STRENGTHENING CORPORATE WATER REPLENISHMENT

Leveraging lessons learnt to maximize the benefits for all

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SETTING THE SCENE

Replenishment of freshwater, as a concept, has been a helpful mechanism to engage companies in meaningful freshwater conservation management globally. When applied as part of a series of activities it can be helpful in addressing freshwater and WASH challenges.

That said, with more than 15 years of experience and a growing uptake of the concept, it is important to reflect on how the implementation of these projects has presented both opportunities, challenges and limitations for organizations implementing replenishment projects ("implementers" and largely undertaken by NGOs to date) as well as those that are funding projects ("funders"). While the framing of this paper is largely derived from the perspectives of the above groups, it is also important to recognise that replenishment is delivered within landscapes containing existing public bodies and regulations and accounting for these is critical to the success of replenishment projects. Reflecting on the challenges will enhance and strengthen the efficacy of this approach, ensuring that lessons learned contribute to continuous improvement and more impactful outcomes. This paper has been co-authored by a selection of international and civil society organisations involved in stewardship and replenishment projects. That includes: Conservation International (CI),The Nature Conservancy (TNC), WaterAid, and Water.org, Wetlands International (WI) and World Wide Fund for Nature (WWF).

The paper aims to outline the primary challenges arising from the current approach to Replenishment and set the stage to help develop, as a community, an improved approach and how it might fit into a broader range of activities and set the stage for more aligned expectations with respect to how projects would be delivered in the future. It is intended to serve as a catalyst to spark conversations on how the current challenges of replenishment can be overcome. This paper does not seek to present solutions to the identified challenges. Rather, it represents an invitation to the community (of other implementers, corporates and funders) to engage in a structured process to jointly identify potential solutions to solve the observed challenges (*Figure 1)*, so that replenishment projects can have a stronger impact on freshwater ecosystems, surrounding communities, and their sustainability.

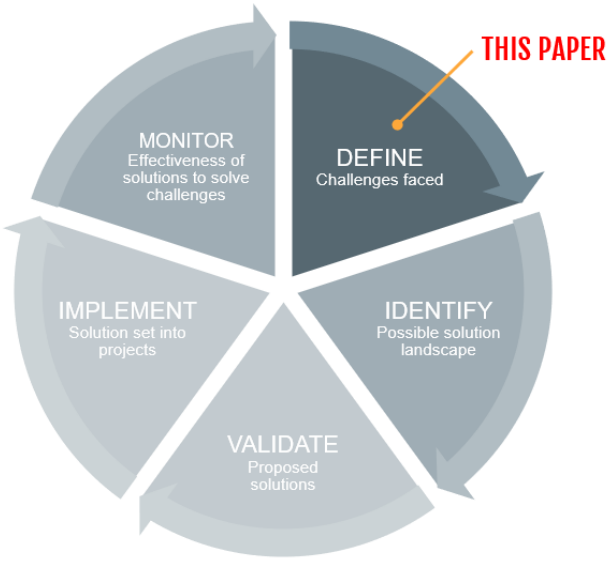

Figure 1: Illustration of proposed process towards solving perceived challenges linked to scaling replenishment and where this paper sits within that cycle.

This paper emerged from discussions where the authors identified shared challenges in the context of companies striving to meet 2025/2030 goals and planning for 2030+. These challenges were then prioritized by the authors and this prioritization exercise was then repeated with a largely corporate audience during a session at Stockholm World Water Week in 2024. The purpose of this was to understand the level of alignment between those who typically implement replenishment projects and those who typically have provided funding on the importance of each of the challenges. As outlined in the last section of the paper, while the lived experience of the challenge might look different for either an implementor or funders, **all parties are fairly aligned on the key challenges that need to be addressed**.
The overall conclusions of the exercise were as follows:

(1) a general agreement that the concept of replenishment can play a positive role in solving freshwater challenges and can be a gateway to enable companies to expand into more meaningful projects and engagements that actually address the more systemic environmental and/or socio-economic challenges,

(2) the scale of investment and rate of project initiation is not sufficient to keep pace with the freshwater challenges the world faces,

(3) Currently deployment needs to move away from a core outcome of individual company targets (“counting drops”) towards the more systemic activities/actions that are at the level of impact that's needed for both ecosystems and communities.

