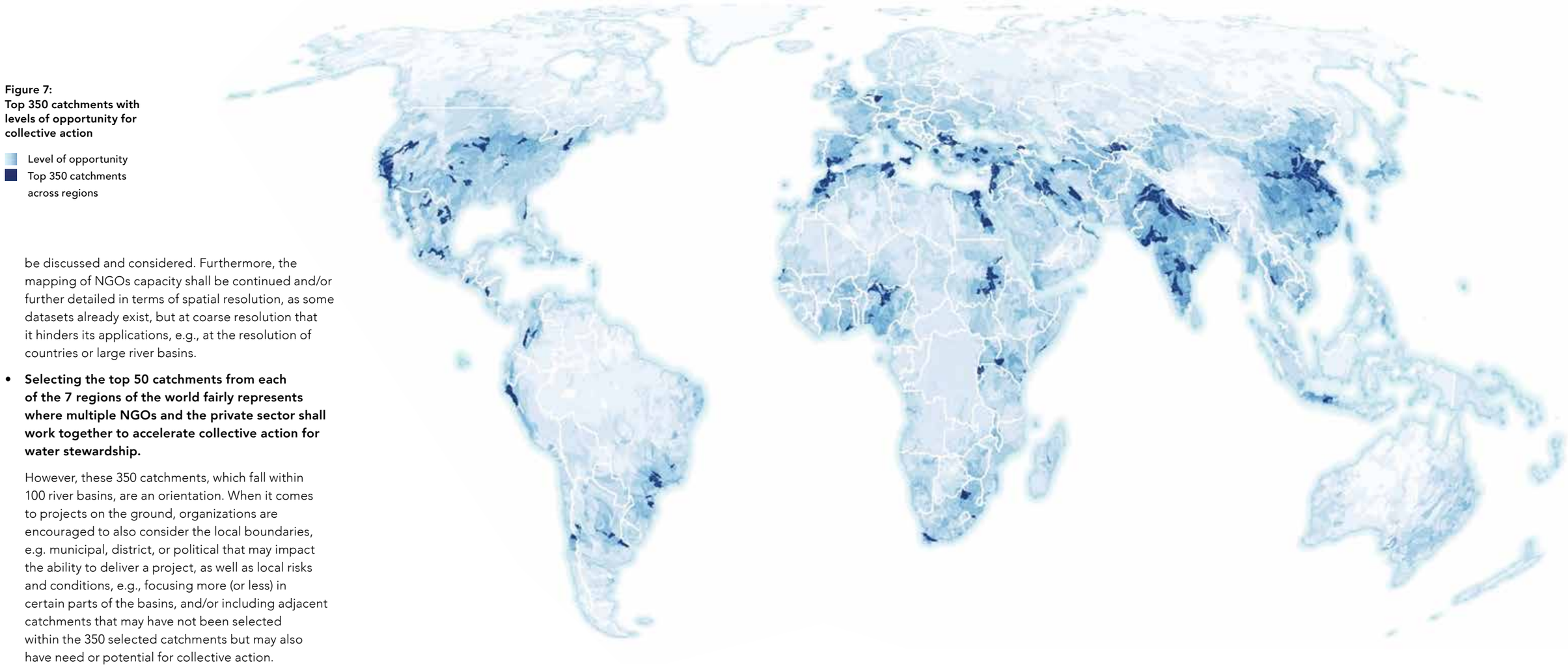


Figure 7:
Top 350 catchments with levels of opportunity for collective action

Level of opportunity
Top 350 catchments across regions

be discussed and considered. Furthermore, the mapping of NGOs capacity shall be continued and/or further detailed in terms of spatial resolution, as some datasets already exist, but at coarse resolution that it hinders its applications, e.g., at the resolution of countries or large river basins.

- **Selecting the top 50 catchments from each of the 7 regions of the world fairly represents where multiple NGOs and the private sector shall work together to accelerate collective action for water stewardship.**

  However, these 350 catchments, which fall within 100 river basins, are an orientation. When it comes to projects on the ground, organizations are encouraged to also consider the local boundaries, e.g. municipal, district, or political that may impact the ability to deliver a project, as well as local risks and conditions, e.g., focusing more (or less) in certain parts of the basins, and/or including adjacent catchments that may have not been selected within the 350 selected catchments but may also have need or potential for collective action.

[1] Using the **World regions according to the World Bank**.

[2] Natural breaks (Jenks) are "widely used within GIS packages, these are forms of variance-minimization classification. Breaks are typically uneven, and are selected to separate values where large changes in value occur. May be significantly affected by the number of classes selected and tends to have unusual class boundaries." **Smith, Goodchild & Longley (2021). Geospatial Analysis, 6th Edition. Building Blocks of Spatial Analysis / Geometric and Related Operations / Classification and Clustering**

[3] This compilation represents the location of sites (e.g., operation, manufacturing, processing facilities of global supply chains), as of December 2022. It includes data from 9 publicly available sources, that after data cleaning and harmonization, resulted in 189,075 data points, covering 15 industries. Note that this compilation is based on an extensive search, however, we acknowledge that there is a significant discrepancy in data coverage/comprehensiveness among the different industries. The industry "Textiles, Apparel & Luxury Good Production" is by far the most complete, while other are clearly far from complete, for example, "Construction Materials", "Agriculture (animal products)", "Agriculture (plant products)", "Oil, Gas & Consumable Fuels", "Water utilities / Water Service Providers", "Hospitality Services", "Fishing and aquaculture".

[4] This risk layer can be visualized **here**. More details in the **Water Risk Filter Methodology**, pages 9-12.

[5] This risk layer can be visualized **here**. More details in the **Water Risk Filter Methodology**, pages 13-14.

[6] This risk layer can be visualized **here**. More details in the **Water Risk Filter Methodology**, pages 14-15.

[7] This risk layer can be visualized **here**. More details in the **Biodiversity Risk Filter Methodology**, page 59.

[8] This risk layer can be visualized **here**. More details in the **Water Risk Filter Methodology**, pages 22-23.

[9] This risk layer can be visualized **here**. More details in the **Water Risk Filter Methodology**, pages 29-36.

3.1.3 Results

The resulting analysis across Level 6 HydroBASIN catchments generated the map seen below (Figure 7). As noted previously, these top 350 catchments represent where the data suggests the combination of water risk and water users come together in dictating both a need and an opportunity for collective action. While on raw numbers Asia (especially Pakistan, India and China) dominate the absolute values, once regionally redistributed the authors felt comfortable that the identified catchments did indeed pass a "gut check" of our on-ground experience.

Building on these smaller catchments, we also generated a list of 100 basins (larger - shown in light blue in Figure 8 below and publicly available here), something that had been requested by the CEO Water Mandate's Water Resilience Coalition to measure impact at a broader basin level. The Water Resilience Coalition added three supplemental basins (Zambezi, Mekong, Murray-Darling) into their exercise to ensure representation of all inhabited continents and basins of key interest, which are reflected in Figure 8 in teal).

This picture offers up a suggested pathway for areas where we may want to coalesce effort. Indeed, many of these places already have collective action efforts underway (e.g., California, Rio Grande, Sao Paulo, Cape Town, parts of the Zambezi, southern Spain, the Ravi, the Noyyal-Bhavani, Taihu, etc.), offering up an array of places where we can begin to re-think our forms of collaboration that are already underway, as well as new areas we may want to jointly develop.

3.2 IDENTIFYING WHERE ARE WE ALREADY WORKING AND IMPLEMENTING COLLECTIVE ACTION

The logical sequitur from where there is opportunity for collective action (i.e.," demand"), is to better understand what the picture of collective action platforms/efforts (ie., "supply") looks like.

Since its launch in 2012, the Water Action Hub (WAH) has offered a platform for actors to place water stewardship projects (both requests and offers). It has provided, to date, the best resource that the water stewardship community possesses to understand the picture of activity at the catchment level. However, the historical picture that is painted by the WAH remains incomplete. It is missing many projects, reflecting only those who have actively participated in the platform, and data submitted has not historically been adequately maintained.

