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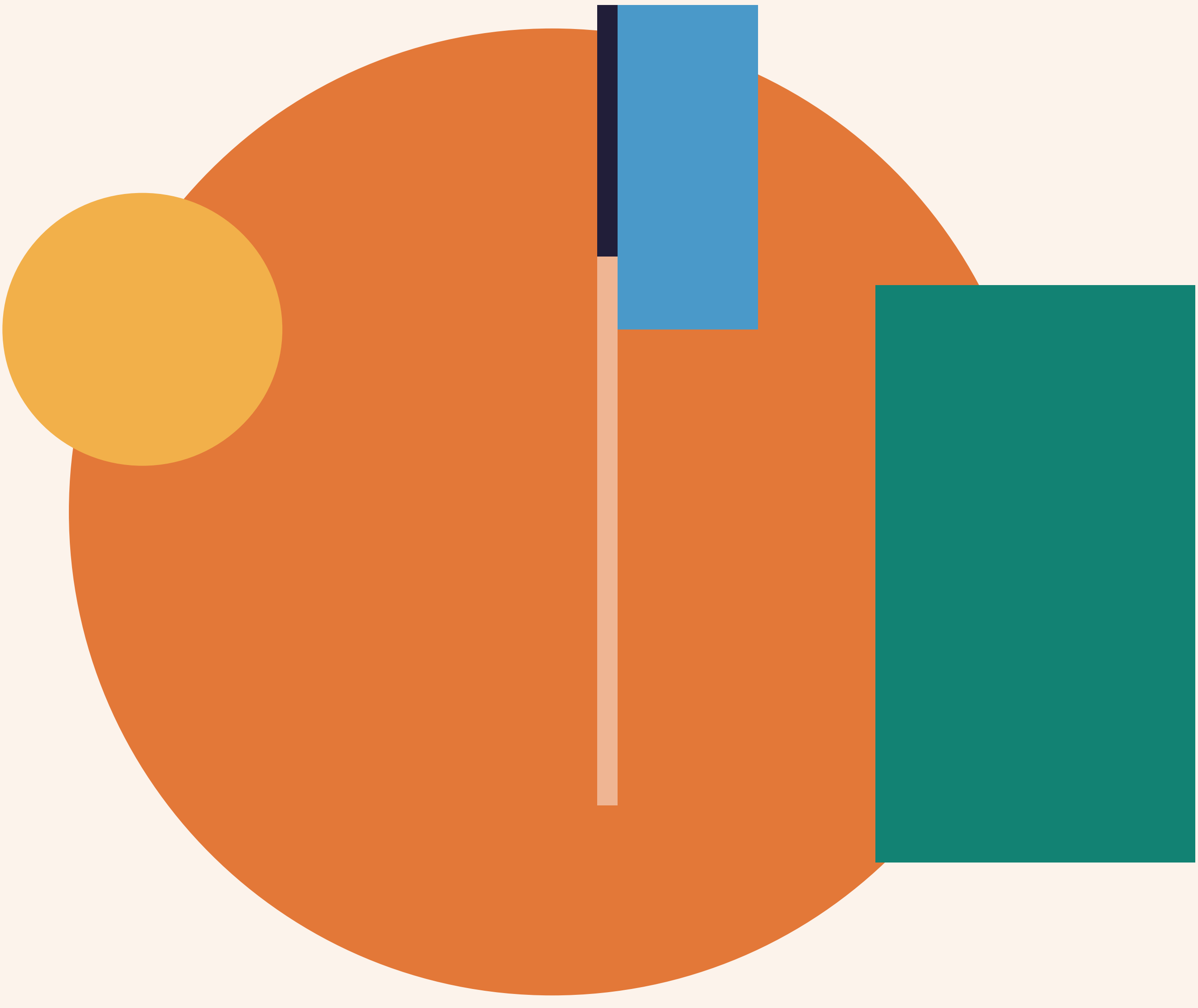
DISSEMINATION TOOLKIT

Developing a sustainable behaviour change communication strategy within the **Integrated Catchment Management, Lesotho**



Busara

Abstract

Conserving and protecting natural resources is important for local communities, biodiversity, and the world at large. This conservation cannot happen without people: in order to be able to tackle climate change or unsustainable farming practices or overfishing, we need to change behavior. This is most pertinent in the Global South, where local stakeholders and communities are able to affect positive environmental shifts by changing their behavior This guide provides a framework for designing and implementing behavior change interventions that encourage conservation in the Global South.

BEHAVIORAL SCIENCE

What is Behavioral Science

Behavioral Science (BeSci) is the study of human behavior. Through systematic experimentation and observation, we gather evidence to explain why humans make the decisions that they make - especially the decisions we might consider irrational. We draw out behavioral insights from this evidence base, which can be applied to practical problems in the world today - such as Integrated Catchment Management in Lesotho. Using these insights, we can design and implement wise, behaviorally-informed interventions that are effective in shifting existing biases and encouraging the desired behaviors and practices.

Employing behavioral science in our projects in this manner can positively affect their potential impact by helping us understand common decision-making pathways, providing a framework for evaluating the key barriers[1] and enablers[2] faced by decision-makers, and enabling us to augment our interventions to be more effective. For example, by using behavioral science methods in our research we can go beyond reported behavior to observe the revealed behavior[3] of individuals of interest, design research to monitor possible biases in decision making, and control for those biases in our intervention's instruments or messaging.