(4) It would be beneficial to revisit and evolve the concept of replenishment, to ensure that the way(s) it is deployed and the role it plays in overall responses to freshwater availability, quality and access challenges remains fit for purpose.

INTRODUCTION

Water stewardship is a complex endeavor, one that requires action to optimize outcomes across water balance, quality, governance, important water-related areas, and WASH. Replenishment is mostly thought of being connected to water balancing, involving taking action to restore water to local catchments and communities[1]. However, a more holistic approach to replenishment should also consider improving water quantity alongside quality through actions like reducing water use, recharging aquifers, restoring ecosystems, conserving land, strengthening governance and/ or returning water to communities. It may be undertaken within direct operations and supplier facilities, or in the surrounding landscapes/catchments in which companies operate. One of the first uses of this type of corporate action was in 2007 as a mechanism for the company to meet its volumetric goal[2].

Meaningful replenishment projects respond to local water challenges in the catchment. When deployed properly, replenishment projects are used to compensate for water impacts of a site (either direct operations or those of a supply chain) alongside contributing positively to the surrounding catchment. It should be noted that replenishment projects are not a standalone solution to water challenges in a catchment, they can be an entry point, through which a company should expand engagement into more meaningful projects that address systemic challenges, serving both communities and ecosystems.

[1] CEO Water Mandate (2021). Volumetric Water Benefit Accounting (VWBA): A Practical Guide to Implementing Water Replenishment Targets

[2] WWF (2015). Measuring the Benefits: Replenishment & Corporate Water Stewardship

More recently there has been a growing expectation that companies need to expand the scope of action on water to their value chain[3]. Scope of action here refers to the coverage of the targets, actions and responsibilities that a company takes across its value chain with respect to water. What is commonly observed (using volume as an example) (see *Figure 2)* is that the largest impacts on water are often found within the upstream part of a company's value chain (*Figure 2 - 1*), which especially for larger or international operating companies lies in other catchments possibly in different countries. Companies then typically apply the Avoid and Mitigate (similar to following a mitigation hierarchy approach) responses across their value chain (often with a bias towards Operations) (*Figure 2 - 2*). Replenishment actions are then typically applied to the residual impacts (*Figure 2 - 3)* but often this is restricted to those impacts linked to Operations. Or more simply, companies first work to Avoid and Mitigate their impacts across a wider spectrum of the value chain and where they have the most influence. They then often apply replenishment to the residual impacts, but this is often then restricted to only impacts of Operations. What is less evident within current practices is the application of replenishment across the remaining value chain, where the largest source of impacts is potentially upstream or even downstream of operations (Figure 2-4). In addition, many companies are seeking to tell a story of "positivity" linked to replenishment, but an unanswered question is what amount of positive is enough (*Figure 2 - 4).*