Originally developed by Pacific Institute and the CEO Water Mandate, the Water Action Hub has not been regarded as a "shared community platform" by many in the water stewardship space. To promote the WAH and realize its potential to drive collective action and collaboration in basins around the world, the Mandate will establish a WAH Strategic Advisory Panel to ensure ensure the platform is meeting the needs of the Water Stewardship Community (including features and functionality), and help to facilitate interoperable digital tools and data sharing.

However, cooperation and input from the Water Stewardship Community still remains the biggest impediment to success. If companies, NGOs, and other actors in basins do not engage in the activity of recording projects, locations of interest, and general organizational presence in a basin, the dataset will remain incomplete and a reasonable picture of a basin will not be attained. To this extent, actors like AWS, the CEO Water Mandate, as well as initiatives like the Fair Water Footprints, are collectively aiming to continue dialogues and collaboration in the spirit of the commitment outlined in 2.3.2.

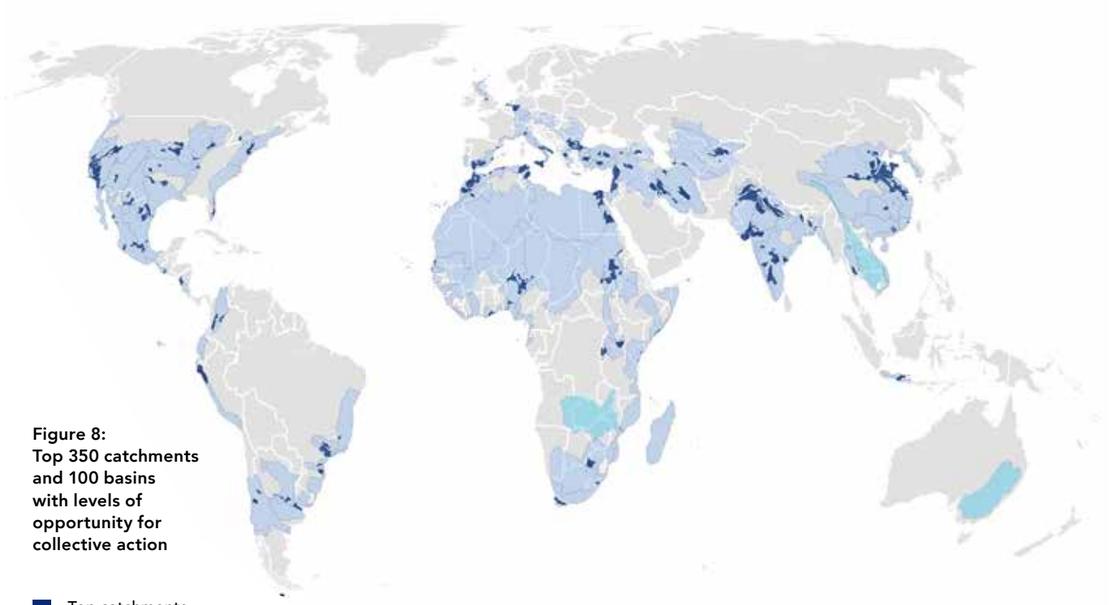


Figure 8:
Top 350 catchments and 100 basins with levels of opportunity for collective action

PART IV

COLLECTIVE ACTION: HOW

4.1 INTRODUCTION: COLLECTIVE ACTION AT THE CATCHMENT SCALE

As noted earlier, this paper recognizes that collective action happens at multiple scales, but is focusing specifically on collective action at the catchment scale. Many of our organizations have been working on collective action for decades now, but unlike global scale collective action where we've had significant alignment, collective action at the catchment scale has often been much more fragmented. There remains a core need to scale up efforts at this level, but the history of bilateral implementation is at odds with the need to work together. Put simply: our revenue models are at odds with our missions when it comes to catchment scale collective action.

A new way of working is needed, which is what we explore in Part IV.

4.2. OUR SHARED EXPERIENCES

Collectively our organizations have undertaken much of the collective action in the water stewardship sphere. Below we offer up some of our shared lessons from collective action at the catchment scale and summarize some of what we believe is working, and not working.

4.2.1 Organizational insights

Overall, these examples highlight the successes and challenges faced by several NGOs seeking to implement water stewardship through collective action. Reflecting on our shared experiences, a series of observations emerge:

1. **The risk of collective action capture:** To date, many (if not most) collective action efforts have been a one-to-many structure in which one NGO has organized many other stakeholder groups to align on a project. These tend to be branded as a result with the risk of "collective action capture" by a single NGO.
2. **Many-to-many collective action platforms do exist but are more rare.** Some of these include the California Water Action Collaborative (CWAC and the aligned Texas version TxWAC),
3. **Maintaining funding for collective action in the long term is often a challenge**, especially if resources are continually required for governance functions ("convening" role). Grants and financing are more readily available for "impact" projects (related to the "engagement" - where granting is key - and "implementation" - where financing is key - roles noted in Figure 3). Similarly, securing setup funds (easier) versus maintenance funds (harder) is a key consideration that should be planned for from the outset.
4. **Joint monitoring is a challenge and opportunity:** There remains suboptimal joint monitoring efforts at the catchment level. Similarly, there has been little shared modeling to date. Significant opportunities for improvement sit in this area. Generally speaking, collective action efforts have room for improvement in terms of impact monitoring and evidence gathering. Common impact metrics, combined with open, accessible, data are helpful for collective action platforms.
5. **Joint training is a useful starting point for collective action**. It has a low barrier to entry, enables relationship building and joint understanding of issues. On the back of training it is easier to outline the business case for investments into water at the site or catchment level. Notably AWS's Impact Accelerator locations are a strong opportunity to consider.
6. **Mapping of collective action efforts has been challenging.** While the Water Action Hub has sought to help in this regard, the ability to convert that into an effective and up-to-date map-and-match system has been somewhat limited to date. Indeed, even mapping organizational activities is challenging for many organizations. At the 2023 AWS Forum, stakeholders suggested that: (A) the water stewardship community rally on the Water Action Hub rather than reinvent the wheel; (B) regularly update the data on the site; (C) develop a joint governance model for the Water Action Hub; (D) Encourage proactive, human-led facilitation of opportunities. However, systems to pay for such maintenance are not in place, making these wishes difficult to implement for organizations.
7. **Building on existing initiatives is an imperative (and willingness to modify initiatives is key)**. The community has established many useful efforts to date and broadly people agree that we need to build on these rather than re-build new efforts. However, recognizing a degree of "collective action capture" in some existing platforms, modifications may be needed to encourage further collaboration). Accordingly, willingness to adjust aspects of existing platforms/initiatives is a key success factor in enabling more effective collective action.
8. **Collective action initiatives need to be able to accommodate a range of maturity levels of those seeking to engage**. In any given location, companies operating there will be at different levels of maturity in their water stewardship journey. This creates a challenge for convenors and implementers alike, where there is a tension between needing a critical mass to begin (and finance) activities, but also an impatience to get started given the scale of the challenges we face on water. As a result, collective action efforts need to be designed in a way that enables work to begin, and for others to join as they feel ready.
9. **Perceptions matter**. Recognition and perceptions of ownership can create barriers to wider engagement, particularly when established partners initiate activities with a particular focus in mind (e.g., a specific freshwater challenge, a focus on a particular industry collective action at a particular scale). As we seek to open up our models and improve our own ways of working, openness to reset our models will be crucial.
10. **Insufficient focus on evidence, accountability and integrity.** Water-related challenges are inherently political and often strenuously contested by competing interests and stakeholders. As such, collective action initiatives must prioritise reliable and objective knowledge about the problems being addressed and the viability and performance of solutions, alongside accountability of all actors for delivery against agreed roles, and initiative integrity - defined as 'credible partners working through fair and transparent processes to achieve demonstrable public good outcomes'[8] Without these 3 building blocks the legitimacy, sustainability and impact of collective action rapidly whither.

4.2.2 Summarizing what is working & failing

As the introduction signals, there are an array of things that are working and not working when it comes to collective action. These are summarized below in Table 2.

