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Reflection and Learning from Failure in Conservation Organizations

A report for The Failure Factors Initiative

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Executive Summary

Evidence of success is the holy grail sought by teachers, health care providers, engineers, relief organizations, conservation NGOs, policy makers, and funders. All have the same wish—just let me know what works and I will replicate that.

Evidence for conservation decision making comes in many forms, from reams of information, collected using well-defined and rigorous protocols, that are analyzed using quantitative methods to semi-informed individual assessments of intervention efficacy. The former, though essential, is both expensive and time consuming to generate; the latter often provides minimal insights to benefit future work. More importantly, in all cases, if the results do not support the hypothesis (i.e., the project was not a success) they rarely get published.

A recent post on Mongabay noted that "the problem with focusing so much on unearthing positive or affirmative evidence is that we humans often learn more from our failures than from our successes."

When we follow a recipe and the result is a delicious dinner, we never stop to think, "Wow, why did that work so well?" But when we cook something that is almost inedible, we dissect our cooking process to detect why we failed to achieve what the recipe promised.

If humans learn more from things that do not work as expected, and if gathering rigorously collected and analyzed data is costly and may not generate actionable information at a time-frame useful for conservation decision making and adaptive management, what alternative evidence generation options are available that are quick, cheap, and credible?

This working paper reports the results of interviews with 15 conservation NGOs and their supporters to assess the current and potential use of a team evidence sharing mechanism named "Pause and Reflect" (a.k.a. "After Action Reviews"). This learning approach is systematically deployed by the military, ambulance and emergency room staff, and aviation engineers, but is only recently being tested within the conservation community. Pause and Reflect sessions allow teams to facilitate the timely surfacing of information about which workday tasks and activities are and are not working and what might be changed to more effectively implement actions to achieve desired outcomes.

Results of this preliminary study suggest that reflection can both diagnose and remedy the causes of an evident failure and surface issues that, if addressed, could prevent failure. The process of team reflection is enormously valuable to team members and leads to useful learning and rapid cycle adaptive management. The study suggests that few people have the time or inclination to read numerous "lessons learned reports," but the process of team reflection is critical for staff who participate in it. In other words, organizational learning is most likely to happen as the sum of individual learning and reflection, rather than a few experts making recommendations for others to learn. When serious failures do arise, teams that regularly practice reflection in low-stakes situations often report being better equipped to handle reflection in high-stakes scenarios.

The study identifies four barriers to learning from failure within conservation organizations.

These include:
• Reticence of staff to talk publicly about failure for fear of losing status and funding;
• Funding agreements that assume projects progress as planned and thus inadvertently are an impediment to reporting failure because substantial changes to an existing program or project may be bureaucratically difficult;
• Decentralization that results in desired deployment of locally appropriate solutions to conservation challenges but results in a plethora of silos and little organization wide learning; and
• Few options existing for large organizations to capture and share lessons that do not incur high transaction costs.

The study highlights that Pause and Reflect sessions are most effective when they are structured around a core set of questions such as:
• What was expected to happen?
• What actually occurred?
• What went well and why?
• What can be improved and how?

Results of the study also offer a set of actions that organizations can take to provide a safe space for their staff and teams to learn from what is not working as well as expected. These include:
• Establish norms around the timing and expectations of Pause and Reflect sessions;
• Respect different perspectives;
• Recognize and reduce bias; and
• Establish guidelines for psychological safety.

Lastly, and mostly importantly, teams need to build the mutual trust to talk openly and honestly about what is working well and what may need to change. This trust is best built before a crisis happens. Holding regular Pause and Reflect sessions when teams are working well and projects are progressing smoothly builds trust and social cohesion within a team. This is essential to conducting an honest, open, and useful Pause and Reflect Session when the s—t has hit the fan.

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SECTION I

Evidence to Inform Conservation Decisions

There are growing calls for evidence-based decision making.[1] That is a very good thing. But this has often been interpreted to mean evidence of success. This focus on generating and sharing positive or affirmative evidence is not surprising as recipients of grants believe, incorrectly, that grant makers that grant makers only want to hear success stories. Moreover, research studies that produce negative results rarely get published and made public.[2]

People working to conserve nature and improve people's lives may not report failures because they may worry about compromising their own and their organization's reputations and jeopardizing future support. Neither organizations nor individual professionals who have worked hard to be regarded as experts are anxious to be associated with failure. But humans typically learn more from failures than from successes.[3]

We aimed to gain a preliminary understanding of how conservation NGOs and their supporters value learning from failure, their perceived barriers to learning from failure, and whether and how they have put in place mechanisms within their organizations to better learn from failure. To do this, we conducted semi-structured interviews (Appendix A) with 15 conservation practitioners and funding managers from 13 different organizations. The interview was also designed to specifically ask about the use of team reflection (After Action Reviews, Pause and Reflect Sessions) as a way to learn from failure.

For the purposes of this report, "funding organizations" are either taxpayer-funded bilateral or multilateral agencies such as the United States Agency for International Development (USAID) and the World Bank, or private family philanthropic organizations like the Gordon and Betty Moore Foundation, the Walton Family Foundation, and the Ford Foundation. "Implementing partner organizations" here refers to NGOs ranging from a single employee operating in a landscape to international NGOs like the Wildlife Conservation Society (WCS), World Wildlife Fund (WWF), or Birdlife International that employ thousands of practitioners across every time zone.