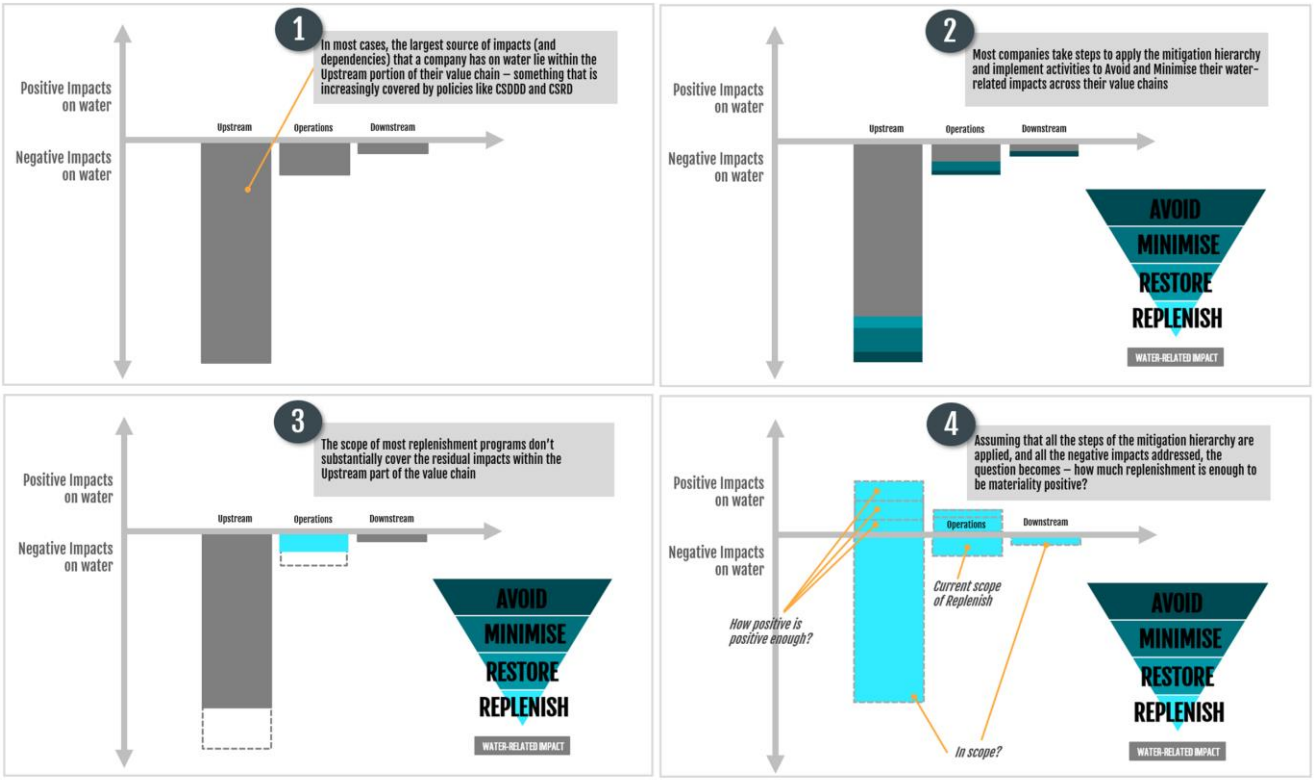

Figure 2: Graphical illustration of how (volumetric) replenishment is currently applied within corporate programs within the context of mitigation hierarchy across the total water impacts across the value chain

[3] CDP (2023). CDP Global Water Report 2023.

CALL OUT BOX: Is replenishment different from offsetting?

The term offsetting has its origins within climate language and can be simply thought of as actions that reduce or remove GHGs (or impacts) in one place to compensate for emissions elsewhere[4]. In contrast, replenishment is largely about efforts to balance water use through action that restore water back to local communities and nature. In essence, replenishment is integrally dependent on water being restored within the same catchment, where it was used and within a time frame that is meaningful. This contrasts with offsetting where the need to consider location and time of the reductions or removals is less material. With this, replenishment is materially different from offsetting.

Since 2016, there has also been an uptake in the interest and use of the concept of water positivity - specifically "water positive" or "net water positive". In many cases where corporates have made commitments related to forms of positivity, replenishment has often formed part of a series of responses to delivery on these commitments. Lastly, there is a rising interest in the use of Nature-Based Solutions (NbS) as a mechanism to deliver on corporate ambitions to contribute towards solving water-related challenges within catchments. In conjunction with this, there has been a more recent rise in the interest and focus on biodiversity conservation or nature positivity. This includes the use of Nature-based Solutions (NbS) to potentially deliver stacked (water, carbon, biodiversity, socio-economic) benefits.