4.2.3 Spatial dimensions of collective action: what works at what catchment scale?

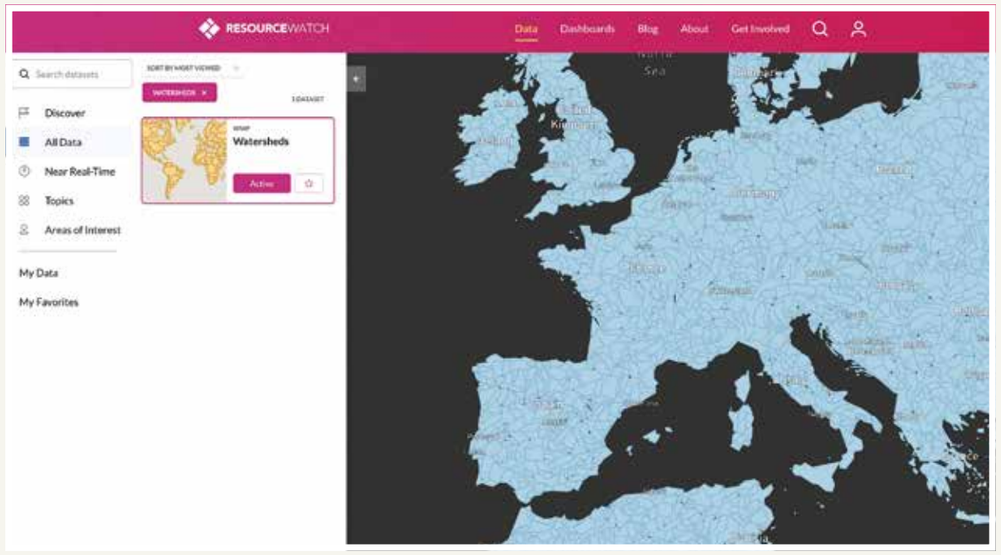
Since the establishment of the first version of the Alliance for Water Stewardship Standard in 2014, there has been an open question about what the "best" or "most appropriate" scale is for catchment-level collective action. The guidance that was established in version 1.0 of the standard suggested that roughly the scale of HydroBASIN Level 7-9 would be the most suitable scale for identifying the "catchment" (and in turn, to consider for collective action). Over the intervening decade, this estimate has largely proven to be roughly correct albeit at perhaps slightly a larger size. If we go larger than Level 6 or 7 (i.e., Levels 1-5), the basins begin to get too large to be manageable and shift to become more political (vs. implementation scale). The Mekong River Commission or the Nile Basin Initiative are examples that are at this very large scale (roughly HydroBASIN Level 3-4). It should be noted that joint basin monitoring ("monitoring" role) as well as policy/regulatory engagement may be exceptions here of roles that continue to work effectively at large scale. In the other direction, beyond level 9 (Levels 10-12), catchments begin to get too small to effectively address the issues and/or fail to gather a sufficient number of stakeholders.

Table 2: What's working and what's not working

WHAT IS WORKING	WHAT IS NOT WORKING
General recognition that collective action is needed by public, private and civil society stakeholders	Collective action capture (a general default to one-to-many fundraising / implementation models with select organizations "capturing" collective action efforts in singular projects)
Several models that have successfully enabled collective action at various scales (e.g., Water Funds)	Intentioanl or unintentional branding of collective action (e.g., "Water Funds" have a strong association with TNC)
Dialogues on collective action at various fora (e.g., AWS Forum, Stockholm Water Week)	Formal agreements on inter-NGO collaboration (few / none at present). Sometimes brokered at locally but at absence at global scale undermines progress
Alignment of geographies of collective action opportunity as outlined on this paper, which have informed and been adopted by the Water Resilience Coalition	Funded and jointly owned systems to identify which actors have projects / funding / capacity / etc. where. This includes NGO presence and projects, as well as corporate asset-level data, and public sector activities at the basin scale
The use of HydroSHEDS as foundational geospatial framework, with Levels 7-9 acting as a generally recognized appropriate size for the collective action (see Box A below).	Securing funding for further development of HydroSHEDS 2.0 and creat8ing a named basin layer at a more granular level to help with common basin names.
Sector-based groups coming together to identify basins of common interest	Cross-sector groups coming together)i.e., cross-sectoral collaboration is not happening
CSO and NGO evidence-based advocacy to bring stakeholders to the table and stimulate collective action.	Widespread adsence of credible monitoring, evaluation and learning around collective action to track performance and share lessons.

8. See CEO Water Mandate/WIN (2015) Guide to Managing Integrity in Water Stewardship Initiatives. https://ceowatermandate.org/integrity/

HYDROSHEDS – COLLECTIVE ACTION THROUGH AN ALIGNED GEOSPATIAL DATA FRAMEWORK



HydroSHEDS, which stands for **Hydro**logical data and maps based on **SH**uttle **E**levation **D**erivatives at multiple **S**cales, is a consortium-created dataset that provides high-resolution information on the world's surface water and drainage features. As part of the suite of data it provides, HydroSHEDS offers 12 levels of HydroBASINS with 1 being continental divides, and 12 being very small sub-sub-catchments. In the middle, HydroBASINS offers a useful framework to organize consistent basins with Level 3 being large basins (e.g., Amazon) of an average size of 463,917 km^2, Level 6 being roughly 8,233 km^2, Level 7 being 2,341 km^2 and Level 12 being 130km2. For more information on HydroSHEDS and its successor, HydroSHEDS 2.0 – slated for release in 2025, please visit: **https://www.hydrosheds.org/**
Note that ResourceWatch offers an easily accessible means of viewing various scales of HydroBASINs from Level 3 to Level 8. The figure below illustrates an example of Level 7 HydroBASINS in Europe.

Table 3: List of selected collective action efforts and their respective hydro-geographical scales

Collective Action Initiative (contact org)	Catchment scale/size	HydroBASIN Level
Noyyal-Bhavani (WWF)	9,710 km^2	Level 6
Buyuk Menderes (WWF)	24,873 km^2	Level 5-6
Taihu basin (WWF)	10-36,900 km^2	Level 6-7
Upper Tana Water Fund (TNC)	20-40,000 km^2	Level 6-7
Charco Bendito (BIER)	232 km^2	Level 8
Dhaka Impact Accelerator (AWS)	600 km^2	Level 7
California Water Action Collaborative (CEO WM)	423,970 km^2 (California)	N/A (~ Level 3)
Lusaka Water Security Initiative (LuWSI)	900 km^2 (region around Lusaka)	N/A (~ Level 9)
Ica (WRAP, IDH, GSI)	5-10,000 km^2	Level 7-8

4.3 CHARTING A PATHWAY FORWARDS: IMPLEMENTING CATCHMENT-LEVEL COLLECTIVE ACTION

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."
Buckminster Fuller

4.3.1 Core elements for catchment scale collective action

While collective action at the catchment scale will never have a "one size fits all" approach, there are some general ideas that we believe are likely to be transferable, and moreover, a general pathway that collectively we can begin to undertake to help all actors move towards the achievement of SDG6. Building on various Parts in this paper, we would suggest that implementation of collective action at the catchment scale invariably requires the following elements:

A. **Selection and delineation of one or more catchment areas** at roughly HydroBASIN Level 6-9. This may be an iterative exercise, beginning at a global-regional scale and then being refined at the catchment scale. The larger the size, the more actors can be aggregated, but project relevance to actors begins to diminish while coordination gets more difficult.

B. **Actor identification & engagement:** It is important to map various actors in the catchment (where they are located), along with their interests and potential roles. This may be done at the outset, but should be treated as an iterative exercise that needs to be regularly revisited and updated as things evolve.

C. **Stakeholder engagement and convening by a mutually trusted actor** who is seen as having legitimacy. Transparent motivations and explicit mapping of where stakeholders have sites/interests are useful. At the outset, a temporary governance structure can prove useful with the group of actors who are seeking to initiate the collective action effort. Linked to this is consensus building on the priority shared water challenges facing the catchment and their root causes.

D. **A common vision, goals/objectives and a shared terms of reference** for how the collective action will operate. Ideally this should be mapped to common efforts such as SDG6 targets, Science-based Targets (including links to government/basin goals), etc. and be science-based. It is prudent to establish this vision near the outset to ensure it continue to act as a "lighthouse" for the direction of travel of the collective action. Note that this can be captured under (F) below as well.