"We need to have a solid understanding of where we are currently to imagine how we can get to where we want to be"

-Project Interviewee

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[2]Westoby R, Rahman MF, McNamara KE, Huq S, Clissold R, Khan MR (2020). Sharing adaptation failure to improve adaptation outcomes. *One Earth* 3:388-391
[3]Catalano AS, Redford K, Margoluis R, Knight AT (2017). Black swans, cognition, and the power of learning from failure. *Conservation Biology* 32:584-596 https://doi.org/10.1111/cobi.13045.

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EXAMPLE 1: CURBING ILLEGAL TRADE IN WILD MEAT IN CONGO

To help reduce the illegal transportation of bushmeat from Conkouati-Douli National Park and surrounding logging concessions in the southwest of the Republic of Congo, WCS and the government's protected area staff decided to erect a barrier along the main road to the large coastal city of Pointe-Noire. For the first few days, almost all vehicles stopped at the barrier were carrying bushmeat, which the staff then confiscated.

Over the next few weeks, the staff at the barrier observed that most vehicles stopped at the barrier were now no longer transporting bushmeat. The team was elated. Their plan had worked. The barrier and confiscation of contraband appeared to be a strong disincentive for drivers to buy and transport bushmeat to the city.

But after reporting this success to the park manager, the barrier team began to ask themselves, was there any other explanation for what they were seeing?

Their concerns turned out to be true. By talking to local bushmeat hunters they found out that, because of the barrier, truck drivers now hired porters, and dropped them off, and the bushmeat, out of sight of the staff at the barrier. The porters carried the bushmeat through the forest, around the barrier, then reloaded it onto the truck after it had passed "safely" through inspection at the barrier.

Without reflecting on the apparent success of the barrier, the team may never have realized their error. As a result, the team started also using pop-up barriers randomly located on different days and locations along the road.

SECTION II

Barriers to learning from failure

Reticence to talk about failure for fear of losing funding

Results from the interviews overwhelmingly suggests that the greatest barrier to learning from failure is that the conservation NGOs believe their supporters might cease to provide funding if they reported that any, let alone some, of their conservation activities were not working as expected or were failing completely. Whether failure was simply that an activity resulted in an unexpected and undesired outcome; or was a result of poor planning, flawed implementation, inadequate operational resources, insufficient human capacity and expertise, fraught relationships with local communities, government agencies, and/or private sector companies, or unexpected external events like natural disasters, disease outbreaks, or civil unrest, interviewees all felt strongly that reporting these "failures" would diminish their reputations for running effective conservation programs and thus jeopardize future funding.

All conservation NGOs have congruent missions, yet they are, effectively, competing with one another for a limited pool of funds. They fear that admitting failure when others do not would place them at a disadvantage, which is a risk none are willing to take. This aversion to talking about and reporting failure persists at every level within an organization, and interviewees reported that higher-level management, in particular, are often unlikely to acknowledge, reflect on, and embrace failures in part because of the perceived stigma associated with divulging anything but success.

Competition for funds encourages implementing partners to submit grant proposals with progressively ambitious goals. This lofty outcomes "arms race" almost assures that some or many of them will not be achieved. Failure is likely to be commonplace, particularly given that desired conservation outcomes typically require a complex set of activities that are simultaneously implemented, mutually supporting, interdependent, and undertaken by more than one actor.

Some level of failure is almost inevitable within the conservation sector. But given that implementing partners are motivated only to report success, this means valuable lessons about why conservation activities did not work as expected or did not produce the desired outcomes are being lost. As a consequence, these "failures" are likely to be repeated unnecessarily. In response to this perceived or actual competition for funding where communicating success is paramount, implementing partners may obscure failures and spin stories to communicate exclusively rosy pictures of their projects. This lack of reporting by projects that do not go according to plan does not mean failures are categorically ignored. Field teams often adapt their practices when things do not go as expected or when actions generate unexpected and undesired outcomes. However, a culture of only talking about success means that organizations are unlikely to capture lessons from failure or share that learning for the benefit of others in their organization or the greater field. One interviewee specifically reported that field teams for instance may actually learn from failure frequently, but they remain reticent to share knowledge and learnings outside of their teams because of the stigma associated with not being seen as always successful.

Interviews suggest that some teams routinely reflect on successes and failures while others have a culture of avoiding difficult conversations around unexpected outcomes. Moving up the chain of command, discussing and communicating failure seems to be less common among managers and executives. Programmatic leaders, country directors, and organization executives are trapped in a convention where communicating failures is conflated with—in the words of some of our interviewees at both funding and implementing organizations—"airing dirty laundry" and "revealing weakness and faulty leadership," thus reflecting poorly on that indiviual's career competence. Instead of valuing and learning from failures at the same degree as successes, leaders within organizations obscure instances of failure and spin projects that didn't go according to plan in a positive light to continue attracting the attention of funders and praise from within and outside their organizations.

Interestingly, the grant makers who were interviewed said that they encouraged the conservation NGOs that were their implementing partners to report when things might not be going as expected and repeatedly tried to assuage fears by saying explicitly that talking about failure would not risk the loss of future funding. But they admitted that no matter how often they encouraged an honest reporting of things that did not work, they understood why the conservation NGOs they support were largely unwilling to do so.

