INSIGHTS INTO HOW SOCIAL AND BEHAVIOURAL SCIENCES CAN INFLUENCE PROJECT OUTCOMES:

A WORKSHOP REPORT PREPARED FOR THE SCIENTIFIC AND TECHNICAL ADVISORY PANEL OF THE GLOBAL ENVIRONMENT FACILITY

ABOUT FUTURE EARTH AUSTRALIA

Future Earth Australia, a program of the Australian Academy of Science, is the Australian national committee of Future Earth, a global sustainability, research, and innovation network. Future Earth Australia is a national initiative that enables Australian researchers, governments, industry, peak bodies, and civil society to connect and collaborate on sustainability transitions.

We partner with anyone researching or implementing sustainability knowledge and action and particularly those working on systemic co-designed and coproduced outcomes for the implementation of the Sustainable Development Goals. We aim to initiate and develop long-lasting relationships that enable collaborative action for societal transformation.

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EXECUTIVE SUMMARY

Behavioural change is at the heart of efforts to identify, design, and implement effective solutions to the challenges posed by changing environmental conditions. The need for behavioural change to support societal change in response to evolving environmental conditions and priorities remains one of the most pressing issues of our time. Most environmental challenges are driven by human choices and behaviours. Equally, institutions must be attentive to the important leadership and facilitation role they have in shaping behaviour and choices as they seek solutions. The social and behavioural sciences, as a crucial set of disciplines that can inform such efforts and enable such change, have a vital role to play in both top-down and bottom-up approaches.

Future Earth Australia (FEA), in partnership with the Scientific and Technical Advisory Panel of the Global Environment Facility (STAP/GEF), recently designed and facilitated a two-day workshop with social and behavioural scientists, systems thinkers, and project practitioners with the goal of providing guidance on the behavioral aspects of project design. STAP provided an initial workshop briefing to the GEF.[1] The report that follows is an extended analysis and synthesis of the transcripts of all discussions had across those two days. The findings are that:

- human behaviour is deeply rooted in both cognition and the sociocultural contexts within which it plays out. Effective interventions consider both how mental processes shapes people's perceptions of the world around them, and how those perceptions and responses to them are shaped by the social context. That is, both the behavioural and social sciences are equally needed;
- early investments in problem definition will reap dividends in a project when the social and behavioural factors relevant to the problem are identified; stakeholders are identified, including whose behaviours have what effects; and inter- and transdisciplinary team building linking social and behavioural scientists to wider expertise is used;
- key elements of a project include considering the timescale of the project versus the timescale of the change sought, exploration of context, a clear theory of change, and matching the scale of a problem with its solution;
- adaptability and flexibility are needed throughout project development and implementation, particularly in relation to nurturing partner relationships and building capacity suited to geographical location/context;
- an iterative approach to project design and evaluation, combined with multiscalar interventions working at individual, institutional, and systemic levels, will yield durable outcomes;
- capacity building and knowledge management are needed in the communities, populations, and organisations engaged by the problem to ensure stakeholders can maintain behavioural changes.

These findings are relevant throughout the lifetime of a GEF project. They serve as helpful cues to define the problem, and develop activities that respond to the desired change – ultimately, maximising project effectiveness.

The workshop was attended by participants from a range of disciplines in the social sciences, environmental sciences, and physical sciences and representing a range of geographies. Below, FEA presents a synthesis of the key points from the workshop to assist the GEF in developing future actions.

1. Refer to "How the science of behavioral change and the social sciences can help the GEF to deliver its objectives".

KEY POINT 01

Refine guidance at the project level to embed a holistic view of behavioural change based on social science and behavioural science;.

KEY POINT 02

Consider what information is needed to apply systems thinking in project design and implementation such that there is greater consideration of the interactions between social and behavioural sciences to foster behavioural change.

KEY POINT 03

Undertake consultations to ensure long-term drivers of social change and environmental management are addressed by and through iterative learning flowing from project implementation.

KEY POINT 04

Develop a process to ensure long-term capacity building with local peoples, empowering their self-determination and durable outcomes.

STRUCTURE OF THIS REPORT

This report is structured according to the methodology undertaken for the project; that is, four workshop 'prompts', used across the two full workshop days (held on Zoom). The discussions under each prompt have been distilled into sub-themes, indicated by a short order heading.

FEA

PROMPT 1: HUMAN COGNITION AND SOCIAL SYSTEMS – A CHICKEN AND EGG PARADOX, OR IS THERE SOMETHING MORE?

THIS FIRST PROMPT AND QUESTION WAS MEANT TO: DRAW OUT THE DIFFERENCE BETWEEN CHANGES THAT TAKE PLACE AT AN INDIVIDUAL LEVEL (BOTTOM-UP CHANGES) VERSUS AT AN INSTITUTIONAL OR SOCIETAL LEVEL (TOP-DOWN CHANGES); PROMPT DISCUSSION OF THE RELATIONSHIPS BETWEEN THESE TYPES OF CHANGES; AND LEAD PARTICIPANTS TO EXPLORE THE DIFFERENT VALUES OF EACH.

CHICKEN AND THE EGG PARADOX, OR FALSE DICHOTOMY?

The first prompt generated a robust discussion about the iterative relationship between individual-level behavioural changes and systems-level changes, and what the appropriate starting point (or point of entry)[2] might be, in order to facilitate the GEF's objectives. Participants discussed whether there was an ideal linear sequence to follow, whereby individual behaviour changes would happen first and then societal changes would follow, or vice versa. Discussions touched on ideas of which type of change might foster the other; for instance, it was noted

2. Refer to GEF project cycle.

that changing governance policies and regulations might be more efficient in avoiding the need for mass individual change, because regulations would set new norms. However, a challenge to this idea was whether policy change could or would only occur within a conducive environment supported by many individuals. This tension highlighted the difficulty in establishing an ideal sequence to behaviour change, and the group quickly determined that the pathway to broad, impactful behavioural changes is not so simple.