The expectation for companies to do more to address their impacts across their value chain is not only confined to water but to many other sustainability topics. These expectations are being driven by initiatives such as the EU's Corporate Sustainability Reporting Directive (CSRD) and Corporate Sustainability Due Diligence Directive (CSDDD), the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations and Science-Based Targets Network's (SBTN) Interim Guidance. While some of the above are voluntary, replenishment could also start to permeate into local regulatory requirements. In combination, what is emerging is an expectation for companies to not only expand the scope of responsibility for reducing impacts on resources but also to start with avoiding and minimizing the impacts before turning to actions that mitigate the impacts.

WHAT IS WORKING WITH REPLENISHMENT

Replenishment has become a common response as part of corporate water stewardship, despite its challenges. Since the first replenishment targets were announced in 2007, more companies, especially those in food, beverage, and technology sectors, have followed suit. Today, over 40 Fortune 500 companies have committed to water replenishment. Corporate announcements of these targets have increased significantly in recent years[5].

Beyond volumetric benefits, some other areas in which replenishment has created benefits to the water stewardship narrative include:

[4] The Nature Conservancy (2021). Carbon Offsets Markets Illustrated.

[5] Microsoft (2023) Water Replenishment: Our Learnings on the journey to water positive

- Helping to attract real money to restoration efforts that have been hard to finance in the past;
- Prompting companies to start thinking about their dependencies and the status of water resources in the catchment surrounding their operations and the catchments of their value chain suppliers;
- Setting the stage for addressing shared challenges through the use of shared responses and collective action;
- Catalyzing industry and cross-sectoral collaborations;
- Sparking questions and work on how to more consistently to measure and validate impacts under the Volumetric Water Benefit Accounting work;
- Acting as a financing mechanism for basin scale initiatives;
- Helping companies manage physical, reputational and regulatory risks;
- Creating benefits (e.g., payments for ecosystem services) for local communities; and
- Resourcing collaborative governance structures and collective action.

WHAT ARE THE CURRENT CHALLENGES

Despite the successes with replenishment since 2007, there are systemic challenges with respect to how replenishment projects have been deployed. Some of these challenges are primarily felt by implementers and funders alike.

The authors worked to identify some of these challenges then individually and collectively prioritized which of the challenges were more/less important or relevant to their roles with respect to the implementation of replenishment projects. The same challenges were then presented to an audience primarily made up of funders of replenishment projects during Stockholm World Water Week 2024. This allows for a comparison between how largely (NGO) implementers and (corporate) funders view the importance of these challenges (*Figure 3*). (Note: Descriptions of the challenges and examples are provided later in this section)

IMPLEMENTORS PRIORITIES	FUNDERS PRIORITIES
Target focus	Governance/Set-up/Maintenance funding
Quantification & Verification approaches	Long-term project sustainability
Operational Limits	Target focus
Governance/Set-up/Maintenance funding	Reporting Transparency & timing
Long-term project sustainability	Quantification & Verification approaches
Non-collaboration incentives	Operational Limits
Transaction Costs	Setup timing issues
Co-benefits	Co-benefits
Benefit Attribution	Benefit Attribution
Setup timing issues	Transaction Costs
Predicable financial commitments	Pricing transparency - Project budgets
Pricing transparency - $/gal	Non-collaboration incentives
Pricing transparency - Project budgets	Predicable financial commitments
Reporting Transparency & timing	Quantity/Quality overlaps
Quantity/Quality overlaps	Pricing transparency - $/gal

Figure 3: Ordered prioritization of the identified challenges for both implementers and Funders of replenishment projects.

Notes:

(1) The colors shown in the table are intended to visually show where challenges prioritized by implementers landed within those priorities of funders.

(2) Implementers refers, in the above figure, to the authoring organisations of this paper

(3) Funders refers, in the above figure, to mainly corporates who attended a joint session by the authors on this work during World Water Week in Stockholm in August 2024.