Decentralization as an impediment to organizational learning

To effect conservation, beyond reforming policies, requires investment and action on the ground. Conservation organizations with field programs follow a decentralized approach to decision making based on the principle of subsidiarity, arguing that matters ought to be handled by the least centralized competent authority. They understand that staff embedded in the field develop, over time, a profound understand on the ecology, socio-historical context, and political economy of the area. This context-specific knowledge helps them and their teams and local partners to conjure highly credible theories of change and design locally appropriate actions to avoid and mitigate threats to biodiversity and human wellbeing. Though senior leadership may weigh in on decisions of where a conservation organization invests effort and offer broad guidelines for how to effect conservation (e.g., support the establishment and good governance of conserved areas, respect the rights of Indigenous Peoples and local communities, promote the establishment of for-profit enterprises based on the sustainable use of natural resources), they understand that the details of how to work and with whom to work with are best left in the hands of locally-based field project managers and their teams.

Decentralized teams may be highly effective at using regular Pause and Reflect sessions to learn what is working and what is not, deduce why, and devise ways to improve the implementation of their conservation efforts. But even if detailed notes are taken during these sessions, unless the organization has in place a process akin to a net assessment in the US Military,[4] it is highly unlikely that these decentralized lessons about success and failure will be synthesized and disseminated in an easy-to-absorb format by other staff across the organization.

Lastly, After Action Reviews after a military patrol, after a busy day working as an EMT in an ambulance, or after an aircraft accident, have been shown to tease out lessons that when shared are both relevant and thus useful to other military patrols, ambulance staff, or to prevent future accidents facing the same situations. The question remains untested– will the learning from site-specific Pause and Reflect sessions for conservation projects be meaningful to conservation practitioners working in potentially very different contexts?

Funding agreements are inflexible to change, and an impediment to reporting failure

The second barrier to learning from failure was a sense amongst the conservation NGOs that funding agreements assumed that work would largely progress as planned with only minor deviations and budget reallocations. This reinforces the aversion to reporting failure as theories of change, multi-year workplans and budget allocations are perceived to be relatively set in stone and not easily adapted if a major element of a project does not work as expected. If adaptive management is encouraged in principal, but contractual agreements limit the extent of change and adaptation that is possible over the life a project, then contractual changes to address major failures may seem like a non-starter, militating against reporting such failures. If funding agreements are constrained by bureaucratic requirements to comply with accounting standards focused more on doing what you said you would do (e.g., original budget line items can only vary by a small, fixed percentage), rather than what you learned you should be doing, then reporting only successes minimizes the transaction costs of re-imagining ongoing projects and re-negotiating contracts and budgets.

"We want to keep donors happy; they rate us. There's a pressure to create a rosy picture for the donor."

-Project Interviewee

[4]Net assessment, originally designed for the Department of Defense, involves integrating evaluation knowledge from all parts of a program (from field teams to top-level decision makers). Each unit can submit written assessments to a core team that makes the "net" assessment on how things are working, focusing on (1) how information flows (2) how decisions are being made (3) whether targets are being met and (4) how one part contributes to the whole. See Clark's *Averting Extinction* (1997) chapter 9.

Organizations lack effective systems for sharing knowledge gleaned from reflections

Many interviewees mentioned that there are few, if any, effective systems for sharing knowledge in their organizations—particularly those gleaned for team reflection. There are efforts under way, however, to make improvements in these systems and facilitate a culture shift that prioritizes learning from reflection across organizations. When asked for examples, interviewees discussed the Conservation Measures Partnership (CMP), Highly Effective Teams (HET) within The Nature Conservancy (TNC), Fail Forward's consulting work, the Living Landscapes Program at WCS, and USAID's Collaborating, Learning and Adapting (CLA) framework.

The Highly Effective Teams (HET) system was launched more than a decade ago and has since been integrated into TNC's operating structure. They have been developing tools, coaching teams, and tracking reflection practices among TNC's project teams ever since and are just now starting to notice achievement of a widespread culture shift at TNC towards systematic reflective inquiry.[5] It has taken time and effort to get to this point, but because of conservation's decentralized model, systems for effectively sharing learnings widely are still lacking. Reporting and sharing knowledge from initiatives that don't go according to plan is critical to extracting value from projects that do fail, but it is not the only reason to implement reflection practices. Interestingly, the HET system at TNC focuses primarily on intra-team learning rather than the broader and much more complicated organization-level learning. It is clear that, if the learnings from failure only reach the teams involved, there is limited value for the rest of the organization. There are initiatives across the conservation world to determine the best way to share learnings so organizations can share internally and between one another, but these are currently underdeveloped.

Individuals commonly report having insufficient time and capacity to reflect regularly.

Both implementing partners and funding organizations report being chronically overworked and understaffed, arguing that they have no time to reflect with their teams on what is working, what is not, and why project actions should continue or change. There is evidence that investment in reflective practice[6] confers benefits to team members and improves team performance, and interviewees affirmed that effective reflection helps to improve teamwork, outcomes, and long-term success. Despite this, many interviewees noted that time dedicated to reflection was the first to be cut in a crunch.

Interviewees highlighted that scheduling team reflection sessions was less of a priority than investing time to carry out projects and deliver results. This was ironic given that the time to conduct Pause and Reflect sessions is relatively trivial and that those interviewed were in complete agreement that making the small investment of time to reflect regularly would improve overall outcomes in the long run.[7] Several interviewees wondered if they would be more motivated to schedule and implement reflection sessions with their teams if this process was a formal component of funding agreements and that the results of these sessions were part of periodic reporting requirements of funders.