Rather than following a linear structure, the participants recognised the process of creating change as ongoing, iterative, circular, and dynamic, involving levels of intervention that span from individuals to institutions to systems. Sometimes institutions can empower individual changes, and sometimes individual champions can stimulate broader societal change. Indeed, it was noted that a chicken-egg argument that seeks to identify the origin of behavioural change can never do so, as societal structures and human behaviours have been co-evolving over time. Rather, the discussion can be seen as a useful way to explore differences between these methods of creating change and identifying the appropriate entry point in a given context.

Participants felt that both top-down and bottom-up changes should be pursued simultaneously to best promote positive behaviour changes. This could be described as a systems-level change that contained a diversity of incentives and approaches while understanding the macro picture of the system and the types of behavioural changes that are possible within that system. Participants also highlighted the challenges of this combined approach, given that the academic fields focused on individual change (behavioural sciences) and societal change (social sciences more broadly) tend to run parallel, but are not as frequently blended together. A combination of these fields, and a recognition of the multiple forces at play within a system, can create positive change at multiple scales.

CONSIDERATIONS WHEN SEEKING CHANGE

After discussing the differences between different types of changes, participants outlined key considerations for creating changes that are often overlooked or undervalued in projects. A key consideration was that of time, and the mismatches that can occur between the short length of projects and the long-lasting changes they aim to generate. The short length of funding cycles can also prevent projects from planning for and achieving long-term changes. Furthermore, trust and relationships are paramount to creating behavioural changes, but these require time to both build and maintain. Without longevity in terms of having legitimate relationships with beneficiaries and project partners, behavioural changes are unlikely to occur. While robust theories of change can help connect particular interventions to expected behavioural changes in a thoughtful manner, time is also required to assess progress and monitor changes to establish the efficacy of interventions.

> ***“It takes time to establish a deep understanding of the context in which a project will take place, and therefore determine the type and scale of intervention that is feasible.”***
>
> – Participant quote

Indeed, understanding the context of a project was also flagged as a key consideration when attempting to generate behavioural change. Though countries and implementing agencies may wish to rush to intervention, they must look for and then consider the complex, contextual forces at play that may help or hinder a particular behavioural change. This consideration can save time and resources to prevent funding a project without the key enabling conditions that would lead to a successful intervention. For instance, some systems-level considerations might include understanding countervailing forces to a particular change, such as system inertia, and

considering how such forces might be overcome to generate change. An understanding of the cultural context is also crucial, since some generalised principles of social psychology might not translate across cultural contexts. Historical views of a cultural context, whether from historians, archaeologists, or other historically focused experts, could provide useful windows on past processes of change.

Contextual forces are visible, when we choose to look for them.

It is also important to consider the key agents in a system, understanding their relationships and the exchange of power between them. For instance, change agents can influence an entire system due to their status. With a deeper understanding of these agents, it could be easier to encourage them to break path dependencies and generate desired change.

We can also focus on the desired behaviour changes themselves- for instance, are they simple or complex, and how might that affect the approach we take?

There is a difference between observing behaviours and seeking to understand the forces driving motivation for behavioural changes. Observing and accounting for behaviours is important to ensure, for example, a baseline from which to measure change. The forces that may be driving motivation or desires for change, whether they be institutional or individual or both, can be much more fluid, context-specific, and subject to sudden change (the latter often in response to an external, unexpected event). These nuances must be acknowledged and accounted for when planning projects.

MAKING CHANGE HAPPEN

Participants agreed that projects looking to address behavioural change needed to have a theory of change. A theory of change needs to be alert and responsive to the dynamism present in social systems, and clear that behaviours continually influence social systems. A theory of change would differ for individual versus institutional-level changes, and would need to not only be tailored for the situation, but also be translated from an abstract concept into operational, useful guidelines that could be used by practitioners. A number of specific tools were suggested that could help think through the nature and type of interventions, such as a behavioural wheel that could map out the changes needed, by who, and by when. This framework could address issues previously mentioned, such as the timing of individual-level versus system-level interventions, and outline how to enable key agents of change to bring change to fruitful impact.

> ***"Systems change and behavioural change framework could be constructed, one that incorporates different levels of scale, governance, social structures, power structures, and more, to map intended behavioural changes, practice changes, and agency changes."***
>
> – Participant quote

A discussion arose about the durability of changes, and the need to recognise that systems are dynamic. This would require taking an adaptive approach and theory of change to deal with this dynamism. To ensure that changes are durable and last beyond an intervention, there should be system-wide shifts in incentives, structures, and norms. Yet it can be difficult to disentangle short-term from long-term system shifts when the cultural context is dynamic. For instance, during the COVID-19 pandemic, online meeting platforms like Zoom have proliferated. This might indicate a system-wide move towards more online meetings over in-person ones, but the shift cannot be said to be durable until the pressure of lockdowns and travel restrictions are lifted. Thus,

in a policy-driven versus individual-action-driven conversation about lasting change, while policies are often seen as secure, durable changes, we know that policies can be undone. Therefore, reliance on policy drivers might not yield results as durable as those coming from efforts to shift social and cultural norms.

> ***"There should be system-wide shifts in incentives, structures, and norms."***
>
> – Participant quote

In addition to durability, participants spoke to the need for iterative change in developing theories of change or frameworks. Although system-wide shifts are desired as the end goal, transformation often takes place as a series of small interventions that trigger a system-wide shift. Indeed, it is often a combination of transformation and incremental changes that shift systems and norms. Furthermore, to allow for dynamic changes, frameworks for change should be recursive, constantly feeding back new information into the framework in a feedback loop to improve and strengthen it.

Finally, participants discussed how projects funded by the GEF could change their modus operandi to integrate some of the above-discussed concepts. One suggestion was to integrate the concept of emergence into project design – that is, to consider changes, contexts, findings, and other ideas that might emerge during the course of a project and would therefore not be accounted for in the original project design. Since many projects deal with some form of emergence in their course, there should be a plan for projects to capture emergent changes, ideally tied to a clear theory of change, and have a strategy for being responsive to these emergent changes.