E. **A common understanding of the roles that various actors will undertake** in the context of collective action. Regardless of potential roles, agreed upon roles may differ. Clarity of overlaps and gaps is an important issue to consider.

F. **A governance structure** that enables multi-stakeholder participation and accounts for power imbalances. Governance and participation in general must be non-exclusionary as it is important not to "shut anyone out". Establishing clear governance is also essential to be done as early as possible, but again should be iterative and regularly revisited. Any governance structures ought to account for the elements noted in (D).

G. **Project implementation & coordination.** This can occur at the site-level and the beyond-site (or catchment) level. Note that one or more projects may be combined in the context of a collective action platform, and joint understanding of various projects is useful for coordination purposes.

H. **Shared water data and information including models and monitoring.** local and global data and information collection, condensation of information, extraction of main challenges and opps and validation of information with stakeholders. This should also explicitly account for joint monitoring & evaluation (including baseline data and status data). Robust monitoring, learning and evaluation are important to ensure accountability and demonstrate legitimacy to various audiences.

I. **Mechanisms to account for complex issues**, including cross-cutting issues, nexus tradeoffs, conflicts and cumulative impacts. This may be included within the governance structure, but water has links to food, energy, biodiversity and other issues (which may also act as entry points to engagement on water). Considering links and tradeoffs is an important aspect of the work and diverse links can help to foster these perspectives.

J. **A mechanism for engagement with policy & formal water governance**. This could take many forms, but speaking to regulators with a common voice is a powerful means of shaping a long-term sustainable pathway for a catchment.

K. **Robust Monitoring, Evaluation and Learning (MEL)**. This is vital to ensure an evidence baserd approach, mutual accountability, attribution, adaptive management and learning - and to demonstrate legitimacy. For example, the CEO Water Mandate/ WIN integrity guidelines for integrity in water stewardship initiatives emphasizes the need for ''demonstrable public good outcomes'.

L. **A sustainable funding mechanism** – for all of the above, as well as project implementation. This will be further explored below, along with several of the other key challenges when it comes to implementing collective action.

4.3.2 Challenge 1: Re-thinking financial models of collective action

Perhaps no issue has held back collaboration more than collaborative funding for collective action for both scalability and sustainability. There is a pressing need to re-consider how we fund collective action and to explore the establishment of collective funding mechanisms that can grow with increases in ongoing revenue. As noted in the Joint Statement from the International Water Stewardship Community at the 2023 UN Water Conference, we need to "establish collective funding mechanisms that act as a channel towards scalability and sustainability. These funds can help channel investments in numerous areas from natural conservation or restoration to water access, sanitation, and hygiene while strengthening water governance by bringing together relevant stakeholders – and provide sound scientific knowledge to facilitate the decision-making process." This sort of language was again re-iterated in the report issued by the Global Commission on the Economics of Water.

Recent years have seen a push by companies and NGOs to ensure we are "delivering (positive) impact" at the catchment scale. However, to deliver there are an array of precedents that must be in place, namely those outlined in the section above. Without these, project impacts tend to be limited.

Historically, many catchment-scale collective action platforms have been established by a single NGO who has then encouraged other stakeholder to join "their" platform. While efforts have, in many cases, been undertaken to ensure such platforms are neutral (e.g., California Water Action Collaborative), lingering perceptions remain (e.g., Water Funds, which are a neutral platform, are often still perceived as a "TNC program" since they have been a champion of that model). Equally, many companies have funded basin restoration work (which benefits others, but also benefits them directly), while less keen on funding efforts related to the messy guts of collective action (governance, trust-building, even monitoring). These challenges are real, but as water is increasingly recognized as both a risk and opportunity, new thinking about ways to harness new forms of funds has emerged.

Funding can be broken down into two broad categories: (1) that which requires a payback (bankable), which includes debt and equity investments, and (2) that which does not (non-bankable), which includes grants. One could argue that there is also a third category that is somewhat of a hybrid, which are grants with a bankable dimension. Such structures often see grants involve the use of revenue recycling with notable examples being various credit schemes (e.g., carbon credits) as well as programs such as Water Funds being another good example.

Table 2 below outlines how these funding structures link back to the various elements noted in 4.3.1 above. The table also speaks to the general suitability of each of these funding structures to supporting the need of collective action to be both sustainable and scalable.

Further unpacking this table, it brings us to one of the key challenges facing collective action at the catchment scale: **how to ensure sustainable funding of the foundational core operations** when grants tend to be time-bounded,

Table 2: Linking collective action elements and funding structures

Nature of work	Description	Includes	GRANTS (non bankable)	DEBT / EQUITY (bankable)	HYBRID
Core operations	Foundational to collective action and is a precondition for scaling impact	Stakeholder convening, role mapping, vision / goals, governance (dispute mechanisms), shared data / monitoring fundraising	Critical (but less sustainable)	Less suitable (but sustainable)	Suitable (sustainable)
Projects	Impact-orientated time bounded (may be broken into on-site and beyond-site / catchment	Project implementation, (select) monitoring, (select) fundraising	Suitable (but less scalable)	Critical (scalable & sustainable)	Suitable (but variably scalable)

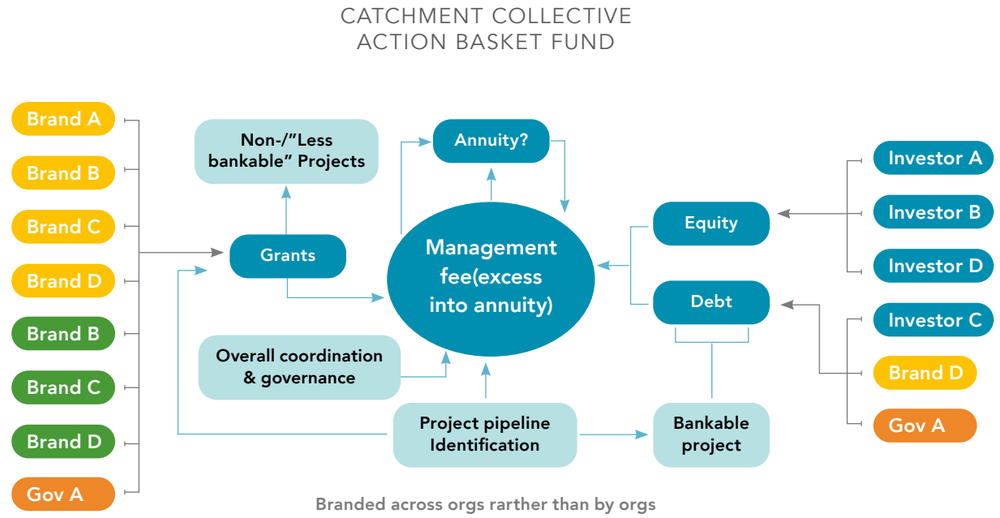


Figure 9: A proposed catchment collective action basket fund model

and bankable approaches are interested in impact and largely unwilling to finance core operations? Even many of the hybrid structures (e.g., Replenish) have tended to focus on project-funding, and are unwilling (or at best grudgingly accept) to cover expenses for core operations including monitoring.

There are several possible solutions are proposed to tackle this challenge of how to develop core funds:

1. **Catchment-based collective action management fees:** As projects are deployed in the catchment, consider the use of a core operations "management fee" for all projects deployed within the boundaries of the catchment. Such fees are well established in the financial world, as well as within the donor community and offer a financially sustainable and scalable form of financing core operations as it would work for grants, debt/equity and hybrid structures alike.
2. **User-based revenue recycling:** While perhaps less scalable as it is not linked bankable projects, mechanisms that draw on local users (via taxes/ tariffs - often via water bills) offer another proven mechanism to fund core operations. The various city-based water funds that have been implemented around the world offer a set of proven examples of how this can work.
3. **The (longer-term) development of an annuity:** While often grants state that funds need to be used up, if funds can be gradually aggregated and developed into an annuity, a form of sustainable funding can be established through time.