[5] See Highly Effective Teams, https://highlyeffectiveteams.com/.
[6] The authors of "Making Experience Count: The Role of Individual Reflection In Learning" explore the value of reflection, noting "we don't learn from experience. . .we learn from reflecting on that experience." See https://hbswk.hbs.edu/item/reflecting-on-work-improves-job-performance for a summary of the research and see https://dx.doi.org/10.2139/ssrn.2414478 for the full report.
[7] Authors of "How Team-Based Reflection Affects Quality Improvement Implementation: A Qualitative Study" studied team dynamics in the healthcare field and suggest that regular team reflections improve outcomes in quality improvement interventions. See https://dx.doi.org/10.1097%2FQMH.0b013e31824d4984. Also visit the blog "Why Does Team Reflection Matter?" at https://blog.saberr.com/why-does-team-reflection-matter-a1f5a04a280f.

EXAMPLE 2: FPIC IN DR CONGO

As part of our efforts to conserve wildlife in eastern DRC, we have been working with local communities to help them to establish their own community forest concessions enabled by a new law enacted by parliament. Part of that effort is putting in place a Free Prior and Informed Consent (FPIC) process to ensure that communities understand what they are agreeing to and what rights they have. Our field teams worked hard to build trusting relationships with several local communities and to come to mutual understanding of what the community and WCS hoped to achieve together. That process also included raising community awareness of their rights to consent to or object to (i.e., withhold consent to) any activity proposed by WCS.

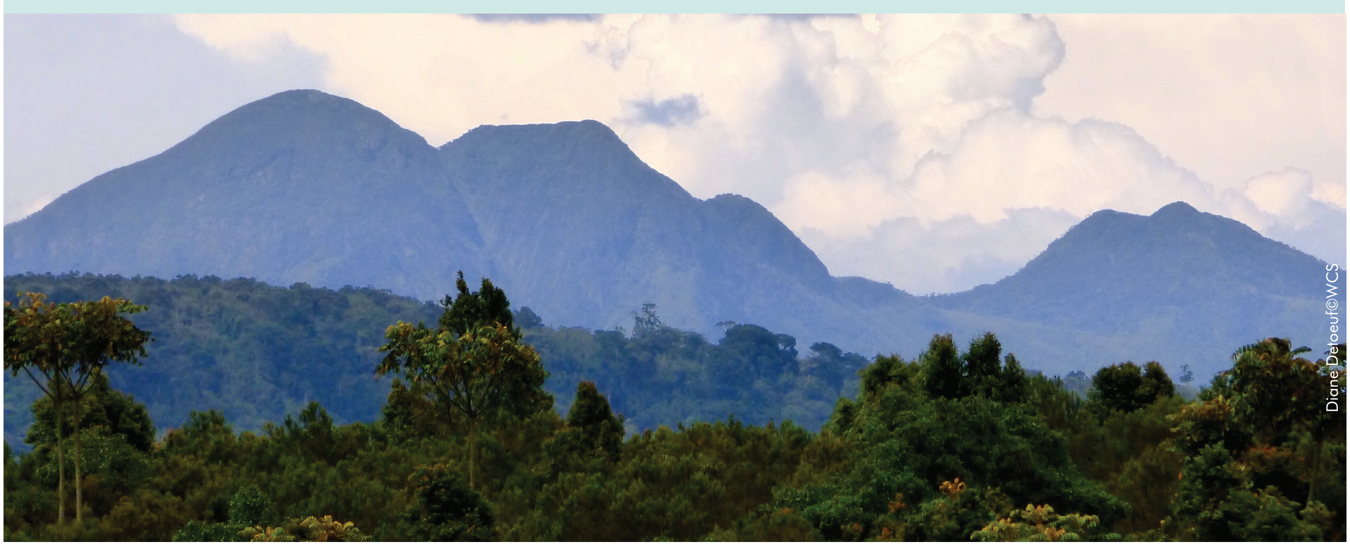
Recently, WCS received a letter from the community that stated that they were formally withholding consent to work with us.

The WCS team was devastated by the news. A meeting was quickly convened to discuss the issues (basically a Pause and Reflect session or an After Action Review).

The team discussion initially focused on what they had done wrong to cause the community to send a letter saying, effectively, that they no longer consented to collaborate with WCS. As the discussion continued, the team realized that the letter indicated not an abject failure, but a success, manifested by a failure.

The community had told the team that they were concerned that they were increasingly unable to provide their children with good food—i.e., meals with meat. WCS replied that we could help with small livestock production. The community agreed (i.e., consented) that this was a good idea. A survey conducted with the community showed that everyone ate the fatty larvae (grubs) of palm weevils—in fact, people really liked them. So WCS asked a small NGO based in Kinshasa to come out to eastern DRC to train the community how to raise palm grubs rather than simply collect them from the wild. But the community was expecting help with small livestock production and did not see raising palm grubs as the same thing. So they wrote a letter, based on their accurate understanding of FPIC, withdrawing consent to work with WCS.

So the team realised they had failed to communicate appropriately with the community about the palm grub production training, but had, at the same time, succeeded in implementing an FPIC process where the community clearly understood their rights: two things that would not have been evident to the team without a formal Pause and Reflect session. To address the failure of communication, the team leader and the team returned to the community to listen to them and find a new way forward that all can agree to.