In order to understand why behavioral science has been effective we must go over some key insights from Behavioral Science to understand how they could be useful when designing solutions. Social and Behavior Change Communication (SBCC) is an approach utilized in development to promote changes in individuals' behavior, beliefs, and attitudes. It is the systematic application of interactive, theory-based, and research-driven messaging and activities across a variety of channels in order to inform, educate, and engage individuals and/or communities of interest on the desired topic. For example, communication campaigns urge people to conserve water by informing them of the water scarcity situation in their country or the world, making them aware of the precarious nature of the situation. They might not have previously been aware, and might form an intention to conserve more water, yet it is possible they do not perform the actual desired behavior. This is known as the intention-action gap[4], and is a key insight from behavioral science.

1 A barrier is any factor which inhibits a particular behavior - these must be addressed for the behavior to occur
2 A lever is any factor which facilitates a particular behavior - these can be utilized to encourage the behavior
3 Revealed behavior is observing what individuals really do when offered a choice, instead of relying on what they tell us they would do
4 The Decision Lab resource for further reading on the intention-action gap

> We have limited memory, limited attention, and a limited ability to process information.

The intention-action gap stems from the idea that we are limited beings. We have limited memory, limited attention, and a limited ability to process information. So, we often rely on mental shortcuts to decide what we should do. These shortcuts generally work well, letting us effortlessly and automatically perform lots of complex tasks such as deciding when it is safe to cross the road, identifying a friend in a crowd of strangers, or sensing how someone else is feeling without them saying anything out loud. These might seem like simple tasks, yet consider how difficult it has been for computers (with far greater computational abilities than us) to perform these tasks at a level comparable to the average human being.

However, sometimes using these mental shortcuts can cause problems in our thinking known as biases. Let us consider the following question. Please try and answer it in your head before reading further.

You would have just arrived at some percentage in your head. The actual probability is 1 in 11 million or 0.00009%. Unless you have done extensive research into plane crashes, you probably thought of a different percentage by utilizing a mental shortcut to answer this question. You likely asked yourself a related yet different question like "How worried do I feel about my plane crashing during my flight?" or "How easily can I remember instances of planes crashing?" and answered that question instead. As stated before, while most of the time these kinds of shortcuts are useful to us, in cases like this they can lead to biases in thinking and decision-making. These biases can be the reasons for why intentions to perform desired behaviors never materialize.

However, even if our communication is effective in forming the intention to act in a certain way, similar biases might stop us from doing so. This is because whether one performs a specific behavior at a given moment of time depends on a series of prior decisions and behaviors. In order for the desired behavior and prerequisite behaviors to materialize, it is important structural[5] or behavioral barriers[6] do not exist. As such, merely providing information or creating intention to act in a certain way is not enough. Instead, interventions that adopt an SBCC strategy must draw on behavioral insights to be an effective tool in both forming the intention to act in a desired manner and encouraging the desired behaviors. More broadly, embracing and leveraging principles of behavioral science will provide you with the necessary approach, tools, and strategies to affect your desired changes in behavior.

[5] Structural Barriers are external factors, such as lack of access to resources, that makes it difficult for individuals to change their behavior.
[6] Behavioral barriers are internal factors, such as the lack of motivation, which impede an individual's ability to change their behavior

Behavioral Change within ICM

Lesotho, known as the 'water tower' of Southern Africa, contributes to 40% of the annual run-off of the Orange-Senqu River Basin while encompassing just 3% of its land. However, population growth, overgrazing, and poor land management have degraded natural resources and threaten the livelihoods of Basotho communities. These behaviors also accelerate the negative effects of climate change, which have already harmed communities and natural resources across the country. Integrated Catchment Management (ICM) is a holistic approach that has been adopted to address these challenges, emphasizing the need to collectively manage resources including land, water, and infrastructure. To encourage buy-in and ownership of the project, stakeholders across catchments from the broader drainage basin are engaged in sustainable natural resource management and empowered to implement and maintain sustainable behaviors and practices. This approach has been successful in a variety of contexts when it successfully empowers stakeholders and takes their aspirations and values into account - adapting as they change over time.

> Lesotho, known as the 'water tower' of Southern Africa, contributes to 40% of the annual run-off of the Orange-Senqu River Basin while encompassing just 3% of its land

Behavior change measures utilized within the ICM approach have generally targeted barriers that are more structural in nature - like messaging focusing on raising awareness of conservation issues or the passing of conservation-related laws and regulations - and opportunities exist to support the existing message content by targeting behavioral bottlenecks. In order for the desired sustainable practices and behaviors to occur many things need to happen, including but not limited to community members needing to have an understanding of the negative consequences of their actions on the environment, be willing and able to change their behavior, and have no equivalent competing incentives (financial or otherwise) that would prevent them from changing their behavior. Behavioral science offers us a way to address these requirements and encourage these desired behaviors.

AUDAS

A behavioral science framework

A conceptual understanding of Behavioral Science and its applicability to conservation, while useful, is not enough to be able to apply behavioral insights effectively to your projects. Instead, it is useful to approach your projects with a behavioral lens, utilizing a variety of strategies and techniques in order to design and test a useful solution (an intervention) that leverages the findings of behavioral science research. AUDAS is the framework utilized at Busara which guides our approach to generating solutions that are based on behavior, fit the situation sufficiently, and are thoroughly tested. It consists of five stages – Align, Understand, Design, Assess, and Share – which encompasses the ethos of how we design and deploy behavior change interventions in the Global South to address challenges in conservation and many other areas like social inclusion, agriculture, health, education etc. In this guide, we will go through each stage of AUDAS in detail, provide examples of specific strategies you can utilize, and explain how we used AUDAS in our project in Lesotho.