Another suggestion was to pay more attention to systemic or structural barriers relating to power relations in project design. For instance, longstanding issues like patriarchy or institutional racism might exist in the context of a project's location, and will act as barriers during the timeframe of a project. These deep-rooted issues are likely beyond the scope of change in a short-lived project. However, there are ways to acknowledge and account for these issues through a project's work, such as by conducting midterm reviews that reconsider assumptions about existing power structures, creating opportunities for project revision and redesign that addresses those structures. In addition, encouraging thinking about transformational change in terms of increasing the 'seats at the table' of historically marginalised communities, and otherwise facilitating space in which incremental changes can take place and potentially catalyse transformational change, is important. In this way, behavioural changes can be addressed not only through projects themselves, but also through the systems that govern the GEF itself.

We must increase the seats at the table for those from historically marginalised communities to properly enable transformational change.

Finally, there is space to incorporate social and behavioural science approaches into the GEF and its way of operating. Behavioural perspectives might be used to change incentive structures on project designs and project outcomes if they are designed to take advantage of existing spaces for innovation within the GEF structure. An example was given that a report by the Independent Evaluation Office of the GEF cited 80% of completed projects as having satisfactory short to medium term outcomes.[3] Discussion ensued on how more risks ought to be taken in projects, and ambitions set higher. This concept shows how behavioural changes can be incorporated into organisational systems to promote new, more ambitious types of change.

We must reconsider assumptions about existing power structures, create opportunities for project redesign and revision that addresses those structures as projects evolve.

3. Refer to "Global Environment Facility Independent Evaluation Office, GEF Project Performance and Progress to Impact, Evaluation Report No. 121 (Washington, D.C., 2018)".

PROMPT 2: UNPACKING COMPLEXITY – HOW CAN THE BEHAVIOURAL AND SOCIAL SCIENCES TOGETHER BETTER INFORM THE DESIGN AND IMPLEMENTATION OF ENVIRONMENTAL PROJECTS?

THIS QUESTION MOVED MORE EXPLICITLY TOWARDS CHANGES THAT COULD BE MADE IN THE DESIGN AND IMPLEMENTATION OF PROJECTS SEEKING BEHAVIOURAL CHANGE IN ENVIRONMENTAL PROJECTS.

KEY CONSIDERATIONS

The conversation began with a discussion of the key elements to consider when designing and implementing environmental projects. This largely echoed the ideas laid out in the first discussion, touching on four main themes: time, scale, context,

and theory of change. The relatively short duration of funding and project cycles was seen as a common limitation to achieving long-term change, and some participants expressed a desire to see longer-term investment frameworks incorporated into GEF projects to increase the chances of behavioural changes occurring during a project and continuing beyond the lifespan of a project. Similarly, scaling up projects was seen as a difficulty, emphasising the importance of matching the scale of a proposed solution to that of the proposed problem. Participants highlighted the key role of context in dictating the performance of a project and its sustainability, and cautioned that many social factors can remain hidden during the design phase of a project. Thus, this point demonstrates that predicting and anticipating tradeoffs and unintended consequences is crucial, while also highlighting the need to allow projects to adapt as these factors emerge. In addition, having a clear theory of change, as well as an understanding of the enabling conditions that allow for transformational change, is critical when designing an environmental project. Finally, allowing enough time for open and transparent relationships to develop, and trust to build, is essential for long-term success.

> ***"Predicting and anticipating tradeoffs and unintended consequences is crucial. Projects need to adapt as these factors emerge. Having a clear theory of change, and an understanding of the enabling conditions that allow for transformational change, is critical."***
>
> – Participant quote

ENGAGING WITH COMPLEXITY

To unpack and engage with complexity, participants spoke of the different approaches and definitions of complexity, including having too many factors to separate, not understanding interdependencies, or simply regarding a problem as intractable or 'wicked'. This highlights the importance of examining complexity from different perspectives beyond only scientific ones, and trying to understand the key dynamics and drivers to achieve a desired objective.

Complexity within a project can arise when multiple project partners are involved and increases with the number of participants and institutions. While this complexity must be explored individually and jointly, sometimes an increasing number of partners can actually help to defuse conflicting rationalities and make progress through what would otherwise be barrier tensions. Indeed, collaborating with or building upon existing projects or teams can create synergies and cumulative positive values and impacts. However, oftentimes individual project partners will have an incomplete understanding of the full range of complexities facing a project. These viewpoints should be aggregated up to develop a full systems perspective of the existing complexities and determine how to act on the objectives. This process could be incorporated into GEF thinking for project design; if grantees are not able to appreciate the full complexity of a project, the GEF can encourage or require them to partner with others who can assist in grasping and addressing complexities adequately. This might also include addressing risks and complexities that the GEF itself cannot grasp.

Complexities will exist within any project, but it is important not to be overwhelmed or discouraged by the complexity. Participants suggested that one method for coping with complexity would be to create a typology of project types across the GEF and develop a nomenclature regarding complexity. Others pointed to the importance of focusing on the project's big-picture desired outcome, rather than getting sidetracked into fulfilling individual Key Performance Indicators (KPIs) at the expense of the primary goal. Finally, while a project design must account for complexities, there is a balance to be found between having every necessary element to generating success versus overcomplicating elements that can remain fairly simple in practice.

DESIGNING AND IMPLEMENTING ENVIRONMENTAL PROJECTS

A major emphasis was placed on the need to take sufficient time and resources at the inception of a project to set it up for success. For instance, while it

might seem intuitive and simple to clearly define a problem, rushing through this step can miss crucial context and interdependencies, or even focus on a symptom rather than the underlying problem itself. The lens through which we view a problem can limit the mechanisms and solutions we find to solve it. Similarly, the assumptions we make about stakeholders, relationships, systems, and the questions we are asking should not be taken a priori, but reassessed and reframed before proceeding with a project. Thus, shifting investments into early phases of projects and seeking diverse perspectives can ensure that contexts and drivers are fully understood, that we have clearly identified the true problem, and that the solutions we find are robust.