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SECTION III
Reflection Basics

At its most basic level, reflection is often considered to be a practice of active self-awareness in which teams or individuals consider their actions within the context of their personal standpoint.[8] One interviewee further simplified reflection as thinking about something until an insight about it surfaces from one's subconscious. Unlike evaluations and appraisals, which measure and assess what has already been done with a critical perspective, reflection is not tied to the conventional setting of looking back at the end of a project and determining how things went (although it certainly could serve that function as well). It also does not necessarily need to have a critical objective of explicitly searching for success or failure. Reflection is unique in that it can be done frequently over the course of a project just to figure out "what is going on" and, more importantly, "why." Further, effective reflection has a focus on team actions. The significance of this kind of activity is that it provides space for functional learning—surfacing lessons throughout a project to improve strategies over time. Almost all interviewees expressed that this was needed more in conservation work. There was also widespread interest in conducting more effective adaptive management, which routine, self-informed reflection can make happen.

While a post-mortem activity may uncover the fundamental causes of a catastrophic failure and generate "lessons learned" at the end of a project to avoid future repeats, there was general agreement among interviewees that these lessons do not tend to go anywhere after being identified in conservation projects, especially when these lessons are captured in either lengthy or even summary written reports. The disinclination to read post-mortem reports to extract lessons was a sentiment shared by conservation practitioners and their funding partners alike. This was coupled with a nearly unanimous sentiment that conservation is lagging too far behind other sectors like tech, medicine, and the military in capturing and acting on lessons from failure. It is important to keep in mind that the goals of conservation, as well as the time scales and geo-political systems in which this discipline operates, can be far more complex and extended than those of other sectors. So we are not arguing here for conservationists to replicate the review practices of other fields, but instead call on them to take a functional learning approach to reflection that best fits their specific situations.

"Conservation never ends. Because of that, you need to adapt. To adapt, you have to learn. To learn, you have to reflect."

- Interviewee

The process in conservation therefore must focus first on creating psychological safety within institutions for open discussion of failure, including the use of tools such as Pause and Reflect. Such tools, frequently used, can help build a reflective culture as a relatively low-entry-cost, easy-to-implement and quick process to identify lessons that can be applied to future work. Once applied regularly, these practices can build an organizational culture that is sympathetic to a process of reflection when things go well and importantly when things go wrong.

Effective reflection enables participants to discuss freely and honestly what they believe is working for their project and what is not working, and then take it to the next level by routinely identifying any sort of underlying conditions that may be causing these happenings. A likely essential follow-up after this activity is then writing actionable problem definitions that are informed by the reflection that has been conducted.

Another benefit of reflection is that it is not bound to the scientific (positivistic) parameters of measured evaluation. While some may be uncomfortable with this ("we are all science people," as multiple interviewees independently mentioned), providing space for participants to reflect on topics like team dynamics, cultures, decision-making processes, social and political factors, emotions, values, and ideas can greatly improve results. These topics usually cannot be measured by typical evaluations but often turn out to have positive impacts on the success of conservation projects in the long run.[9] Active, self-aware, and routine reflection casts a wide net to catch potential sources of failure that otherwise could be missed or ignored until it is too late. Section IV gives some specific guidelines on how to do this.

[8]There are many definitions of "reflection" and "reflective inquiry" in the context of the organizational and social sciences. For a detailed look into these concepts, see *Handbook of Reflection and Reflective Inquiry* by Nona Lyons https://doi-org.yale.idm.oclc.org/10.1007/978-0-387-85744-2.
[9]Catalano et al. (2019). Learning from published project failures in conservation. *Biological Conservation*, 283, https://doi.org/10.1016/j.biocon.2019.108223.

EXAMPLE 3: A POULTRY PRODUCER'S CARD GAME IN MADAGASCAR

Eating lemurs in northeastern Madagascar provides food-insecure families with an important source of nutrition for their children. It is also unsustainable and if current practices do not change, will kill off all lemurs and perversely deprive children of an important source of food.

WCS, working respectfully in partnership with local communities, came to the shared opinion that helping families to raise poultry would be a sensible and practical way to achieve the joint objectives of feeding kids and conserving nature.

To help families learn about poultry production, WCS developed a no-tech card game designed to build the skills and experience that families need to raise poultry. WCS teams tested the card game with several communities. Everyone who played the game loved it and said they learned a lot about backyard poultry production by playing. In fact, communities "...asked WCS if they could keep the cards so they could play the game when WCS is not there."

The game was a success, but the WCS team still wanted to get together to reflect. This is an example of a Pause and Reflect session driven by success rather than failure. The team wanted to understand why the game worked so well and whether it could be made even better

Through reflection the team was truly happy that the game was a "hit" with all communities but they thought that the rules and the cards did not accurately reflect what poultry producers actually faced. So they decided that a successful game still could be made better with a few tweaks.

Pause and Reflect is not only about fixing failure; it can be about making the successful even better.

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Two modalities for reflection

After talking with a number of interviewees about their experiences with failure, we began organizing stories of failure into two categories: reflection after an evident failure and reflection as a preventative measure. Thinking about reflection in terms of these two categories was especially influenced by conversations with interviewees who had formal training in public health. These two categories are based on the core principles of effective reflection: open communication, honesty, and commitment to learning from experiences. But the two reflection styles are suited for challenges at different scales, and require different time commitments, reflection structures, and reporting styles.