In reviewing the results presented in *Figure 3*, it can be observed that despite there being differences between the two groups with respect to prioritization, the differences are relatively minor across the top 10. This indicates that, while the lived experience of the challenge might look different for either an implementor or funders, **all parties are fairly aligned on the key challenges that need to be addressed**.

The below table provides more detailed descriptions of the identified challenges. Please note that the examples included are hypothetical examples based on experiences between funders and implementers. These were included to provide additional illustrations of the challenges being faced in the water stewardship community. Not all funders and implementers of replenishment projects have experienced all of the challenges outlined below.

Areas	Challenges	Description	Example
Scope	**Operational impacts**	Operational volume targets restrict action, causing a disconnect from catchment needs and value chain replenishment goals	*A company who deploys replenishment at one of its sites but the volume being targeted for replenishment is only equivalent to the water used by the site and does not consider the needs of the catchment or the footprint of the materials used within the product (e.g. upstream value chain) (this is expected to improve as additional data on basins and corporate value chains is generated)*
	Water quantity bias	Current replenishment prioritizes quantity (water volume) over catchment needs and often also places equal values to water volumes across catchments, potentially reducing volumetric impacts in only water scarce areas or parts of the catchment which results in less overall benefits	*A company receives two proposals for work in the same catchment. It chooses the proposal with a higher replenishment value, due to it being in a naturally wetter area (e.g., headwaters). The other proposal, which yields less volume being in a dryer area (e.g., middle catchment) is as crucial for communities and wildlife but remains unfunded.* *Or a company receives a proposal in a water stressed area and requests behavior change, advocacy, and governance activities be cut from project scope. A drier area has a low L/$ return and additional activities needed for long-term sustainability of project and impact also skew L/$ figure.*
Project Development	**Transaction costs**	High transaction costs in bilateral projects hinder impact delivery, stemming from tailoring projects to donor needs	*A company requests changes to a project proposal activities to meet their replenish target and their benchmark for cost effectiveness (L/$). The implementer adjusts activities to meet requirements, resulting in a long proposal process for a relatively small amount of funds and scale.*
	Setup timing	Donor timelines often clash with local capabilities and capacity constraints, causing frustration and inefficiency in meeting unrealistic initiation deadlines	*A company asks for replenishment values upfront at the proposal stage. However, the implementer does not have time or funding to do field data collection to provide sound estimates of the potential volumetric water benefit before the deadline. Implementers are not comfortable being held accountable to a 'back of the envelope' calculation that could be inaccurate.*
	(Non) Collaboration incentives	Current replenishment project model fosters implementer competition, hindering collaboration and efficiency, and stimulating corporate competition	*Working bilaterally with an implementer is viewed as simpler (e.g. quicker to contract, easier to align on common interests) for a company and therefore foregoes undertaking a multilateral collaboration that may take longer to launch. Multilateral collaboration is ultimately needed to solve catchment challenges.*
	Quantity/quality overlaps	Lack of guidance on quantity vs. quality leads implementers to adopt diverse approaches, hindering cost-effectiveness and sharing lessons.	*Black box models used for calculating water yields may drive non optimal prioritisation on the ground and can result in inaccurate reporting as they are difficult to audit.*