In working with stakeholders, the behavioural and social sciences can provide tools for understanding diverse motivations and barriers to change. For instance, existing power dynamics and structures can affect how stakeholders relate to one another. Additionally, stakeholders with the same desired outcomes can have drastically different motivations for wanting those outcomes. This highlights the need to understand not only desired outcomes, but also the motivations sitting behind those desires, to get to the root of how to generate the positive social and economic benefits that communities and stakeholders need. Investing in facilitation and dialogue with stakeholders can ensure that stakeholder motivations are understood, creating buy-in and building trust. Stakeholders should also be properly integrated into projects to help map systems, define project terms, and truly inform the process, confirming previous STAP reports and advice.[4]

> ***"A wider variety of social science scholars should be incorporated into environmental projects, particularly those from the countries in which projects are operating."***
>
> – Participant quote

The social and behavioural sciences should also be considered when designing and working within research teams themselves. Inter- and transdisciplinary (ITD) research teams, which involve researchers working across academic disciplines and with non-academic sources of knowledge, can produce outputs greater than the sum of their parts. Yet fostering productive ITD teams is challenging, and many projects that aspire to true ITD work struggle to know at the outset which partners to involve and when. Participants noted that, too often, researchers want to involve social scientists in projects, but bring them in too late (i.e. after problem identification and much of the project design have taken place) and often have a limited understanding of the potential of the social and behavioural sciences, ultimately inhibiting the ability of these sciences to have a positive impact on the project. Participants thought that, when brought into projects early enough, social scientists can bring their skills of facilitation and dialogue that will smooth the path forward for a productive team.

Some organisations, such as the National Science Foundation in the US, are promoting this type of arrangement through convergent research, and social scientists will likely have a growing role to play in environmental projects.[5] Social scientists can also help to map stakeholders to determine which partners should be involved in a project. Scholars from the country in which projects are operating can offer experiential and lived knowledge in addition to their training as social scientists, broadening the knowledge available to research teams. Participants suggested that more of these scholars should also be involved in internal GEF processes such as this workshop.

Scholars from a wide range of geographies, disciplines, knowledge perspectives, and cultures are needed.

The conversation largely focused on the design stage of environmental projects, but did touch on some key elements of how they perceived possible implementation pathways. For instance, it was

4. See footnote 1.
5. Consider, for example, the NSF's convergence accelerator: https://www.nsf.gov/od/oia/convergence-accelerator/

acknowledged that most projects aspire to long-term change, but project resources do not extend past project lifespans. Therefore, while official projects might end, it is important to engage with the people who will be implementing the work beyond the life of a project and start these conversations well in advance of a project's end. Similarly, when projects aim to generate behavioural change, there is often not a solid plan for guiding and tracking behavioural change throughout a project. There was also an overall sentiment that the idea of monitoring and evaluation more generally – rather than only tracking quantifiable metrics – should be a plan, a theory of change, for understanding if and how the project is influencing or modifying behaviour change to achieve the desired outcomes, as well as other social impacts such as wellbeing.

Projects must engage with people who will be implementing the work beyond the life of a project.

USING WHAT WE HAVE

The behavioural and social sciences hold a wealth of knowledge relevant to project design and implementation, and participants sought to harness this existing knowledge rather than to reinvent it. They specifically highlighted existing tools such as design frameworks, systems mapping, and psychosocial theories of change that could be modified to apply to new contexts and behavioural changes. For instance, the key elements of a good theory of change include having a strong theory of the problem and designing interventions that include explicit logic of how they would impact behaviours, as well as a theory of the project itself and why it is focused on a particular problem. Therefore, the challenge is not to conduct new research on theories of change themselves, but rather to determine how to get existing tools into the hands of project proponents to the GEF. However, participants cautioned that different tools are needed for projects with different scales of project complexity, and that we tend to use familiar tools over the most appropriate ones, recalling the adage that if your only tool is a hammer, every problem looks like a nail.

Participants also spoke to a desire to draw on and learn from best practice examples and success stories from other similar fields, rather than relying strictly on theory. Systemic transformations and collective actions have occurred in the past, and the GEF can learn from or work with other movements or projects that are addressing wider systemic and structural barriers. For instance, the health sector was highlighted as a potential source of inspiration, given its long history of integrating science and behavioural change. Similarly, looking to former cases of innovation and technology adoption can demonstrate instances where changes transcended social structures to become global phenomena.

Pilot projects within the environmental field could also generate positive outcomes and success stories. It was also noted that robust studies and best practices can be inaccessible to non-academics, so entities like the GEF should work, through for example entities such as STAP, to facilitate knowledge co-production and dissemination between academics, practitioners, and policymakers.

SCALES OF CHANGE

A final reflection was given at the start of day 2, allowing participants to give their final thoughts on the previous day's discussion. Participants returned to the idea of scales of change, and suggested that focusing purely on behavioural change could actually do a disservice to the systems changes needed. While the goal is for people to behave differently, it is often systems that prevent or enable behavioural changes. Therefore, to advance a conservation goal, rather than focusing on particular individual behaviours, the goal should be framed in ways that resonate with stakeholders as well as institutional decisionmakers who can make institutional-level changes that create the space for individual change. An example was given of the prevalence of smoking despite the decades of campaigns proclaiming its health risks, demonstrating that good knowledge alone is not sufficient to engender behavioural change. Rather, the inhibitors and reasons that people find not to change must be examined. With climate and environmental change, the evidence is nearly inescapable that events are becoming more extreme and frequent, so the dilemma becomes understanding inhibitors to change, particularly at the institutional level.

PROMPT 3: HOW CAN WE EXPAND BEHAVIOURAL AND SOCIAL SCIENCES CONTRIBUTION(S) IN DEVELOPMENT PROPOSALS?