Reflections after an evident failure

Evident failure in this case refers to projects that decidedly did not go according to plan, and failed either catastrophically or gradually, often in painful, confusing, or poorly understood ways. Interviewees who shared stories of evident failures often described them as dark, taxing times when reflecting was the last thing they wanted to engage in. However, it is in these moments that reflecting on, and learning from, failure is most critical. Reflection processes after failure often utilize a facilitator or neutral actor to tease out learnings and convene group members that might otherwise resist the process. Interviewees with salient experience with evident failure frequently noted the importance of a facilitator or semi-neutral actor. They were often described as invaluable for bringing together groups that lacked a trusting, open, and communicative culture and would have otherwise struggled to effectively identify learnings and the roots of this failure. Capturing learnings from these failures and identifying effective methods to share learnings widely is critical to ensuring conservation work continues to learn and grow from the collective experience amassed by funders and implementers alike.

Many interviewees expressed interest in a learning structure rooted in conversations with colleagues from projects that failed, rather than reports detailing the context and components of failed projects which often go unread (or not remembered even if read). This was contrasted by individuals who hope to see more rigorous measurement and formal reporting of failures, perhaps in a database. No matter how the learnings are captured and disseminated, the act of reflecting after failure is the critical first step. When serious failures do arise, teams that regularly practice reflection during low-stakes instances (reflection as a preventative measure) often report being better equipped to handle reflection in high-stakes scenarios. For that reason, it is also important for conservation organizations to think about cultivating reflection practices outside of moments of crisis.

EXAMPLE 4: AN ORGANIZATION'S POLICY MAKING PROGRESS

The WCS Global program is purposefully decentralized to help ensure that our conservation efforts are manifestly relevant to the 14 regions within which we work around the globe.

Often our Regional Programs need to act quickly to respond to urgent issues. At times, the response that is needed is policy advice to national governments within the region. Typically, this advice relates solely to issues relevant to countries within a region.

A couple of years ago, sensible advice offered to governments in one region went viral and unintentionally conflicted with the conservation realities faced by other WCS regional programs. WCS leadership, which includes all Regional Program Directors, sees the enormous value of the decentralized authority of WCS Regional Programs to make conservation decisions. But they all felt that it was important to reflect on what had happened and see if all could agree on a process to minimize future risk that decisions in one region might undermine or jeopardize conservation efforts in other regions.

In the end, the idea of holding a formal Pause and Reflect session was shelved, mostly because senior leadership had never done this type of group-level self reflection before and some feared it risked devolving into a meaningless and damaging blame game. That said, a series of more informal reflections resulted in a shared understanding of how, across numerous time zones, WCS Regional Programs could continue to respond quickly to fast-moving events while soliciting timely input from other regions and other programs, and avoid undesired and unintended consequences of decentralized decision making.

This speaks to how Pause and Reflect in a group setting is a process that needs to be practiced and learned before the unexpected happens. It also shows that effective reflection can occur through a coordinated series of one-on-one discussions.

Reflection as a preventative measure

Reflecting frequently, often informally, in the absence of crisis or major failures can be a proactive and resilience-building activity for individuals, teams and organizations. It can take a number of forms—weekly check-ins with program managers to ensure projects are on track, individual employees starting their day by asking themselves how they can improve, and team members reporting out in a program meeting about what work is going well and what needs closer attention. This style of reflection allows for problems or potential stumbling blocks to surface regularly—often an important part of effective adaptive management. It empowers program leaders to anticipate and limit the number of so-called unforeseen (uncommunicated) challenges that might otherwise snowball into larger issues. Preventative reflection requires trust, support from leadership, and a commitment to a growth mindset[10] from the actors involved—all topics that will be explored in Section V.

Interviewees who research institutional structure or who work specifically on formalizing reflection practices reported that the time required to effectively practice preventative reflection is limited: it could look like 30-minute bi-weekly team check-ins, 5 minutes of individual reflection at the end of every day, or a program culture that dedicates two minutes to share thoughts at the end of a meeting, among many other possibilities. Preventative reflection can also be formal and time intensive: Pause and Reflect sessions[11] as well as projects that include mid-point reporting can be considered forms of preventative reflection—especially when an analytical, functional learning approach is taken.

Despite the relatively limited time requirement, the return on investment can be significant. Not only does preventive reflection create structures that help teams avoid unsurfaced challenges from undermining projects, it also creates more robust, cohesive teams. When done effectively within teams, frequent reflection can help cultivate effective group dynamics because preventative reflection is premised on maintaining open and honest communication.[12] When reflection is intentional, it also fosters a habit of mind where team members are constantly practicing checking in with themselves and each other—again minimizing the risk that a miscommunication will balloon into a stalled project or failure. Successful preventive reflection, and by extension successful reflection after an evident failure, requires buy-in from a majority of individuals. Getting staff to focus on reflection as a preventative tool (process-focused) can lead to the curative success (outcomes) wanted originally. But doing so will require the conservation field to undergo a cultural shift that centers and celebrates reflection as a key to successful outcomes.[13]

[10]See the Farnam Street blog on "Carol Dweck: A Summary of Growth and Fixed Mindsets", where Dweck's discussion of failure is quoted as, "in the growth mindset, failure can be a painful experience. But it doesn't define you. It's a problem to be faced, dealt with, and learned from." https://fs.blog/2015/03/carol-dweck-mindset/.
[11]USAID CLA Tool Kit provides a resource guide for facilitating Pause and Reflect through several different approaches. See https://usaidlearninglab.org/library/facilitating-pause-reflect.
[12]See Harvard Business Review blog "Business Team Building: The Value of Self-Reflection", https://www.pon.harvard.edu/daily/business-negotiations/business-team-building-the-value-of-self-reflection/.
[13]Grantham et al. (2009). Effective conservation planning requires learning and adaptation. *Frontiers in Ecology and the Environment*, 8(8), 431-437. https://doi.org/10.1890/080151.