STAGE 1

ALIGN UNDERSTAND DESIGN ASSESS SHARE

Align

1

Any conservation project in the Global South has a lot of moving parts. You will likely be working with a team of different individuals in your organization, who all have different roles, competencies, and outlooks. Furthermore, the project will likely have a variety of stakeholders: individuals, groups, communities, funders, governmental agencies or other organizations with direct or indirect interest or involvement in the project and its outcomes. Stakeholders can often have diverse perspectives, needs, and expectations from your project, and also all have unique and valuable insights and understandings of the context and the challenges valuable. In order to ensure that your interventions are successful and achieve your intended outcomes, it is crucial to align with your team and your stakeholders.

Aligning with your team allows you to manage your project effectively by ensuring that everyone is on the same page. This is not something that is done just once; it must happen regularly throughout the project to allow your intervention the chance to succeed. Through this process, your project will benefit from the diverse perspectives within your team, a common understanding on how best to work with one another, and the opportunity to divide roles and responsibilities as per your team member's roles and competencies. Aligning with your stakeholders can help you establish a common ground and a common vocabulary with both team members and stakeholders, identify potential differences in your scope for your project and what stakeholders expect from your projects, as well as what the possibilities and constraints are in the design and implementation of your intervention. Once again, this must happen throughout the project: for example, if you identify a new stakeholder in the 'Understand' stage, it is important to conduct a session with them to align their expectations and ideas for the project with your own. Aligning in both these ways will equip you to develop a clear vision, mission, and objectives for your project, ensuring a strong foundation and giving it the best chance of success.

Specific strategies

Behavioral Brief
This is a project template that outlines the scope of the project, and the specific target actors, actions and outcome sought from the project. This facilitates a clear understanding of project parameters and acts as a roadmap for all project contributors, ensuring everyone is on the same page about the intended behavioral interventions.

Behavioral Hypothesis
A short statement that focuses on the actor, action, and the outcome, and fosters a comprehensive view of the project's potential impact for all stakeholders. This hypothesis guides the project by offering a clear, testable statement of the changes sought.

Project Kickoff
A session which can be only for your team or for your team and clients and/or key external stakeholders. The key objective is to align everyone involved in the project on its goals and objectives. How you run this session will be up to you, but it should generally include an overview of the problem you are tackling and the proposed scope of the project. You should also include engaging and interactive elements such as icebreakers, group discussions, and activities.

Co-defining Concepts
When operating in unfamiliar contexts, you can conduct sessions with stakeholders to agree on common context-specific definitions. This will allow your interventions to be more effective because the words you utilize in your intervention materials, measures, and surveys will likely be interpreted the way you intended them to be.

Project management tools
Using a variety of tools to ensure your team is on the same page and understands the division of responsibilities such that the project runs smoothly. In doing so, you will be able to set up the project such that it benefits from the diversity of opinions and competencies within your team. We will go through one such tool at the end of this stage.

How we did it

> Ask questions like "You get the best of me when..." and "You get the worst of me when..."

Externally, we found it important to align with both our client and other stakeholders. We conducted a kickoff presentation which built on our common understanding of the issues at hand and included discussions on what the potential challenges to our project might be.

Internally, we utilized a variety of project management tools to ensure that our team was on the same page. As team members might enter and exit the project due to a variety of factors, or team members might develop different competences or working styles over time, this was a consistent process. We conducted internal sessions to align our working styles, asking questions like "You get the best of me when..." and "You get the worst of me when...".

We broke down all our tasks as much as possible, utilized workplans to ensure that everyone was on the same page about project timelines, and clearly assigned roles and responsibilities so that it was clear which tasks each team member had ownership of. We utilized time tracking software to ensure accountability and generate a common understanding of how much time was spent on each task within the project.

Mini-Worksheet

Aligning with your team using MOCHA

M — **Manager**
Assigns responsibility and holds the owner accountable. Makes suggestions, asks hard questions, reviews progress, serves as a resource, and intervenes if the work is off-track.

O — **Owner**
Has overall responsibility for the success or failure of the task. Ensures that all the work gets done (directly or with helpers) and that others are involved appropriately. There should only be one owner.

C — **Consultant**
Provides input and perspective on the task.

H — **Helper**
Assists with or does some of the work.

A — **Approver**
Signs off on decisions before they are finalized. May be the manager or someone higher up

Write down the stages of your project as specifically as possible, and fill in the person for each role for each action item. If you are unclear on the project stages then take this opportunity to align with stakeholders. If you are unclear on the roles of members within your team or their competencies then take this opportunity to align with your team.

Task	M	O	C	H	A

STAGE 2

ALIGN UNDERSTAND DESIGN ASSESS SHARE

2

Understand

It is essential to look at the context - the location, cultural setting, and lived experiences - to determine the appropriate tools we need to employ to achieve our desired outcomes. Specifically, we will try to understand the population we are trying to target, utilizing quantitative methods to research on well-observed obstacles and qualitative methods to tease out unknown or culturally sensitive obstacles. It is important to understand how receptive contexts will be to different types of interventions; no matter how well-designed or clever a behavioral science intervention is, it will not have the intended effect if the context doesn't allow for behavior change[7]. For example, no matter how many behavioral techniques you utilize to encourage individuals to save money, if norms to spend money on expensive goods exist (and are not addressed) then even the best-designed behavioral interventions will have limited effectiveness.