Figure 9 (above) illustrates how several of these elements could potentially come together in a catchment collective action basket fund. On one side, we see grant capital flowing into various projects. Lumped into this category would be large and small grants (e.g., GEF as well as replenish/water credit grants). On the other side, we see market- and blended-rate capital. In both cases, these feed into management fees, which can then be used to cover an array of activities needed at the centre that also help to ensure future funds can be found (with the potential for excess funds being moved into an annuity). Such a construct is theoretical at present, though Water Funds do operate somewhat akin to this.

If we work under the assumption that funds can be aggregated at the catchment level, and then redistributed to various implementing actors (both non-profit and for-profit), then further models of aggregation could also be explored (e.g., aggregation at the national, regional and even potentially global levels) as seen in Figure 10 (p46).

Here we can see funds aggregated at the global or regional level and then passed down to catchments. While a large global fund could be complicated and bureaucratic in some regards, such a "one stop shop" would also simplify life for companies and NGOs alike, and enable scale as well as force collaboration. If global were

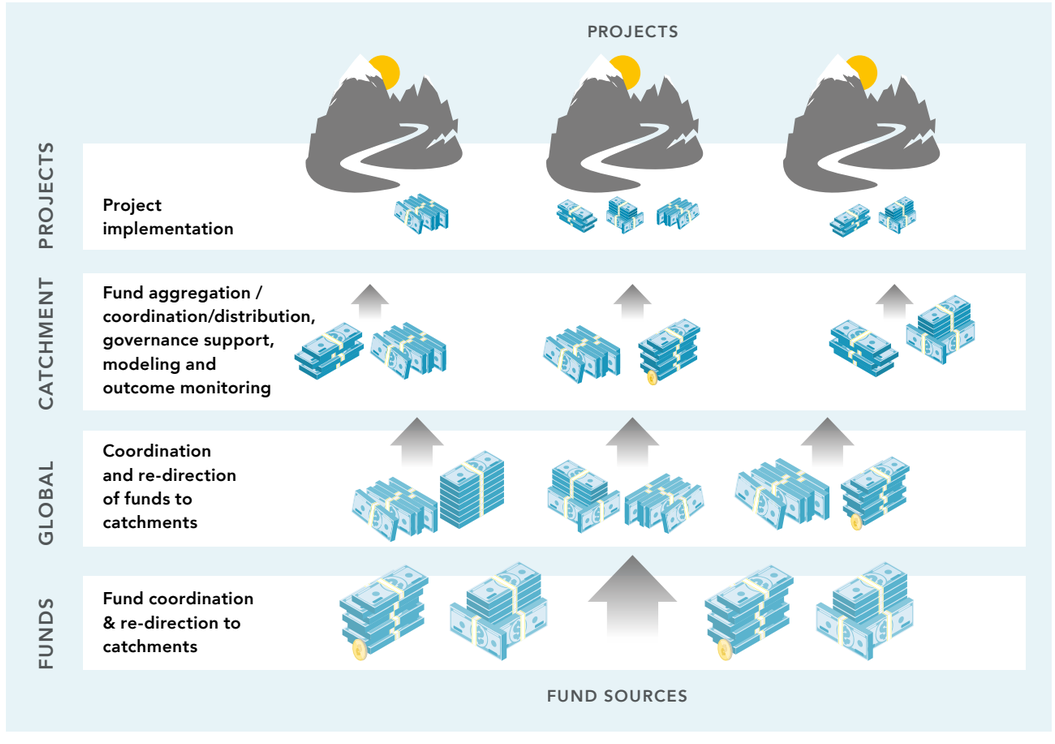


Figure 10: An aggregation-disaggregation financial/river system model

too complicated, this could be undertaken at the regional level or possibly even national level (though as one goes to smaller scales, the duplicated efforts lose their efficiency and coordination). The model denoted above would aim to devolve decision making (regarding project funding) to the catchment level in an effort to address the need for bottom-up power structures and the need for contextual understanding of the best use of funds. Project implementation could be carried out by both NGO and private sector actors alike through a combination of both bankable and non-bankable/grant financing.

Regardless of the scale of aggregation, be it global or catchment level, incentives to coordinate and aggregate funding are needed. While we do not expect any model to be a silver bullet, we also believe there is a need to test new models (and build on existing models) in an effort to achieve scale and impact. In this sense, establishing a series of "learning basins" where we can test implementation would be a useful next step to encourage collaborative business models.

4.3.3 Challenge 2: addressing proprietary collective action capture

Collective action at the catchment scale can operate through a one-to-many relationship (often one NGO and many private sector partners), or a many-to-many relationship (many NGO/public/private sector partners working with each other), as well as a hybrid (a one-to-many relationship nested within a many-to-many relationship).

The second of the key challenges facing collective action at the catchment scale is that of "capture" in the case of one-to-many relationships. How do we avoid a collective action platform being branded, associated and therefore revenue being sent to, a single actor? When one NGO financially benefits from a collective action platform, but others do not, it creates a disincentive to work together. Too often we have found ourselves in such situations.

To respond to this capture risk, we offer up a series of potential pathways:

1. **Shared catchment-based basket funds:** Combining funding under a common banner is perhaps the most common-sense approach to removing the branding issue. A single initiative, with a common "basket" of funds removes the single-convener capture aspect of collective action. It should be noted that often, logistically (and legally), it is simpler to select a single actor (often public or NGO) to hold the shared pool of funding that comes into the platform. Such a basket-funding approach works particularly well for a mixture of the core operational elements, as well as the beyond-site projects (e.g., catchment restoration work or community WASH work). WWF has successfully applied such models in places like Pakistan.
2. **Multi-organizational branding of platforms:** Regardless of whether funds are centralized (as in #1 above), another suggestion is to ensure that the brands of all participating entities are reflected in the communications materials regarding the collective action. By co-branding from the outset, collective action initiatives avoid capture.
3. **Encouraging incentives:** Most people and organizations respond better to carrots than complaints. Offering incentives to entities that join and collaborate with the collective action initiative is another pathway to driving towards a common platform and avoiding fracturing. Incentives may differ by stakeholder ranging from funding, to recognition, to improved efficiency, impact and scale. Ensure that the collective action initiative has a clear value proposition to those considering joining at the periphery.
4. **Apply peer pressure:** Social, or peer, pressure can be an effective means of driving alignment with initiatives. Perhaps a somewhat "soft stick", this is the corollary to the incentive pathway, but can be enabled through conversations asking peers why they're not aligning with everyone else. The more we encourage peers to align, the better the coherence of the collective action. Never underestimate your own influence!

4.3.4 Challenge 3: considering re-distribution and governance

Ultimately perhaps the largest success factor in determining the long-term viability of a collective action initiative (so long as funding is sorted) is people getting along. As with any relationship in life, trust, clear communication and a joint understanding of expectations is essential. In addition, like a marriage, understanding how money will be used by both (or in this case all) parties is key for harmony.

For collective action, this means establishing robust governance practices at the heart of the collective action.It is hard to overstate that clear pathways for decision making and group decisions about the use of shared funds will be fundamental to the success of the collective action. Balancing power and influence is key as invariably there will be groups that feel somewhat hard done by as funds are redistributed. Constantly reminding all parties that the collective goal should be to grow the pie, and not focus or argue on how to split the pie, needs to be an ongoing mantra.

Collective action participants must agree on how decisions will be made and how measures will be implemented. The roles for each level (i.e. steering board, technical committees) need to be

assigned and defined clearly and include a system of checks and balances for accountability. Poor definition of roles and responsibilities is a recipe for loopholes and accountability gaps.