THIS QUESTION TURNED MORE SPECIFICALLY TOWARDS PROJECT PROPOSALS WITHIN THE GEF TO SEE HOW PROCESSES AND STRUCTURES MIGHT BE MORE INCLUSIVE TO THE BEHAVIOURAL AND SOCIAL SCIENCES.

ADAPTABILITY AND FLEXIBILITY

A common theme that ran throughout the group's discussion was the need for adaptive and flexible approaches in project ideas and outcomes, reflected in project proposals. Such approaches should also be followed through within projects themselves. It was noted that many project funders, including the GEF, result in static proposals that preclude the flexibility and agility required to safeguard successful longevity of on-ground projects. The need for this flexibility is underpinned by the recognition, among participants, that contextual factors can change over time in unpredictable ways. Examples of these changes were provided, such as power relations between stakeholders, evolving stakeholder values, and changing environmental conditions. These shifting baselines may then have flow-on effects to project activities, including the desired behaviour changes themselves. Therefore, the entire process, from

project development to implementation, must ensure entry points for flexibility. For example, there might be space for revisiting targets and keeping them flexible as contexts shift, ensuring that project goals remain achievable and realistic within their context. Design elements such as theories of change can, if applied too rigidly, also fail to capture the dynamism of the social world, and should also be allowed to flex and adapt as needed.

CHANGES TO GEF PROCESSES

Project practitioners highlighted the inherent challenges which exist within the GEF's existing institutional frameworks, particularly within the project cycle, and their ability to maneuver within those to promote behavioral change effectively as a component within GEF investments. On the design side of projects, participants spoke to the impossibility of fully grasping all the issues, solutions, methods, and outcomes before a project has started; often, key elements reveal themselves through the process. Pilot or exploratory projects were seen as a way to address this difficulty, allowing project partners to define key elements before launching projects. Others suggested a pre-investment process that could give teams time and funding to clearly identify the problem at hand, rather than rushing to correct wrongly-held assumptions about theories of change. Within the GEF, the project preparation grant (PPG) was seen as an entry point for change in this respect. For instance, some participants suggested a mandate that social scientists must be involved in project proposals. Social scientists could then aid in other aspects of the PPG phase, including stakeholder mapping. It was noted that stakeholders are often listed at the project setup phase, without any context or understanding of how they are related or the power dynamics between them, opening an opportunity for social scientists to step in and clarify these key dynamics. An assessment of these power relationships could describe how they might affect the success of a project, as well as what is known and unknown at the early stages of a proposal.

How might the implementation and reporting phases be altered?

Participants felt that important theoretical elements could be made concrete by requiring reporting on them throughout a project. For instance, if reflective learning is seen as a crucial element of projects, then there should be a requirement for products that come from self-reflection and reflective learning. This might change the structure of reporting from the known format into one that supports the iterative nature of change. An additional suggestion built on this idea, proposing that the true end goals of projects are not plans and reports, but rather the processes behind those plans. To that end, more emphasis should be placed on making processes more effective over additional analysis or studies. For example, stakeholder workshops and training are often seen to be key to generating behavioural change, but they do not always incorporate the right science into their processes, leading to death by Powerpoint.

If workshops and training can be more effective in their processes, stakeholders can leave having built trust and connections, which will have ripple effects for the rest of a project's success. This might also mean prioritising learning outcomes over the implementation of specific activities when reporting on project successes. Finally, knowledge management systems were seen to be critical for ensuring that lessons are retained and passed forward, both within and between projects, to maintain and build capacity within institutions, governance structures, and donors.

Stakeholders are often listed at a project set-up phase, but without any context, or any clear understanding of how they are related or the power dynamics between them.

Though the above suggestions would all improve project design and implementation, some participants noted that projects must often cope with budgetary and resource constraints that preclude drawn-out exploration and problem definition stages. The example was given of a relatively new requirement for GEF projects to have a gender plan, given that the GEF has already received feedback that people are struggling within their budgets to make this happen. Furthermore, it can be difficult to build and maintain relationships with stakeholders without the promise of funding, which may mean that credibility is lost before a project even begins. The primary solution proposed was to shift from simply adding requirements to streamlining existing processes in the project cycle, or, when necessary, substituting new elements for less helpful ones in previous models. This could make projects more effective and efficient with their resources.

CAPACITY BUILDING

Participants spoke to a desire for overall capacity building to support the above ideas. For instance, many projects require a variety of expertise from social scientists, but project proponents might not understand the breadth and depth of types of knowledge that exist within the field. Therefore, programs need help to develop an understanding of the type of expertise they need. A social science database was suggested as one way to define the field for non-experts. Capacity building is also needed on the ground and in the field to ensure that the knowledge of social scientists is spread throughout a research team, and therefore that behavioural changes continue past the life of a project. Key to this idea is building capacity not only within research teams, but also within stakeholders and communities themselves, so that they have the tools to maintain social changes beyond the life of a project.

Local governments and institutions in particular would benefit from capacity building, ensuring that learnings stay on the ground and last long after a project's completion. There was also a discussion of the importance of building capacity for processes, rather than specific outcomes, as these would be more transferrable than particular outcomes, and lead to greater longevity on the ground.

> ***"We need a programmatic bank of experience to better support projects and provide guidance, one that evaluates the delivery of projects over time and post-project completion."***
>
> – Participant quote

PROMPT 4: WHAT IS THE BROADER AGENDA FOR LINKING THE BEHAVIOURAL AND SOCIAL SCIENCES? HOW CAN WE ENSURE THAT THE SOCIOCULTURAL CONTEXT IS CONSIDERED AND MEANINGFULLY INCORPORATED THROUGHOUT THE LIFESPAN OF THE PROJECT(S)?

THESE QUESTIONS MOVED TO A BROADER OVERVIEW OF THE DAY'S DISCUSSIONS, SEEKING TO INCORPORATE SOCIO-CULTURAL CONTEXT THROUGHOUT A PROJECT AND DETERMINE AN OVERARCHING AGENDA FOR LINKING BEHAVIOURAL AND SOCIAL SCIENCES INTO ENVIRONMENTAL PROJECTS.