There are a variety of strategies that can be utilized to help you understand a problem and its context thoroughly enough to develop effective solutions to those problems. Below we provide a few key strategies, however this is by no means an exhaustive list and there may be more appropriate strategies that you could employ for your own projects.

Specific strategies

Literature Review

A review of the literature can help provide an overview of recent developments in conservation in similar contexts, allowing you to understand the factors behind the undesirable behaviors you are looking to change as well as what interventions have worked to address them. When conducting a literature review, it is important to be clear on what you would like out of it, such that you can accurately define its scope and devote adequate resources and time to conducting it. You can and should conduct different types of literature reviews depending on your needs. Some examples of different scopes for a literature review are:

- Inspiration: In an Inspiration Review, you are viewing literature to gain inspiration and insight for your research without aiming to evaluate or synthesize the literature systematically. It is less resource-intensive than other reviews, and largely involves reading various sources, both academic and non-academic, to generate ideas or approaches for your intervention.

- **Gap Identification:** In a Gap Identification Review, the focus is on locating gaps or deficiencies in the existing literature to identify areas where further research is needed. In conducting these reviews you will examine existing literature to pinpoint areas where questions remain unanswered or where new developments in conservation have created a need for updated research. These can help define research questions

- **Scoping:** In a Scoping Review, you aim to provide an overview of the existing literature in a particular field or topic without necessarily evaluating the quality of individual studies. They help you understand the breadth and depth of available research in your specific context and area of interest by mapping the key concepts, evidence, and research gaps. These are generally done by systematically searching through a wide range of sources, including published research studies, databases, grey literature, and even expert opinions.

- **Research Tools:** In a review of Research Tools, the focus is on evaluating and comparing the various tools, methods, or instruments that researchers use in their studies. This can include software, data collection methods, measurement scales, or analytical techniques. This helps you make informed decisions about which tools to use in your investigation design and evaluation.

Qualitative Research

Qualitative research is useful in addressing the gaps in the existing knowledge-base; utilizing qualitative research methods effectively can help shine a light on enablers and barriers of your desired behavior that are unknown, sensitive, or context-dependent. This is because qualitative research focuses on the depth and richness of responses, often focusing on smaller and more targeted samples than quantitative research methods. The methods mentioned below can be combined together or utilized in conjunction to better your understanding.

- **In Depth Interviews (IDIs):** A qualitative survey is developed with open-ended questions that are designed to encourage and prompt participants to talk in detail about areas of interest. It is important for these questions to be easy to understand and not leading, so as to procure unbiased responses. The survey is administered to individuals of interest, with the researcher probing for additional information when necessary. This is a useful first method when doing research in a novel or unknown area as it has the potential to uncover hidden behaviors and explanations for a particular phenomenon.

- **Story Completion:** Participants creatively express their views on a topic by completing based on a researcher-provided story stem - the beginning of a hypothetical story which is related to the topic being discussed.

- **Card-Sorting:** Participants are presented with a deck of cards with words or images on them that are related to the area of study. They are then asked to rank them in order or preference or sort the cards into distinct categories, revealing their attitudes and beliefs.

- **Focus Group Discussions:** Focus group discussions (FGDs) gather people from similar contexts or with similar experiences together to discuss a specific topic of interest. Questions are designed to explore their attitudes, perceptions, and beliefs on that topic of interest, and should strive to encourage discussion. Participants should be made to feel as if the discussion is a safe space within which they can discuss their thoughts and beliefs without the fear of judgment or repercussions. FGDs tend to be time-efficient and can provide a broad range of information, allowing us to see where consensus or disagreement lies.

- Photovoice: Photovoice utilizes photography as an elicitation tool to engage community members. Selected participants will take pictures around a thematic question and then meet. Each participant will present a picture of their choice and then discuss them in-depth with the group. This allows for the building of rapport between all involved parties and can facilitate the gradual discussion of a sensitive topic.

- Observational Studies: Researchers observe participants in natural settings to gather information on behaviors and barriers directly instead of through participant's spoken accounts. This method is typically employed to observe publicly occurring behaviors.

Formative Quantitative Surveys

In order to understand your problem you could employ formative quantitative surveys to understand how generalizable the key findings from a literature review and/or qualitative survey are to a larger population. This type of quantitative research is different from the more traditional type, which aims to estimate treatment effects or infer causality between variables of interest. These types of surveys should only be utilized when we are familiar with the context and the area of investigation and understand the questions to ask in order to produce valuable and representative insights. When conducting these surveys, it is important to make sure that the choice of sampling method is done purposefully, with the advantages and disadvantages of the chosen method in mind. This is because, to ensure that your findings are not overgeneralized and applied to appropriate populations only, you must contextualize the findings of your surveys in the sampling method and survey design and procedure.

Synthesizing Findings

After employing some or all of the strategies outlined in the Understand stage, you should have developed an understanding of the behavioral mechanisms being leveraged by existing interventions, the factors enabling and hindering your desired behaviors, and the constraints on various types of behavior change strategies. It is important to synthesize your understanding into behavioral models or maps in order to better guide the design of your intervention.