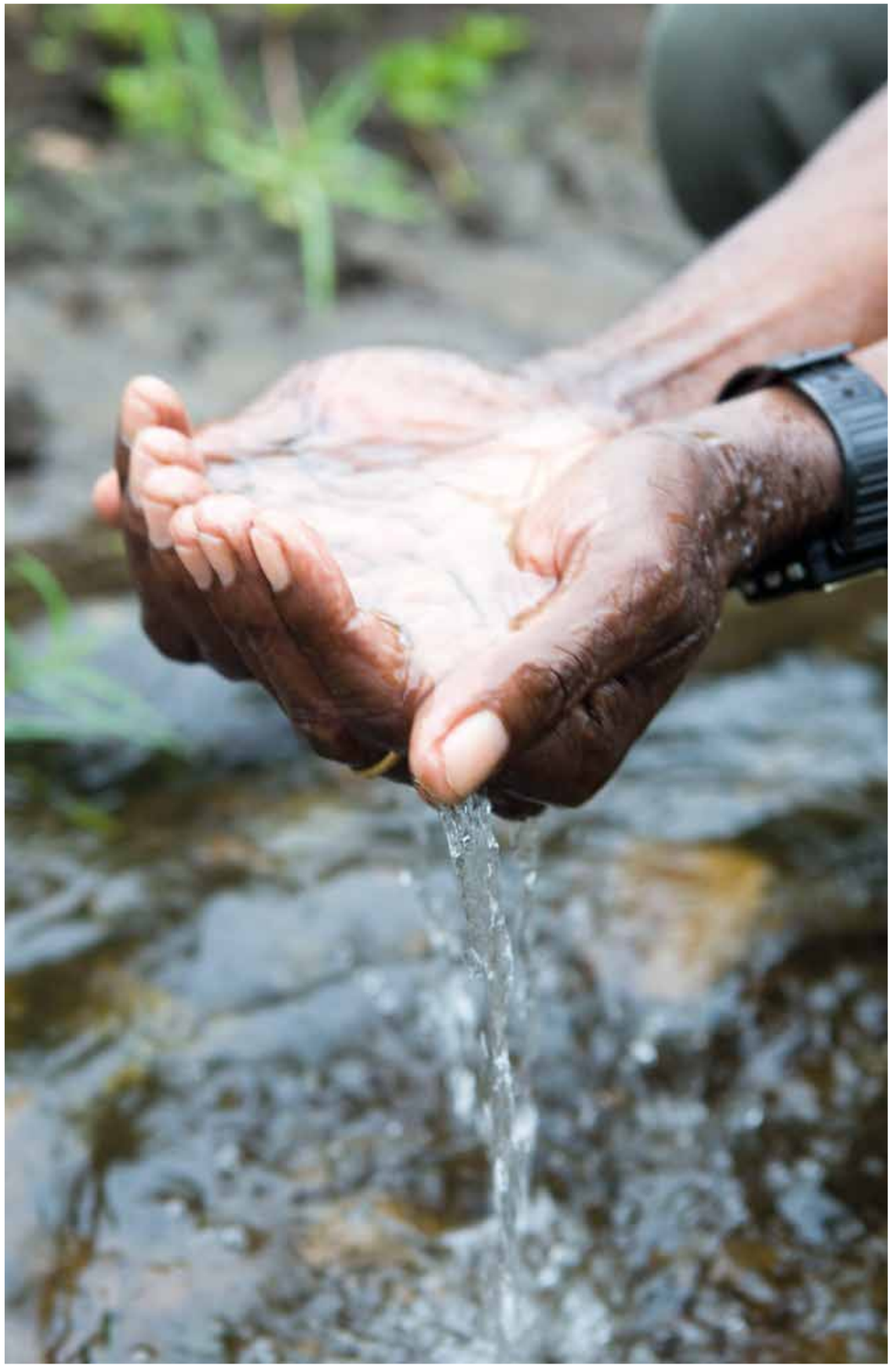
Participants must also clarify the principles and standards that will guide decision making. This can be in the form of a code of conduct or code of ethics. A code of conduct is a statement of principles and values that establishes a set of expectations and standards, including minimal levels of compliance and disciplinary actions. Where relevant, the WSI should draw on relevant legislation and international best practice in the development of the code of conduct.

Furthermore, having a plan that clarifies how the WSI will end or transform (e.g., once goals have been achieved, or at the end of the project or funding cycle, or when participants do not abide by their responsibilities or the code of conduct), or that provides for the withdrawal of participants is key.

4.3.4 A river system model

Lastly, we offer up a proposed structural model to manage the complexity of a multi-stakeholder collective action for high-risk catchments (consistent with Figure 10, but re-imagined in a simplified form in Figure 11).
We envision this structural model like a river system, with a series of headwater tributaries, a main stem river and an extensive delta:

- **The headwater tributaries (channeling resources):** For collective action in a priority high-risk catchment, several NGO facilitators of water stewardship would work in partnership, pooling funding and resources from the businesses, public sector agencies and other stakeholders involved in the catchment that share a common vision and goals. This would draw together smaller blocks of grant funding, existing projects and stakeholders and channel them together. While funds could be aggregated at various scales (from global to national to basin level) to facilitate ease of engagement by funders, all funds should be re-distributed to catchments for decision making around the use of funds. This enables global aggregation, but empowers those at the local level to best determine solutions at the catchment level and avoids funding capture at a global level.
- **The main stem river (alignment and coordinated governance through a branded single initiative):** For each priority catchment, the NGO partners would then align support around one collective action banner. Note that this would be one initiative, but



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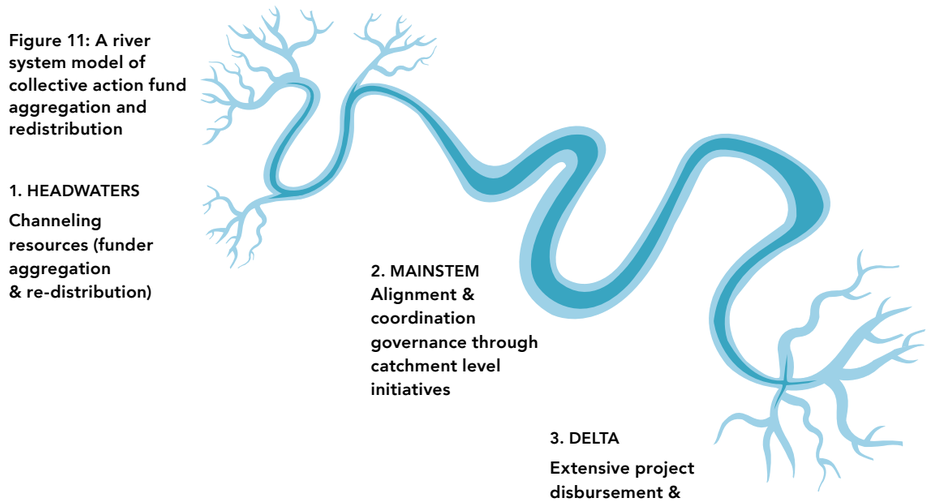

Figure 11: A river system model of collective action fund aggregation and redistribution

from one to many projects within that initiative – the analogy of many drops of water making up one river illustrates the idea. One organization would likely be selected to host funds and potentially also a central coordinator, but all communications should be issued under the platform (rather than the organization), and co-branded. This alignment of multiple actors into a single, unified "collective action platform" with an agreed upon, robust governance structure would help to ensure coordination amongst projects and facilitate new, joint projects as well as coordinate independent projects. For any projects in the catchment, any given project lead would coordinate with other project leads in the catchment (or via an catchment initiative coordinator) to explore opportunities to combine and link up efforts, while the group as a whole could explore different options for longer term sustainable and scalable funding, as well as fund redistribution mechanisms. In short, the aim is coordination and cross-linking, not pushing a single giant project.

- **The extensive delta (scaling and diversification through multiple projects):** As the initiative builds, participants would also aim to work with a network of stakeholders in the catchment to secure buy-in, tackle issues with water governance and tap into both local and global sources of funding and financing to diversify. These stakeholders include the farmers and growers, local businesses, civil society organisations and communities, and public bodies and authorities. Critically, a diverse array of service providers, innovators and entrepreneurs should be linked into the effort, with much greater emphasis on financing over grant funding as time goes on to ensure scalability. It is during this phase that financial models (discussed in 4.3.2) should be explored. It is also in this phase that the initiative needs to embrace a diversity of project implementers - especially innovative, entrepreneurial actors who can help to further scale.

Such a "river system model" outlines how a single, jointly branded initiative with a strong governance model at the centre, can tackle the challenges currently facing collective action efforts.