SECTION IV

Corporate Embrace of Reflection and Learning from Failure

Changing corporate culture

There is a dominant incentive to focus on reporting successes and an even more dominant push to focus time and energy on achieving those successes. That said, all of our interviewees recognized that reflection would benefit everyone and every team. Those same people who advocate for more team reflection also believe that doing so would require them to take limited staff time from "getting the job done" and thus slow down achievement of success.

Some of our interviewees reported that their organizations have decided that team reflection is a credible way of speeding up learning and preventing avoidable errors. Their approach to enabling reflection has, however, largely been to promote tools and structures that enable teamwork, communication, and information sharing.[14] Alas, the problem appears not to be a shortage of team collaboration and information tools—Slack, Asana, Teams, Zoom, etc., all of which do help us to share what we know, post what we have found that is interesting and, in theory, learn from one another. Using these team communication tools appeals to staff who are connected 24/7 to the internet and who habitually glean their insights from online resources. It is largely ineffectual in reaching those staff that do not learn this way. More importantly, having access to team collaboration tools does not mean teams will use these to reflect on what is working, what is not, and why.

What seems to be lacking is corporate messaging that team reflection is not only valuable, it is valued and that those who engage in such practices will be lauded and that this respect will weigh positively in their careers.

So what might it take to change the conservation NGO corporate culture so that purposeful reflection and embracing learning from what did work or resulted in the unexpected or undesired?

Kurt Lewin, an American social psychologist, observed that successful corporate change requires three progressive steps: 1) defrost the status quo, 2) take actions that bring about change, and 3) anchor change in the corporate culture. John Kotter's classic 1997 book, *Leading Change*, proposed eight steps to transforming an organization. What Lewin, Kotter, and a host of other corporate change experts agree upon is that organizational change requires that senior leadership must play five key and highly visible roles in promoting a desired change within their organization.

"We have many tools but the culture is not leaning in to them."

- Interviewee

These roles include:

a) messaging clearly, passionately, and repeatedly that the change is important to the mission of the organization and explaining why this is true;

b) modelling the desired change and communicating this broadly across the organization;

c) rewarding staff that adopt the desired change;

d) building a cadre of change adopters and advocates to diffuse the change to staff at all levels throughout the organization.

The studies and conclusions of corporate change researchers were almost unanimously mirrored by the interviewees who expressed doubt that the field of conservation could embrace a culture of reflection without strong, vocal, and genuine advocacy and support from senior leaders. Simply encouraging reflection in the headings of newsletters was considered unlikely to do much to produce change, and a friendly but quiet attitude towards failure may not translate downward into project staff taking more risks and reporting the outcomes. Interviews also suggest that leaders will not only need to demonstrate some appetite, within reason, for risk and flexibility in project implementation, they will need to lead by example and participate in reflection with their staff. If they do not, then they will be signaling that devoting time for these activities is akin to taking them away from "work."

[14]See the USAID CLA Tool Kit, for example, https://usaidlearninglab.org/cla-toolkit.

The field of conservation would benefit from an established culture of embracing reflection to learn specifically from failure. As detailed above, conservation lacks the motivation and incentive structures to make effective reflection the norm—individuals are reluctant to talk about failure and might only see value in discussing success. Long-term, beneficial reflection on failures can become a widely accepted practice if the field of conservation develops both culture-based and institutional strategies for making reflection a normative behavior with value.

Interviewees that work at implementing partner organizations indicated a desire for reflection and learning from failure to be prescribed in project contracts. From their perspective, requesting these practices as a deliverable—where some kind of honest learning activity is actualized and thoroughly shared with colleagues and partners throughout a project's lifetime—would allow for more implementing partners to develop systems for reflection. Additionally, some interviewees thought it would be best for funding organizations to stop making successful results (and a lack of failure reporting) an expectation for continued funding of those projects. Further, there was widespread interest in substantial investments from both funders and implementing partners to encourage the creation of spaces for discussing failure, like intentional retreats, "fail fests," and third-party facilitator visits. While all desirable, none of these actions alone would create the kind of long-lasting culture shift towards reflective practice that many wish to see in conservation. Mandates and required events are not going to work on their own in such a decentralized and independence-oriented field. Section V offers some steps organizations can take to start a cultural shift towards reflective practice.

SECTION V

Reflection Guides & Best Practices

Reflecting effectively as an individual, as a team, and on the scale of an organization is a skill that requires practice. Organizations that aspire to share learnings from reflection will be better able to both reflect and communicate lessons if they are made up of teams that practice reflection iteratively and strive to regularly learn from failure. In this final section, we provide recommendations to keep in mind, followed by specific tools to consider as reflection guides. The recommendations are the result of reviewing the literature on organizational structures, interviewee sentiments, and existing guides from organizations promoting learning from failure and knowledge-sharing. Later we provide question frameworks and actual reflection plans that are ready for use in any reflection meeting.

Cultural change at different levels

For conservation organizations to embrace systematic reflection as a means of learning from failure, change has to happen at the individual, organizational, and inter-organizational levels:

The Individual Level

To reiterate a sentiment shared by many of our interviewees, we hope to see the simple practice of reflection and learning from those reflections occurring routinely. At the smallest scale, the individual, it is important to first acknowledge that almost everyone reflects on failure already—whether it's a solitary mental exercise over a cup of coffee or in phone conversations with trusted friends. It's our task as initiators of more systematic and intentionally productive reflection to harness the pre-existing action out there and make it more useful for organizational learning.