- Behavioral Mapping: A method to observe and record behaviors in a particular setting at a particular time, you can use behavioral mapping to identify the levers and barriers to your desired behavior and the contextual and situational factors affecting it. Through a clear understanding of the context and factors, you can target the root for why a particular behavior is/isn't occurring and design an effective intervention. We will go through a behavioral mapping exercise at the end of this stage. A good example of this strategy is a user journey map[8] or the mini-worksheet at the end of this stage.

- Behavioral Model: We should synthesize our understanding into a behavioral model: a framework that outlines the nature of the relationships between the identified factors and the behavioral outcome. This should be a broad model that is applicable to your area of interest but malleable enough to be adapted to the different contexts you might apply your intervention in. Some examples include: COM-B Model, Socio-Ecological Model, and the CREATE Action Funnel.

How we did it

The objective was to design appropriate interventions that could effectively affect behavioral change in the relevant target groups of Lesotho to protect land and water resources in Lesotho and the wider Orange-Senqu basin. In order to do so, we first conducted a preliminary audit of existing program materials, and looked at guidelines and toolkits from current and past programs. We utilized these findings to narrow the scope of our review and to define clear objectives.

In our systematic scoping review, we looked at the existing literature related to integrated catchment management and natural resource conservation to identify key lessons and influential factors, as well as the behavioral mechanisms leveraged in existing behavior change and advocacy interventions. We made sure to focus on studies conducted in Lesotho and similar contexts to ensure that our insights were appropriate for the targeted groups. It was only by defining a clear objective and focusing the scope for our review that it could be comprehensive, allowing us to rely upon the insights we drew from it and utilize it to support our interventions.

Using both the review as well as qualitative in-depth interviews with key informants (representatives from the Integrated Catchment Unit, subcatchment officials, partner NGOs etc.), we grouped the objectives of Integrated Catchment Management into 6 main categories: improved water conservation, water pollution management, effective water reallocation, land cover management, biodiversity conservation, and effective flood management. We were also able to identify a variety of factors serving as enablers or barriers to our desired behaviors, like the importance of local leadership and community norms, or the potential for mistrust toward new conservation groups/trainings on novel sustainable practices.

Based on this literature review, we were able to identify gaps in the existing literature and identify what we still needed to know. Furthermore, some of our identified factors tended to vary across catchments, necessitating a more in-depth understanding of the specific contexts within which we aimed to deploy our interventions. We designed survey instruments and conducted in-depth interviews with representatives from line ministries at the district level, and focus group discussions with community members across all six catchment areas. Through these interviews we are able to identify structural and behavioral barriers to the adoption of sustainable practices. Using those findings in combination with the findings of our literature review, we Identified the key aspects of behavior we want to change and generated a behavioral model, which we validated in workshops with stakeholders.

[8] See also, page 9 of The Little Book for Parenting Programmes

Mini-Worksheet

Behavioral Mapping

After utilizing the aforementioned strategies for your intervention, fill in the table by answering each question. If you are unsure of any of the answers, it is a sign to spend more time understanding the context and/or the problem you are trying to address.

What are the current behaviors being observed?	What is the ideal behavior we hope to observe?
What are the key moments where we can intervene to shift the current behavior to the ideal behavior?	**What can we leverage/what barriers will we need to mitigate to induce the ideal behavior?**

STAGE 3

ALIGN UNDERSTAND **DESIGN** ASSESS SHARE

3

Design

Now that we have understood the context and our problem, we must utilize those insights to develop locally-relevant interventions to affect behavior change. It is important to spend time and resources on this stage because your intervention must be validated and well-designed in order to achieve your desired outcomes; no matter how receptive a context is to your intervention it will not succeed if it is not planned well.

The strategies outlined below deviate from strategies outlined in the prior two stages. Instead of choosing the most appropriate strategies, in this stage, all of the following strategies must be incorporated into your project. This is because designing an intervention is an iterative process, and these strategies feed into and build upon one another.

Specific strategies

Problem Statements
Problem statements are clear and concise descriptions of the challenges a specific intervention aims to address. These statements must be well-defined because they are critical to the design and implementation of your interventions: by building off of our problem statements, we can generate "How Might We" (HMW) statements which frame the problem to allow for ideation. These statements emphasize the myriad possible solutions to any problem and encourage creative thinking in your intervention design. We will go through a worksheet at the end of this stage to help you develop HMW statements. The problem statements you identify must be iterated on throughout the design process, and should be revised after participatory ideation and prototyping.

Participatory Ideation
Participatory ideation is a collaborative and inclusive approach to designing your intervention. Stakeholders are engaged in brainstorming, idea generation, and problem-solving activities. This facilitates stakeholder buy-in and spotlights diverse perspectives; stakeholders might often know of solutions that have not been broadly applied or disseminated, or context-specific reasons that a specific intervention will or will not work.

- **Co-design workshops:** These workshops are generally conducted with individuals from groups that the intervention will target, making them core part of the design process of your intervention. In these workshops, creativity is valued and all proposed ideas or solutions should be explored and seriously considered.