Out the outset, such platforms often rely upon a few select focal point individuals to help ensure coordination at the center. Starting with a small secretariat (which may consist of multiple organizational representatives) can distribute the load, but in all cases, ultimately a central "go to place" helps to ensure coordination and facilitate linkages with other stakeholders. The initiative's governance structure, along with the secretariat, needs to be accountable for ensuring coherence of the various on-the-ground interventions, and should help to also ensure robust impact monitoring and evaluation are in place.

Where new projects are being established, shared language, data and common scoping will help to ensure the work is designed and targeted to reflect the catchment context, including the policy and regulatory frameworks in operation. This scoping phase helps to identify integrated and appropriate interventions including Nature-based Solutions, as well as align to efforts such as Science-based Targets for Nature.

CONCLUSION

For some time now, collective action has been rightfully seen as a goal to aspire to in order to deliver on Sustainable Development Goal 6 on Freshwater.

It is our shared belief that collective action remains foundational if we are to achieve SDG6. As a shared, common pool resource, freshwater can *only* be sustainably managed through shared approaches.

This paper reflects the learning and experience to date from many organizations deeply involved in organizing collective action at the catchment scale. We have sought to offer up not only our reflections on key factors that have proven effective in the field, but also a refined definition, a proposed set of catchments, a suggested scale, key roles, and frameworks to distinguish forms of collective action. The paper offers up a set of principles for those who seek to be conveners of collective action, and also provides recommendations on how to ensure successful longevity of collective action initiatives.

Through the elements of good practice noted throughout, this report aims to:

- Develop and share a common understanding of what constitutes collective action so that NGOs and other stakeholders can position and differentiate their roles in delivering linked activities
- nsure consistent logic behind the collective action initiatives undertaken by NGOs, public and private sector actors that are active in water stewardship; thereby avoiding (real or perceived) competition between initiatives and approaches that would create a barrier to working at scale in a joined-up way and deter businesses from investing
- Understand the various scales of collective action, and begin to paint a picture of which basins represent strong opportunities for the water stewardship community to come together in.
- Explain to corporates and the public sector how NGO stewardship and other conveners will follow a good practice model to help corporates and other stakeholders work together in collective action. To that extent, we have offered up a draft declaration which we believe reflects these sentiments.
- Outline the various challenges faced by collective action initiatives - from issues of "capture" to the ongoing struggles to ensure financial sustainability, there are an array of issues that make collective action challenging.
- To overcome such challenges, we have offered a "river system model" that we hope to deploy in the high opportunity catchments identified within this paper.

NEXT STEPS

The development of this report has already achieved one key outcome: fostering a dialogue and building shared thinking together. It has outlined a draft declaration (see 2.3.2 above) and has resulted in enhanced coordination on ground and in proposals. However, our work is far from done.

To facilitate the next phase of work, we propose undertaking the following steps:

- **Publishing this document** so others can digest and engage. Contents from this paper may be repackaged for specific audiences as well.
- Continuing to **convene global calls** on a quarterly basis to bring this community together. The first of these calls will seek to **identify a series of "collective action learning catchments"** – places identified out of the mapping work undertaken in this paper that we can put theory into practice. Such catchments can then test approaches and share lessons learned.
- Continuing the **dialogue on how to finance, operate and recognize shared common water stewardship resource portals** such as the Water Action Hub and the AWS Tool Hub. The community has shared ownership over the contents of these toolkits and needs a better pathway to align and fund each other to maintain them, regardless of hosting arrangements.
- Building on common portals, **further mapping activity and initiatives on ground** to better understand the picture - in particular, bringing in more allies in the WASH and other non-water (but water related - e.g., agriculture) collective action initiatives in landscapes.
- Engaging in one or more **workshops** to unpack how, as a community, we can take this work to ground in the "collective action learning catchments". This will help ensure we have a tangible pathway to go to ground. The first of these is aimed for the AWS Forum in 2024.

We face a world struggling to come to grips with the threats of both climate change and biodiversity loss along with ongoing and numerous social challenges and inequities. Water is the medium through which many of these issues manifest, and to that extent, we must come together if we are to stand a chance at bending the curves and shifting the trajectory of our planet's future. Collective action is that call to action - to begin to think beyond organizational boundaries and work, pre-competitively, towards the delivery of SDG6.

WE NEED TO RAISE OUR GAME AND DO BETTER. NOW IS THE TIME.

ANNEX A

ORGANIZATIONAL EXAMPLES OF COLLECTIVE ACTION

Each of the organizations involved in the development of this paper has an array of examples and lessons which are valuable. Recognizing this, we have asked all authors to develop 2-4 page summaries of their experiences. Below, we have sought to capture a snapshot of some of these, as well as summarize some of the key lessons out of these experiences.

Example 1: Water.org's Community WaterCredit Program

Water.org's Community Water Credit Program operates by providing microloans to individuals and communities to construct water and sanitation facilities. These loans enable communities to take ownership of their water resources and create sustainable solutions. The program has achieved significant success by reaching an estimated 55 million people with safe water and sanitation facilities, and ultimately empowering communities to break the cycle of poverty. The work draws in solution providers, communities, entrepreneurs and financial institutions to implement a collective action. However, it has also faced challenges, such as the need for continuous monitoring and maintenance of the infrastructure to ensure its long-term sustainability.

Example 2: WWF's Water Stewardship Collective Action Basins

The World Wide Fund for Nature (WWF) has implemented various water stewardship initiatives globally. In a variety of basins - notably the Buyuk Menderes in Turkey, the Noyyal-Bhavani in India, the Mekong delta in Viet Nam and Cambodia, the Indus basin in Pakistan and the Taihu basin in China, WWF has been working with businesses, governments, other NGOs and local communities to promote responsible water use and protect freshwater ecosystems - especially with the apparel & textiles sector. While the work has trained thousands, implemented numerous water quality improvements and restored significant freshwater habitat, challenges remain around the ongoing maintenance of funding for governance, and scaling up the pipeline of bankable projects.

Example 3: Beacon - WaterAid's multi-partner collaboration in Nepal

WaterAid's Beacon Project started in 2017 to bring WASH to every person living in Lahan, south-eastern Nepal. It is a multi-partner collaboration between a utility in the UK (Anglian Water), a utility in Nepal (Nepal Water Supply Corporation - NWSC), a facilitator (WaterAid), and government at local (Lahan Municipality) and national level (Ministry of Water Supply, Nepal). The extended collaboration has a long-term commitment until 2030, and is built upon trusted relationships with equitable governance structures and a common vision. Lahan Municipality have established a WASH unit within their institution to coordinate activity by all actors through the Lahan WASH plan, which is seen as an example of good practice for collective action. The Beacon Project has an objective to build a legacy that grows beyond Lahan, and is inspiring ambition in the other 23 NWSC branches where its innovative pilot approaches are being replicated. Lessons learned include building trust and a common purpose between multiple partners takes time and therefore requires long-term investment. Fostering spaces where partners can be honest with each other is crucial and being clear about roles and responsibilities is important. Honoring and respecting diversity and managing expectations around pace of progress are essential. Employing dedicated project staff within the facilitating organisation to coordinate activities, manage progress, invest in relationships and share learning cements the collaboration. The complex policy landscape, lack of regulation and resourcing deficiencies in the Nepal WASH sector present challenges for embedding and expanding the work.

Example 4: The Rivers Trust's Catchment-Based Approach

The Rivers Trust is an NGO based in the UK that focuses on the conservation and restoration of rivers and their catchments. Their Catchment-Based Approach, which is supported by Uk Government, brings together stakeholders from various sectors to collectively address water-related issues at a catchment scale. This approach has successfully fostered collaboration between NGOs, local communities, businesses, land owners and government agencies and water companies leading to improved water quality, habitat restoration, and flood management which, in theory at least, are integrated as part of local catchment plan. It is the issues and actions in these local plans that the CT2030 collective action projects in the UK are seeking to address. To date, challenges have included coordinating diverse stakeholders, ensuring equitable participation, and aligning different objectives, interests and plans.