SOCIOCULTURAL CONTEXT: A BROADER AGENDA

Participants began the discussion by linking together the two components of the prompt, describing a lineage of disciplines in the environmental and social sciences. This lineage began with environmental sciences, moved to social sciences (predominantly economics), and proceeded to bring in broader perspectives through sociocultural sciences and perspectives. Participants thought that this lineage demonstrated the key importance of incorporating sociocultural perspectives, and saw it as the next step in a broader agenda for environmental social sciences. For instance, sociocultural perspectives can be an important means of explicitly addressing the risks and assumptions within a project; unpacking these 'black boxes' can create important insights into structural and institutional barriers that may be hindering behavioural change. Meaningfully incorporating sociocultural perspectives means understanding stakeholders' ideas about behavioural change, rather than relying on imported models of change, and using these concepts in project design, is important.

Participants also discussed the tensions and limitations of the behavioural and social sciences. For instance, while there is often a desire to have fit-for-purpose tools for each project, it is often impossible to develop and apply fine-grained formal understandings to the incredibly complex, multilayered, and messy systems we encounter in the real world.

It is worthwhile to have humility about the capacity of science to be applied at that level of detail.

EFFICIENCY AND BALANCE

While earlier discussions revolved around the elements that needed to be incorporated into environmental projects, later discussions moved to find balance and efficiency. For instance, it is easy to assume that leading-edge social sciences will produce the best project outcomes, but this falls into the trap of misplaced precision. That is, a leading-edge technique may be overkill, and a less novel, baseline level of understanding might be sufficient to implement a project. Participants spoke of a golden middle between leading-edge social science and more common sense, simple understandings of incorporating people into conversations and projects. Echoing earlier conversations, participants also suggested that typologies of problems, interventions, and guidance could save time and effort across projects.

Collating typologies of common elements in, for instance, midterm evaluations or stakeholder engagement processes, could guide agencies and teams developing projects. This highlights another point made, that of the importance of processes and programmatic experience within the GEF, and learning from past projects to provide guidance.

There is also knowledge to be gained from non-GEF projects that have previously worked in the same areas as new proposals. These projects will have collated regional knowledge and social science skills that are relevant to the new GEF project, and should be identified early to better support new work.

TRANSFORMATIONAL CHANGE

Participants ended the day with a discussion of the broader agenda for social and behavioural sciences in environmental projects. They cautioned not to let behavioural change become a fixation, but to continue to view it as a lens to a bigger picture of changing institutional frameworks. They also returned to the paradox from day 1, discussing GEF's ability to perform top-down versus bottom-up interventions. For instance, if the GEF focuses on bottom-up participatory approaches and leaves state and market forces unaltered, then local communities are still

expected to swim against the tide of external forces, decreasing the likelihood of long-term success. This suggests that projects should aim for structural and institutional changes, even though these might be too large for the scope of a single project, to stem the tide of countervailing forces. Projects could make recommendations as to how structures present a hindrance to project outcomes and the changes that communities desire. Furthermore, in naming and describing the structures impinging upon positive outcomes, teams can see the ways that projects may become levers to address those structures, whether by catalysing larger changes or serving as models that can be scaled up. Together, these ideas support the larger aim of the GEF to create transformational change that spans across scales.

CONCLUSION

There is a range of exciting opportunities resulting from this process for the GEF partnership to consider. These range from how to get change happening on the ground, to reflecting on how the GEF as an institution can adapt and modify its processes to ensure robust and sustainable outcomes that are aligned to its purpose and which achieve long lasting change.

APPENDIX-WORKSHOP AGENDA

STAP VIRTUAL WORKSHOP

"HOW THE SCIENCE OF BEHAVIORAL CHANGE AND THE SOCIAL SCIENCES CAN HELP THE GEF TO DELIVER ITS OBJECTIVES"

THURSDAY AND FRIDAY, MARCH 25TH – 26TH, 2021
2-5 P.M. EDT

STAP recently issued an advisory document highlighting how attention to behavioral change could improve the design and outcomes of GEF projects. As extensive literatures in the social and behavioral sciences have demonstrated, human behaviors are at the heart of many significant environmental challenges. A lack of integration across these disciplines may create potential blind spots for project design and implementation. Integrating lessons from the social and behavioral sciences regarding environmental behaviors and behavioral change presents an opportunity to strengthen its guidance to the GEF, and thus improve project design and outcomes.

MODERATORS:

Dr Tayanah O'Donnell and Dr Jana Phan as leads [Future Earth, Australian Academy of Science]

RUNNING SHEET		
2:00-2:05 p.m.	Welcome and Introductions	Rosina Bierbaum (STAP Chair)
2:05-2:10 p.m.	Remarks from the GEF Secretariat	
2:10-2:15 p.m.	An overview of STAP's advice on behavioral change; a glimpse at the links between social and behavioral science of behavioral change; and, a look at a preliminary typology for behavioral change interventions.	Edward Carr (STAP member)
2:15-2:20 p.m.	Overview of workshop process (Tayanah, 5 mins)	Tayanah O'Donnell
BREAKOUT SESSION 1 - DAY 1		
2:20-3:10 p.m.	Prompt 1: Human cognition and social systems – a chicken and egg paradox, or is there something more?	Breakout rooms
3:10-3:35 p.m.	Return to Plenary – Report back & Discussion	
3:35-3:40 p.m.	Break	
BREAKOUT SESSION 2 – DAY 1		
3:40-4:30 p.m.	Prompt 2: Unpacking complexity – how can the behavioural and social sciences together better inform the design and implementation of environmental projects?	Breakout rooms
4:30-5:00 p.m.	Return to Plenary – Report back & Discussion	
BREAKOUT SESSION 1 – DAY 2		
2:00-2:50 p.m.	Prompt 3: How can we expand behavioural and social sciences contribution(s) in development proposals?	Breakout rooms
2:50-3:15 p.m.	Return to Plenary – Report back & Discussion	
3:15-3:20 p.m.	Break	
BREAKOUT SESSION 2 – DAY 2		
3:20-4:10 p.m.	Prompt 4: What is the broader agenda for linking the behavioural and social sciences? How can we ensure that the socio-cultural context is considered and meaningfully incorporated throughout the lifespan of the project?	Breakout rooms
4:10-4:35 p.m.	Return to Plenary – Report back & Discussion	
4:35-5:00 p.m.	Conclusion & Next Steps	Rosina Bierbaum (STAP Chair)