	Long-term sustainability or equity of the project	Limited focus or incentives for long-term sustainability and equity planning post-project closure hampers ongoing delivery and monitoring of holistic stacked (water, carbon, biodiversity, socio-economic)	*Implementers receive funds for the implementation of the project but does not include/accept or provide a limited budget for the maintenance of the operation over the contractual period during which volumetric benefits need to be provided.*
Funding	**Maintenance of setup/ governance**	Short-term funding cycles for replenishment projects prioritizes immediate impacts over governance and setup activities, burdening implementers	*From a proposal, a company picks and chooses to fund only activities that will yield short term replenishment benefits that contribute towards their target. This leaves activities like improved governance unfunded even though they may yield larger scale benefits in the long term.*
	Financial commitments	Uncertain long-term funding from donors limits local teams' ability to establish impactful, sustainable programs effectively. There is little incentive to innovate or pursue different financial models that can create longer-term and more impactful action.	*Funders have historically not committed to projects for more than 1 to 3 years.*
	Pricing transparency - $/L	Implementers lack transparent $/L pricing across projects or the valuation of the L (not all liters are equal), hindering clarity and consistency in funding evaluations	*Most implementers do not budget projects on a per liter basis but on staff time, equipment etc. Additionally, the $/L may be far higher for projects in areas with less water, creating perceived inconsistencies of pricing across different projects.*
	Pricing transparency - project budgets	Corporate budget transparency across project types is currently lacking, impacting funding clarity and accountability	*Funders are hesitant to share data on funding amounts for projects and consultants cannot share these data points due to NDAs*
	Co-benefits	Co-benefits like biodiversity, carbon, socioeconomics and WASH are overlooked, missing chances to maximize financial investments effectively	*A company receives two proposals for work in the same catchment. It chooses the proposal with a higher replenishment value, rather than the proposal that yields less volume but also supports biodiversity, sequesters carbon and socio-economic benefits. The company cannot account for and value the multiple benefits offered by the more expensive project and cannot support several of its company's sustainability targets.*
Reporting/ Disclosure	**Reporting transparency and timing**	Inconsistent reporting requirements from funders complicate and increase costs for consolidating replenishment results across projects.	*A replenishment project is supported by multiple funders, one with quarterly check ins, one with bi-annual, and another with annual reporting requirements all with different formats*

	Quantification & verification approaches	Limited consensus around a consistent and systematic approach for qualifying volumetric benefits leads to varied methods, risking credibility and duplicating efforts and aggregation of projects impacts within catchments	*Two companies fund the same initiative with the same implementer but choose to use different third parties to quantify the benefits. Although both refer to the VWBA guidance, the third parties interpret the guidance differently and the benefits claimed different between the companies.*
	Benefit attribution	Unclear benefit attribution risks double counting, harming reputations. Individual-centered models hinder collective catchment funding in project selection	*For the same project, if one co-financer cares about VWBs and the other does not, can a higher proportion of VWBs be attributed to the former? If not, this could be a disincentive for collective action (e.g. public-private partnerships)*

WHAT NEEDS TO EVOLVE

Based on both experience and feedback, the authors believe there are a series of issues that need to evolve. Improvements in these areas could help to ensure that the community can more meaningfully leverage replenishment efforts to better deliver systemic catchment outcomes:

1. **Methodologies**. This includes:
    - **Accounting** (metrics, models, measures, geographic extent of benefits, including linking those back to catchment health risks in a public/transparent way). NB: We believe that much of this will be covered in various Volumetric Benefit Accounting methodology discussions currently underway via VWBA 2.0 (and linked Quality & Biodiversity Benefit Accounting efforts)
    - **Verification** (including the creation of more/stronger guidance around verification & claims, including issues of plus attribution)
    - **Scope** of replenishment (from operations to value chain)
    - **Evidence of impact/monitoring**: Better long-term on-the-ground monitoring and evaluation of interventions (including greater consideration of local best practices for quantify replenishment)
2. **Financing**. This includes:
    - **Standardizing minimal requirements**: Establish principles and market oversight mechanisms to control the quality and permanent value of the volume of water replenished so that the assessment metrics for projects are more directly connected to delivering impacts in catchments.
    - **New approaches for how to scale and provide predictable financing**/co-financing for investments in replenishment
    - **Incentivisation (and limitations) for collaboration** with among/between implementers, among/between funders (corporates) and connections to public sector investments (including recommended attribution and how this is balanced with when and how the project is funded)

3. **Systemic linkages**. This includes:

    - **SDG 6.4 to SDG6+:** Provide joint guidance on how replenishment is connected to "Net"/volumetric/quantity focus vs. other water issues.