Example 5: The Nature Conservancy's Water Funds https://resilientwatersheds.nature.org/

TNC's Water Funds model has been a very successful example employed throughout the world. Water Funds typically operate in partnership with urban utilities to create a mechanism to recycle revenue within the basin between downstream beneficiaries and upstream catchment management/conservation activities. The approach has brought together different stakeholders from local communities, utilities, government agencies, and the private sector to offer a means of sustainably financing freshwater conservation efforts at the catchment scale. Key elements of success include science-based planning, development of a return on investment business case and clear governance and funding structures, with an intention of sustainability over the medium to long-term. Challenges to date include extending such models outside of non-urban catchments, as well as a lengthy setup process for the funds. The Nature for Water Facility offers supported and pay for service assistance in setting up watershed investment programs such as Water Funds.

Example 6: California Water Action Collaborative (CWAC) https://cawateraction.org/

CWAC is a network of approximately 30 diverse non-profits, corporations, and food producers who have come together since 2014 to address growing water-related challenges. CWAC collectively develops projects, and advances innovative solutions to improve water security and resilience across California. The CEO Water Mandate has facilitated local action on water stewardship through strong partnerships and collaboration to leverage an enabling or neutral environment to facilitate company engagement with suppliers, the public sector, local communities, and other stakeholders to address challenges collectively. Recommendations to scale desired water stewardship practices at the local level, include 1) Target engagement on water-intensive industries in the Basin. 2) Target value chain engagement on industries with important supply chains in the Basin 3) Support platforms to facilitate relationship building and knowledge-sharing between companies, NGOs, water utilities, and other key water stakeholders."

Example 7: The Alliance for Water Stewardship (AWS) Impact Accelerator

Under the Impact Accelerator, AWS is working with members to identify common locations of interest (aligned with the 100 basins) to collectively engage sites supported by the AWS Standard System. This approach is cross-sectoral, and aims to create a hub of sites that are "collective action ready", using training, capacity building and shared data collection to help prepare participating sites for AWS implementation and action on shared water challenges. AWS acts as the convenor and provides training. Companies provide financing and undertake implementation activities. With a focus on enabling groups of water using sites within global value chains to begin their individual water stewardship journeys, this programme has the potential to help prepare a larger scale of participants for engaging in collective action. As the programme develops, AWS is working with members from the NGO community to align and identify opportunities for additional roles such as engagement and advocacy to be connected into the programme.

Example 8: Good Stuff International (GSI) collective action projects and lessons

Since 2015, Good Stuff International has been working to generate collective action on the ground in various catchments in Latin America and Spain. In our work we have broadly implemented three types of catchment level collection action:

- Local multi stakeholder water stewardship platforms, an example is the Plataforma de Custodia del Agua (PCA) in Colombia supported by WWF.
- Water funds and payment for watershed services programmes, example: the Allianza BioCuenca in Colombia supported by GIZ and SDC.
- Value chain driven catchment collective action, examples: the WWF-EDAKA Zitrus Water Stewardship Project in Southern Spain, the WRAP collective action projects in Spain and the IDH water stewardship project in Peru.

Some key lessons from our catchment collective action work are:

- High quality, openly accessible, broadly shared and locally validated information on the catchment water situation levels the information playing field between stakeholders and serves as a common starting point to design and implement collective action.
- Clearly identified shared risks and shared opportunities provide the business case for engagement and action of a wide variety of stakeholders. At the start of collective action, the number and variety of stakeholders can be small. Generally, stakeholder engagement expands as the collection action work evolves.

- Generating catchment collective action takes time and follows its own route. This requires substantial flexibility from project managers and financiers.
- The required local leadership and governance for catchment collective action is generally not in place from the start. Often, this role is assumed by an external, not entirely local, independent and trusted third party. This should only be temporary. It is key to stimulate the development of true local leadership and inclusive and balanced local governance right at the start of the catchment collection action process.
- There is a clear business case for value chains to engage in collective action in sourcing catchments. This is not only to (financially and non-financially) support collective action by stakeholders connected to the business but also as direct beneficiaries of the outcomes of collective action to manage value chain risks, report on sustainability targets, inform business and sourcing strategies and drive overall communications.

Example 9: GWP's Multi-Stakeholder Processes

GWP's approach to collective action is encapsulated in its Multi-Stakeholder Processes (MSPs). Its Country Water Partnerships (CWPs) and Regional Water Partnerships (RWPs) are themselves Multi-Stakeholder Platforms, bringing together private sector, civil society, local government, academic institutions and a range of other organisations. In its recently published MSP sourcebook, it lists key ingredients for success in water management, and in particular summarisesthe principles and methods we can use to bring about change through collective action, from the conceptual level to practical project development.

Example 10: Fair Water Footprints: supported by CDP, Water Witness, Chatham House, FCDO African Civil Society Network for Water and Sanitation and others.

The Fair Water Footprints (FWF) initiative supports delivery of the Glasgow Declaration for Fair Water Footprints and the work of over 30 governments, businesses, financiers and NGOs seeking to ensure sustainable, equitable and resilient water use in global supply chains by 2030. Delivery against the commitments requires establishment of credible water stewardship in sourcing hotspots associated with water and climate risk, and is driving collective action at multiple scales:

- joint investigations, research and dialogue to understand water challenges and solutions;
- joint planning and action at site, city, basin, country, sector and global scales;
- joint communications, advocacy and governance reform to address the systemic political economy, practical and financial barriers to shared water security;
- Mutual accountability monitoring to track and incentivise delivery of FWF commitments.

Uniquely, FWF brings together governments in the Global North and South to work with business, banks, scientists and civil society to take action on shared water risks in sourcing hotspots. As such it holds strong potential for bridging water stewardship/collective action practice to policy and finance, and for driving institutional reform so that stewardship and collective action become the global business norm. As an inclusive and learning centered initiative, Fair Water Footprints invites collaboration in collective action at these multiple scales. Whilst the work is global, initial country level engagement brings opportunities for collaboration and financing for collective action in Austria, Bangladesh, Finland, Kenya, Ethiopia, Malawi, Madagascar, Peru, Panama, Tanzania and the UK.

Example 11: The Courtauld 2030 Roadmap towards Water Security for Food & Drink Supply

(Courtauld 2030 Water Roadmap | WRAP) sets out an ambition and pathway for food businesses and other stakeholders in the UK to collectively protect critical water resources. The target is for 50% of the UK's fresh food to be sourced from areas with sustainable water management by 2030 (compared to 14% baseline). This is estimated to require collective action in the top at-risk 20 catchments (both in the UK and internationally) to deliver practical interventions.

In line with the Water Stewardship ladder, more than 50 businesses have committed to going beyond just site-based water management. As leaders, they engage with others in the priority catchments they operate in or source from, to support collective action / stewardship projects. They also commit to use their influence to advocate for better water governance. These businesses include the 10 major food retailers as well as leading brands, food manufacturers and food service businesses.

At end-2022, collective action projects were underway in seven catchments (four in the UK, three in other countries). The ambition for 2023 is to extend this to up to 12 catchments, including 5-6 countries outside the UK, and to bring in additional international partners.

Key lessons learned include:

Success factor	What difference does this make?
Collective action is organised under the umbrella of a national voluntary agreement, Courtauld 2030, with stretching targets for GHG and food waste reduction as well as water stewardship.	Secures participation from the leading food businesses as well as Government and other stakeholders. Businesses are held to account through annual reporting to the voluntary agreement.
The Water Roadmap sets out what's involved.	Businesses are clear on their actions and the required scale and pace of activity.
A governing body of businesses, water experts, government bodies and NGOs agree the 'Top 20' sourcing areas to focus effort on, monitor overall progress, aid cross-project learning and advise on challenges that arise. Collective action projects are reviewed annually by an independent auditor.	Participants have confidence in the design and delivery of interventions in each catchment.
WRAP as Water Roadmap convener works with other expert bodies including Rivers Trust, WWF, IDH and Alliance for Water Stewardship to establish a network of collective action projects in key sourcing areas that businesses can actively tap into.	Participants have confidence in the design and delivery of interventions in each catchment. Partners bring different stakeholders and funders into the collective activities.
Each project is designed and scoped according to a good practice model and 'Project Scorecard' set out in the Water Roadmap.	Each project implements interventions which are targeted to help achieve sustainable water management and known issues at catchment level, with input from local delivery bodies and governmental organisations.