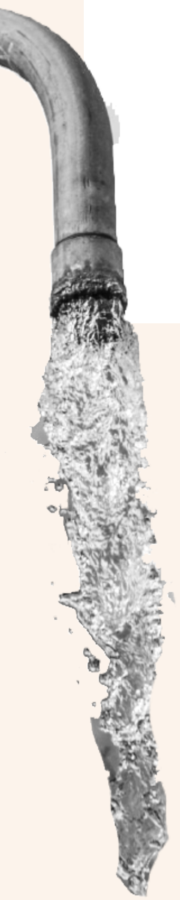
- **Validation workshops:** These workshops are generally conducted with partner organizations or government officials in order to refine and confirm the synthesized insights or potential interventions. This is important because it mitigates the potential for echo chambers, and brings in new, informed perspectives to your design process.

Prototyping

Prototypes are a process of intentional trial and error. These are typically low-fidelity ideas for changing behavior which can be quickly and inexpensively tested, allowing us to explore and validate our potential solutions. Through the process of prototyping, you are trying to learn from your failures and iterate on prototypes until they become high-fidelity, effective interventions. You can test your prototypes using the appropriate qualitative or quantitative measures such as quantitative surveys, IDIs, FGDs etc.

Theory of Change

A theory of change (ToC) is a diagram or written framework outlining how and why your interventions are expected to cause participants to express your desired behaviors. When drafting a ToC, you will need to be clear on how you expect your interventions to affect change, what challenges you might face, and the underlying assumptions and risks of your project. You will not be able to draft a thorough ToC if you do not possess a complete understanding of the problem and your proposed solutions, so this strategy makes these gaps clear and gives you the opportunity to address them before you deploy your interventions[9].



9 Some templates which may be useful when drafting your theory of change: IDEAS Impact Framework, UNDAF Theory of Change Guide.

How we did it

We generated 5 key problem statements on the basis of our behavioral model and the main insights from our scoping review and qualitative research. We framed our problem statements as our desired goals from the intervention. Using these problem statements, we generated HMW statements which helped guide our intervention. For example:

- The Issue: Poor land management practices are made worse by weak cooperation within communities and between herders and farmers.
- Our Problem Statement: Community members need to see the benefit of collaborating and working together
- Our Key HMW Statement: How might we foster cooperation among community members by showcasing the benefits of working together for sustainable rangeland management practices?

Following the development of these statements, we conducted co-design workshops with community members in catchments and validation workshops with ReNOKA stakeholders to catch any gaps in our understanding, generate novel ideas, and validate our problem statements. Incorporating the feedback we received, we narrowed down to 4 main problem statements. Using these statements, we looked to our understanding of the context and the wider behavioral science literature to identify the key concepts we would like to target. We generated 13 different prototypes in total across the 4 problem statements to address those key concepts. For example:

- Problem Statement: Community members need to see the benefit of collaborating and working together
- Prototype 1: Demonstrate togetherness through shared goals and the execution of a community based project (e.g. remove invasive species).
- Prototype 2: Creating positive affect through drama/ folklore to make the abstract concept of cooperation more visible.

We tested these prototypes on a stratified, targeted sample consisting of the different types of community members we aimed to target. We utilized quantitative surveys and qualitative focus groups, asking different questions specific to each of the 13 prototypes. On the basis of our findings, we grouped similar problem statements into 3 bundled interventions that leveraged the strongest mechanisms for behavior change. In essence, the most successful prototypes were incorporated while the less successful ones were discarded. We developed a theory of change for each of our interventions to outline how it would be expected to lead to the desired behaviors. The final product of design phase were 3 focused interventions that leveraged the most relevant mechanisms to achieve the desired behavior change and were ready to be implemented on a larger scale:

- Vandalism and Community Cohesion Intervention: utilizing cultural & religious folklore to create a strong feeling of social connectedness within and between villages.
- Herding Practices Intervention: promoting togetherness between herders and the community, by providing a voice for them and a platform for discussion.
- Agricultural Practices Intervention: establishing the accessibility of farming methods through demonstrative training programs.

Mini-Worksheet

From Problem Statements to HMW statements

Think about the problem that you are addressing through your intervention. Write it down as concisely as possible. For example: Poor land management practices are made worse by weak cooperation within communities and between herders and farmers.

Key issue

Extract the goal of your intervention into a problem statement.
For example: Community members need to see the benefit of collaborating and working together

Key Problem Statement

Based on your problem statement, identify the primary HMW statement by which you are looking to achieve that goal.
For example: How might we foster cooperation among community members by showcasing the benefits of working together for sustainable rangeland management practices?

Key HMW Statement

Now, break down your HMW statement into smaller, more actionable supporting HMWs. Be as creative as possible and generate as many possible ways which might contribute to your intended goal.
For example: How might we encourage community members to understand others' perspectives and be empathetic towards people from other communities?; How might we create a positive identity shared by different communities? etc.

Key HMW Statement

STAGE 4

ALIGN UNDERSTAND DESIGN **ASSESS** SHARE

Assess

4

When we assess our intervention, we utilize various strategies (outlined below) to evaluate the impact of our intervention and get a sense of how effective our approach is. It is only by understanding what worked and what didn't that we can iterate on our current intervention, inform future interventions, and contribute to the current literature on the topic. There are a variety of quantitative and qualitative measures by which we can measure interventions, and which ones are employed depend on the type of intervention. Although we focus on a few key ways of assessing interventions in this section (drawn from our experience developing solutions to issues facing the Global South), many other ways to assess your intervention exist, including but not limited to pre-post studies, observational studies, quasi-experimental trials etc. All of these methods can be useful and which one you choose to use depends on how you believe you can best measure the effectiveness of your specific intervention. You can find more information on these methods here.