APPENDIX-BRIEFING NOTE

STAP VIRTUAL WORKSHOP

"HOW THE SCIENCE OF BEHAVIORAL CHANGE AND THE SOCIAL SCIENCES CAN HELP THE GEF TO DELIVER ITS OBJECTIVES"

THURSDAY AND FRIDAY, MARCH 25TH – 26TH, 2021
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BACKGROUND

Addressing environmental challenges usually requires some degree of behavioral change, either to address a human driver of a challenge or to better manage a challenge. However, many projects aimed at addressing environmental challenges leave the need for behavioral change implicit in project design and theories of change. Others reference needed changes in behavior but are less clear as to whose behavior must change, or how that change might come about. Finally, there is the important question of who decides which behaviors, and by association whose behaviors, must change and on what basis should such a decision be made.

In December 2020, the Scientific and Technical Advisory Panel (STAP) of the Global Environment Facility (GEF) developed guidance on "Why behavioral change matters to the GEF and what to do about it". This work drew attention to the role of behavioral change in the achievement of GEF project goals, highlighting the need to design, implement, monitor, and evaluate projects with behavioral change in mind. The document included a preliminary checklist to guide project design toward attention to behavioral change. Questions in the checklist focused on articulating the behavioral changes needed to achieve desired project outcomes; who needs to be involved to enable this change; what are the project's assumptions about behavioral change; what are the enablers and barriers to behavioral change; as well as guidance on combining different approaches and methods to motivate, or address barriers to, change.

Although these are important questions for the design and implementation of effective GEF projects, GEF's engagement with behavioral change would benefit from a holistic view that draws from social science and its connections with behavioral science. Human behavior is deeply rooted in both cognition and the sociocultural contexts within which it plays out. The design of effective interventions must therefore consider both what we know about how cognition shapes people's perceptions of the world around them, and how those perceptions and responses to them are shaped by the social context in which people find themselves. Thus, what many in the popular media refer to as "nudges" derived from studies of cognition only work if they nudge people in a direction deemed acceptable in their particular socio-ecological context.

HIGH LEVEL FRAMING

STAP drafted a typology that categorizes the place of behavioral change efforts in the outcomes of environmental projects. The typology (Figure 1) organizes projects by the degree to which they succeeded in achieving environmental goals, and the extent to which behavioral change aspects of the project contributed to the environmental outcomes. While derived from STAP's experience reviewing GEF projects[1], the typology has not been applied to GEF projects. Instead, its purpose is to frame how behavioral change thinking might be taking place in GEF projects and the implications of that thinking for project outcomes, thus eliciting discussion at the workshop.

Participants are encouraged to comment, and refer to the typology, to probe about aspects of good project design, or common failure, and to identify critical thinking questions, or assumptions, that projects should have answered on behavioral change.

1.STAP reviews GEF projects to ensure the scientific and technical soundness of the interventions. STAP reviews approximately 120-140 projects a year.

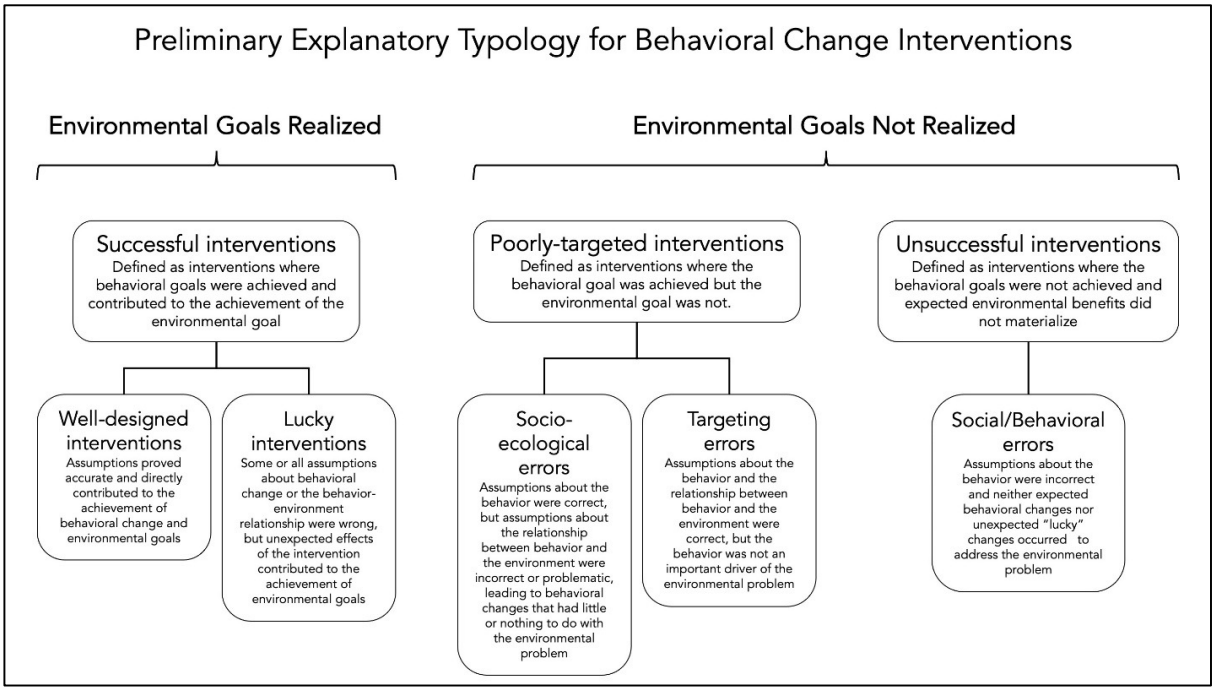

Figure 1: Preliminary Explanatory Typology for Behavioral Change Interventions

THEMATIC QUESTIONS

During the course of two days, the workshop will bring together and integrate the knowledge and experience of experts from the behavioral and social sciences, systems thinkers, and project practitioners with the goal of providing guidance on the behavioral aspects of project design. Participants will be grouped into facilitated breakout sessions to deepen discussions. The breakout groups will focus on a series of thematic questions that include:

- Human cognition and social systems – a chicken and egg paradox, or is there something more?
- Unpacking complexity – how can the behavioral and social sciences together better inform the design and implementation of environmental projects?
- How can we expand behavioral and social sciences in development proposals?
- What is the broader agenda for linking behavioral and social science? How can we ensure that the socio-cultural context is considered and meaningfully incorporated throughout the lifespan of the project?

The breakout groups will be structured around specific questions designed to facilitate conversation and collaboration. These will be shared at the workshop.

BENEFITS AND OUTPUT

Bringing together interdisciplinary experts and practitioners to discuss behavioral change is valuable to STAP and the GEF. Additional benefits of this process are:

- create a collective process for designing advice on behavioral change for GEF project practitioners, and for the wider environmental and development practitioner communities
- bridge knowledge and lessons on the social and behavioral sciences for better designed behavioral change interventions in environmental projects
- build a community that increases attention to the opportunities, challenges, and gaps in understanding, and applying, the links between behavioral and social science for environmental project design

The output from these discussions will lead to updated guidance for the GEF on behavioral change. This guidance will include a revised checklist for project managers, which encompasses the connections between social and behavioral sciences.

APPENDIX-PARTICIPANT LIST

STAP'S BEHAVIORAL CHANGE WORKSHOP

ON HOW BEHAVIORAL AND SOCIAL SCIENCES CAN HELP THE GEF DELIVER ITS OBJECTIVES

FINAL PARTICIPANT'S LIST

	Participant	Affiliation
1	Alessandro (Alex) Moscuzza	STAP Secretariat
2	Aloke Barnwal	GEF Secretariat
3	Andrew Bovarnick	United Nations Development Programme
4	Angela Armstrong	World Bank
5	Anil Sookdeo	GEF Secretariat
6	Anna Tengberg	Center for Sustainability Studies, Lund University
7	Annie Linden	University of Michigan
8	Anthony Bebbington	Natural Resources and Climate Change, Ford Foundation
9	Bruce Glavovic	Massey University
10	Caroline Schill	Stockholm University, Stockholm, Sweden
11	Chris Whaley	STAP Senior Advisor
12	Claude Gascon	GEF Secretariat
13	Cosmas Ochieng	World Resources Institute
14	David O'Byrne	Center for Sustainability Studies, Lund University
15	David Simon	Royal Holloway
16	Declan Conway	London School of Economics
17	Don Nelson	University of Georgia
18	Edward Carr	Clark University / STAP Member
19	Ella Clarke	Center for Global Sustainability, University of Maryland
20	Erik Thulin	Center for Behavior & the Environment, Rare
21	Fareeha Iqbal	GEF Secretariat
22	Farhana Sultana	Syracuse University
23	Filippo Berardi	GEF Secretariat
24	Geeta Batra	GEF Independent Evaluation Office
25	Graciela Metternicht	University of New South Wales / STAP Member
26	Guadalupe Duron	STAP Secretariat
27	Gustavo Fonseca	GEF Secretariat
28	Hannah Fairbank	GEF Secretariat
29	Harald Sterly	University of Vienna
30	Ibrahima Sow	GEF Secretariat
31	Jamison Ervin	United Nations Development Programme
32	Jana Phan	Future Earth, Australian Academy of Science
33	Jean-Marc Sinnassamy	GEF Secretariat

34	Jeni Cross	Colorado State University
35	Jessica Troni	United Nations Environment Programme
36	Juha Uitto	GEF Independent Evaluation Office
37	Karl Zimmerman	Penn State University
38	Katharine Vincent	Kulima Integrated Development Solutions
39	Kathleen O'Reilly	Texas A&M University
40	Keely Maxwell	US Environmental Protection Agency
41	Kevin Green	Center for Behavior & the Environment, Rare
42	Leah Karrer	GEF Secretariat
43	Leonardo Fleck	Gordon and Betty Moore Foundation
44	Linda Steg	University of Groningen
45	Lisa Schipper	Oxford University Center for the Environment
46	Maddie Judge	University of Groningen
47	Mark Stafford Smith	STAP Senior Advisor
48	Marty Anderies	Arizona State University
49	Matthew Reddy	GEF Secretariat
50	Melissa R. Marselle	De Montfort University
51	Miguel Morales	Conservation International
52	Mohamed Bakarr	GEF Secretariat
53	Ole Vestergaard	United Nations Environment Programme
54	Paul Hartman	GEF Secretariat
55	Peter JS Jones	University College London
56	Ralph Sims	Massey University
57	Reuben Sessa	Food and Agriculture Organization of the United Nations
58	Richard Margoluis	Gordon and Betty Moore Foundation
59	Rosina Bierbaum	University of Michigan /University of Maryland / STAP Chair
60	Sabine Miltner	Gordon and Betty Moore Foundation
61	Sarah Wyatt	GEF Secretariat
62	Seema Arora-Josson	Swedish University of Agricultural Sciences
63	Sue Lieberman	Wildlife Conservation Society
64	Tareq Emtairah	United Nations Industrial Development Organization
65	Tayanah O'Donnell	Future Earth, Australian Academy of Science
66	Tom Hammond	STAP Secretariat
67	Virginia Gorsevski	STAP Secretariat
68	William Young	School of Earth and the Environment, University of Leeds


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