    - **Initiative cross-links**: Provide joint guidance on how replenishment is connected to other initiatives (e.g., SBTN, Freshwater Challenge, NPWI, etc.)

    - **Public sector engagement:** Greater public sector involvement through guidance or a collection of lessons learned on linking replenishment to other government efforts (IWRM, NBSAPs, NAPs, NDCs, etc.)

CALL TO ACTION & NEXT STEPS

As framed in the introduction, this paper aims to outline some of the benefits and primary challenges that are arising from the current approach to replenishment. This paper is intended to set the stage for a wider community dialogue to jointly identify possible solutions for these challenges. The next step in this process is to engage in broader community discussion to identify and evaluate a suite of potential solutions to these challenges (*Figure 4*).

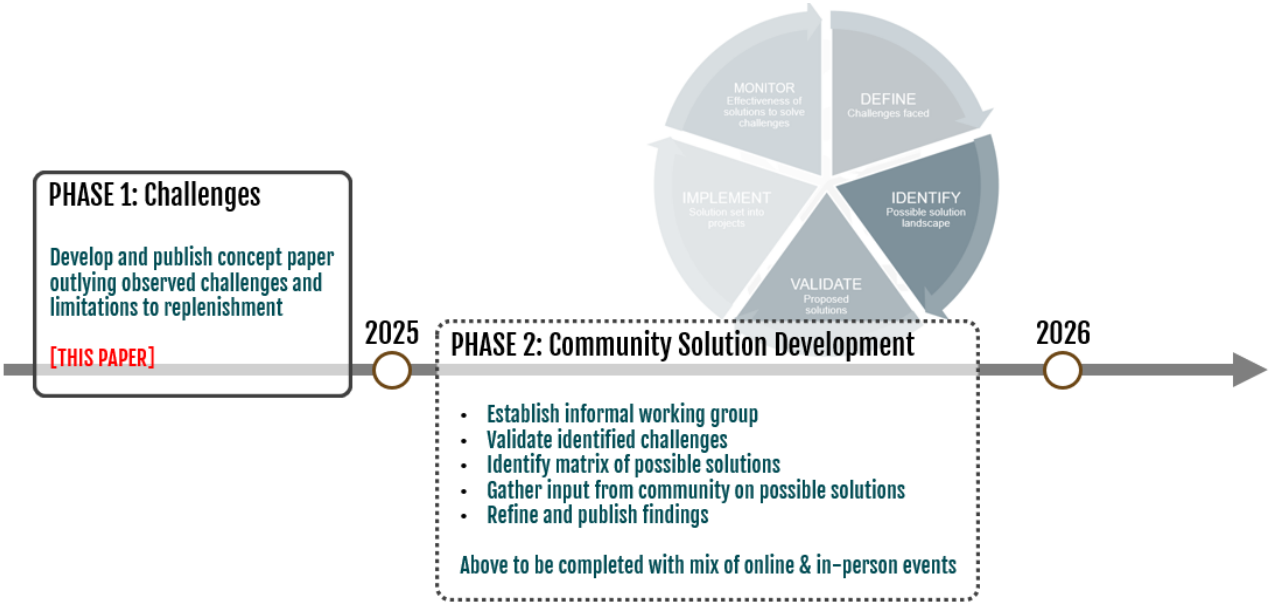

Figure 4: Illustration of possible activities in the next phase of this work

It is the view of the authors that due to the complexity of the challenges identified, there is unlikely to be a single solution but rather a suite of solutions may be needed that help to address parts of different challenges.

The authors are committed to helping to facilitate this community discussion ***but are calling on all interested parties within the community to express their interest in participating***. Without a robust suite of solutions, we collectively run the risk of not being able to leverage the full potential of the concept of replenishment. These discussions can help ensure that the community evolves away from having replenishment be the core company outcome, simply "counting drops" and towards the more systemic activities and actions that are at the level of impact that's needed. Let's improve whilst walking the action!