Specific strategies

Piloting
Regardless of the type of intervention you decide to employ, piloting your interventions is different from prototyping your ideas. The focus is now on testing comprehensive high-fidelity interventions for behavior change and refining their procedure as per the challenges encountered in the field. You are no longer trying to quickly see what works and what doesn't. Rather, you are trying to make your identified solutions as effective as they can be. This is a valuable step because it gives you the opportunity to iron out the kinks in your intervention or analysis plan before it is deployed on a larger scale. After employing the following strategies for your pilot, if you are unhappy with the outcomes, you can and should go back to the design phase to adjust what is necessary and test again.

Experiments
In this toolkit, we are focusing on interventions that aim to change behavior. A/B Tests or Randomized Controlled Trials (RCTs) test interventions by randomly assigning your chosen sample into treatment and control conditions, such that the control can act as the counterfactual for the treatment: what would have happened to your treatment population if they were not exposed to your intervention. In order to isolate this effect, you would look to measure your control and treatment population after (and maybe before) the administration of the intervention by using quantitative surveys and/or qualitative measures like IDIs or FGDs. RCTs - if done correctly - provide the opportunity to make causal inferences for a particular population; you would be able to say whether or not your intervention is what led to the manifestation of your desired behavior. The extent to which the results of your RCT are generalizable will depend on how representative of your target population your chosen sample is.

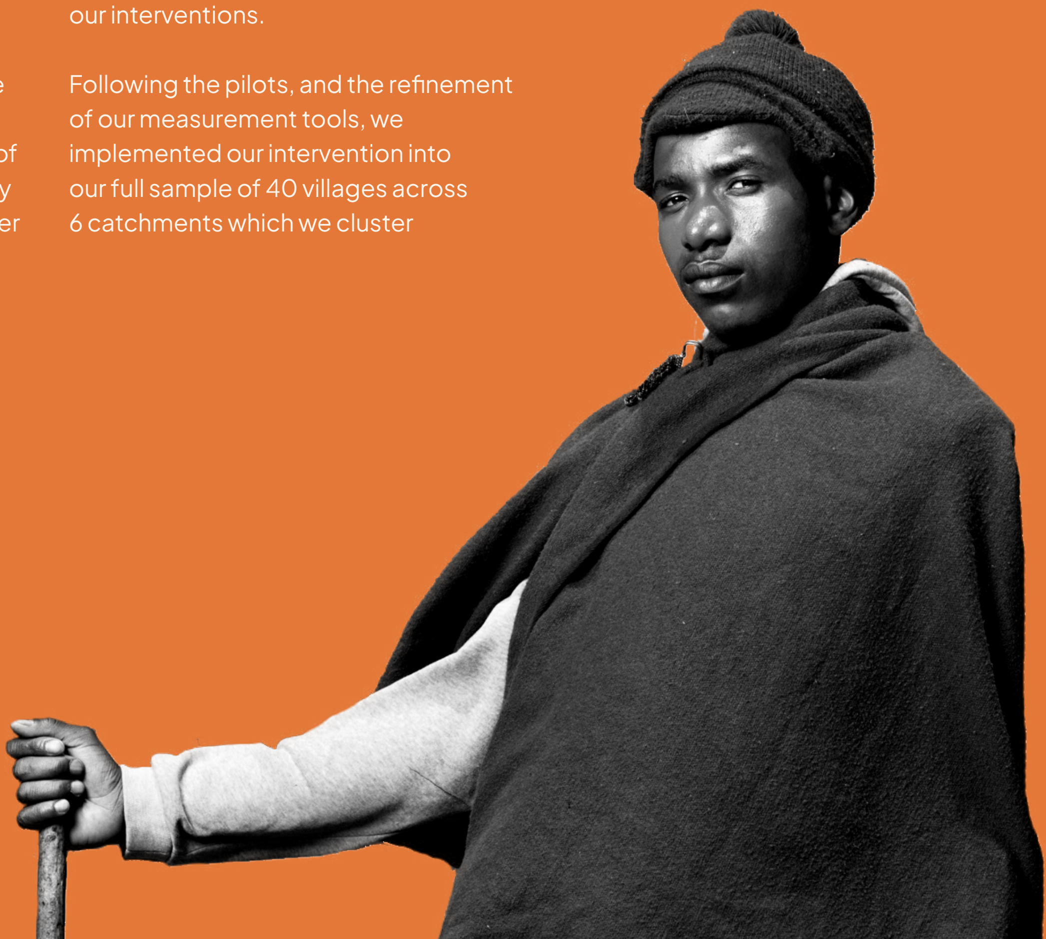
Qualitative Feedback
Qualitative feedback from participants and implementers of your intervention allows you to learn from the rollout of your intervention. This can provide valuable insights which might help you in future iterations of your solution, in designing follow-up solutions, or in refining your intervention procedures.

How we did it

We tested the three interventions we designed in one village each, piloting the experimental procedures and survey materials. Based on the quantitative results from our pilot surveys and the feedback from our field team, we iterated on the interventions and refined our protocol.

We assessed our interventions using quantitative surveys with different questions evaluating the effects of specific behavioral mechanisms leveraged through our interventions. We also tested participant's recall and understanding of our intervention activities, as well as measuring the attitudes of participants toward specific practices and behaviors. We also included questions aimed at observing the revealed preferences of our participants, such as whether they attended a follow-up session, whether they would sign a sustainability-related pledge, or whether they would sign up to volunteer to run demonstrations in neighboring villages. The responses of the treatment group were compared with the control group - who can be considered functionally identical to the treatment group due to our randomization - to isolate effects of the treatment on awareness, attitudes, stated preferences, and revealed behavior. We also assessed our interventions using qualitative surveys with a few participants to understand their subjective experiences and provide richer insight into the effects of our interventions.

Following the pilots, and the refinement of our measurement tools, we implemented our intervention into our full sample of 40 villages across 6 catchments which we cluster randomized into the treatment and control sections. During these studies, we conducted high frequency checks to ensure that the data from our surveys was of a similar quality and proactively identify potential issues in the data collection. Our team was available throughout to address any challenges in the implementation of the interventions as and when they arose, Detailed descriptions of our interventions, their results, and our recommendations can be found here [this will link to the final recommendations document].



Mini-Worksheet

Ready to Pilot and Assess

A series of questions to evaluate your readiness to pilot and assess your intervention.

The target population for piloting the intervention is___________.

I will be piloting the intervention to ___________ [number] of participants.

The target population resides in ___________[location].

I can reach out to the target population without assistance. Yes/No.

I will know that my intervention works if ________________ [expected outcomes of your intervention].

I have access to personnel within my organization who are conversant in evaluation methods. Yes/No

If Yes, reach out to the relevant people within your organization with the information you filled in this worksheet.

If No, consider seeking external expertise for testing your solution. Give them information about your intervention and the information you filled in this worksheet. Designing a sound methodology requires both your deep understanding of the conservation problem and your intervention along with prior research expertise.

STAGE 5

ALIGN UNDERSTAND DESIGN ASSESS **SHARE**

5

Share

Once you have completed the process of analyzing your data and evaluating your intervention, you should share your findings appropriately. This means that you must be clear about both the audience that you are trying to share your findings with as well as the key takeaways from your project, so that you can effectively package your insights. It is important to translate your findings into accessible documents, like this toolkit or our recommendation document, which will enable policymakers, other organizations, and partners to understand your approach, appreciate your findings, and share in your learnings. We will go through how to understand your audience at the end of this stage.

Specific strategies

Final Report/Presentation

The final report presented to the client and other partners is likely the most common deliverable from intervention projects. In order to effectively disseminate your findings, you must be aware of the audience of the report/presentation and tailor your messaging accordingly; someone might be very interested in your methods, while another might only care about your findings. Regardless of the specific content in your presentation, you should always be clear and concise, upfront about your strengths and shortcomings, and make sure to outline and hammer home the fundamental takeaways from your project.

Synthesis of Insights

You can synthesize your insights in a document like this toolkit, a recommendation document, a project whitepaper, a blog post, or any other creative way that you can think of communicating your key insights. This is best utilized when the audience is non-technical but ready for action, or if you want to help set a policymaker's or funder's agenda.

Workshops

Workshops provide an opportunity to engage with stakeholders interactively, allowing for the transfer of insights and findings through discussions and other sessions. These provide stakeholders the opportunity to situate your findings within their own context and focus on what is most relevant to them. Workshops will also provide you with important feedback for future dissemination strategies or follow-up projects.

How we did it

We shared the findings of our three research studies in technical and in-depth presentations and reports with GIZ and other partners that outlined our design, methods, and the findings of our analyses. We developed the toolkit you are currently reading in order to guide you through our approach to behavior change interventions. We also generated a recommendation document which takes you through the three studies we conducted, their shortcomings and strengths, and our learnings. Additionally, we plan to run dissemination workshops with partners to further refine our key recommendations, gather feedback on our approach, and provide avenues for future research.

Mini-Worksheet

Know your audience

Think about your intervention. Use the following checklist to understand the audience, make sure to fill in every box so that you can target the content and messaging when you share your findings. If you are unable to fill a box, that means you must spend more time thinking about who will be reading your report.

A	Analyze	Who are the main recipients of your report/message?	
U	Understand	What is their level of understanding/technical aptitude related to the report/message/sector?	
D	Details	Details such as their level of education, role/position, level in the organization	
I	Interest	What's in it for them? What is their level of interest in the project findings?	
E	Environment	What is the context/setting your audience is invested in, and what is your own relationship to it?	
N	Need	What are their information needs? (Data to inform strategy/proof of concept)	
C	Customize	How should you adjust the message/report to suit their needs, interests and level of understanding?	
E	Expectations	What are their expectations?	

Conclusion

Now, you should have not only developed a conceptual understanding of Behavioral Science and its applicability to conservation but also understood how to approach your projects with a behavioral lens. AUDAS is a good framework for applying behavioral science to your interventions, but it is not the only framework. Many other resources for applying behavioral science exist and should be consulted when designing your interventions: Behavior Change for Nature, The BASIC Toolkit, A Guide to Using Behavioral Science , Designing for Behavior Change. Similarly, it is important to note that the strategies and techniques outlined above, while useful, are not exhaustive. Rather, their inclusion - along with the sections explaining how we utilized each stage of AUDAS in our own project - should bolster an understanding of how you might approach a behavior change intervention. In order to design effective solutions to the conservation problem you are tackling, you must go further than the strategies outlined here and tailor your approach to the particulars of your project.

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