The basic source of team learning could likely be individual people informally sharing experiences with one another. One simple way leaders can help corral that energy into a more institutional space is by providing and encouraging more opportunities for individuals to attend conferences and events where individual connections and sharing of past experiences occur at a high degree through informal dialogue. Online, creating a system of fast dialogue similar to social networks and "listservs" could also expand upon pre-existing reflection and sharing among individuals.

The most important element in any of these strategies is frequency—making simple reflection questions (e.g., What went well? What could have gone better? What can we improve next time?) a recurring part of casual, everyday conversations. The capture and sharing of the lessons of that dialogue beyond interlocutors may then take more effort.
Overall, focus needs to be placed on the general pool of individuals already interested in implementing reflective practice. However you determine who these people are, giving them the necessary encouragement, confidence, and tools to implement effective reflection is essential to invigorate this practice. If staff find that it is effective and that it has value in improving their work—which takes time and practice—they may perpetuate and spread the practice on their own over time.

The Organizational Level

While both informing and being informed by some of the more grassroots-focused strategies described above, organization-level actions for creating a culture of learning from failure start with edifying institutional norms and rules around this kind of practice.[15] Again, this is most simply done by top-down advocating from managers, leaders, and board members. Some organizations have tried to do this more formally by proposing their own "philosophy of learning" where expectations and moral standards around learning from failure were drafted, sent to staff members for comment and approval, and then published as an official organizational policy or compact. At the policy-writing stage, organizations can also establish a "What if I mess up?" section in team manuals, where expectations around reflection and learning from failure are articulated for the organization as a whole. Policies like these would ideally establish norms for psychological safety, tolerance, and a reasonable appetite for risk-taking and failure. More concretely, mechanisms for reflection like Before and After Action Reviews or Pause and Reflect meetings need to be built into pre-existing organizational structures to be further institutionalized. As explained earlier, the key here is not necessarily adding additional work to the

[15]*See How Change Happens* by Cass Sunstein (2019) for information on the critical role of norm-setting in initiating widespread change. Norm-setting in terms of learning is also discussed by Chris Argyris's Harvard Business Review article on double-loop learning, https://hbr.org/1977/09/double-loop-learning-in-organizations.

organizational experience but focusing reflection on structures where it will be adopted almost effortlessly. New processes added on to existing work generally do not take root because people, including many of the interviewees, feel too busy to pile on another task. The good news is that, often, seemingly minimal steps can result in major impacts on organizational attitudes. For example, one interviewee shared that a brown-bag lunch gathering scheduled on a regular workday for staff to hear leaders share their own failure experiences had a surprisingly inspiring and long-lasting impact on team members.

When instituting reflection activities slightly more formally in work practices, like holding scheduled reviews before and after field assessments, it is again important to stay focused on keeping the required activities:

- Accessible (simple and fast, with the right people involved)
- Actionable (responsibilities and expectations of what to do are clear)
- Routine (frequent, scheduled)

It is also important to not allow reflection activities to devolve into a boring "bureaucratic process" that people feel they have to do to satisfy requirements. Reflective practice has an integrity that needs to be perpetuated through its connection to team values. Summarized well by one of our interviewees who frequently coaches teams on better reflection: sustaining reflective practices in a team requires ongoing energy input to the system—norms must be upheld, consistency requires intention, and complacency leads to collapse.

One way to make sure that the reflection process implemented in a team maintains this integrity is by allowing for reflection (feedback) on the reflection—especially if it was a formal, facilitated meeting or Pause and Reflect. Providing space for feedback and comments on whether the reflective process is going well and how it can be improved for next time will ensure that successive iterations of reflection are well-informed by group needs.

The Inter-Organizational Level

Our interviews showed there is noticeable excitement among lower-level implementing staff for reflection and improved learning from failure. A challenge to this excitement is the sentiment among higher-level managers at regional and global scales who find themselves in a context of competition for funding, which allows little to no space for recognizing and reporting failures. In order for the greater cultural shift that we are calling for to happen, the competitive atmosphere at the extra-organizational level should be acted upon.

Bringing regional and global competitors from different organizations together into a safe space for discussing their own failures has the potential to work against the hyper-competitive environment amongst high-level managers. If the CEOs of the largest NGOs were to convene to discuss their experiences with failures on a common platform, the culture of conservation as a discipline could be shifted downstream significantly. The details and reporting of what is discussed could also be made anonymous to account for the distaste of these competitors for revealing what they have done wrong—but it would still be significant to show who is participating in the collaboration. Collaborative venues like the Failure Factors Initiative, as well as venues among large donor foundations, have the ability to put this kind of meeting together.

In conclusion, all of this is a journey that people need to make sense of within their own institutions. It is a movement that will require time to practice and improve.


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Leadership tactics in promoting reflection and learning from failure

Effectively market reflection

It is vital that senior leadership effectively "sell" reflection as something that requires relatively limited time investment while still delivering a return on that investment in the form of team-building, project risk management, and resilience-building within an organization. Reflections are predicated on buy-in from staff and need to be visibly economical of their time and money. While creating and promoting value and practicality around reflection are critical—and the preliminary ways to establish demand for the practice—methods for protecting that demand include branding reflection as something that is simple, fast, and flexible. That framing will allow for individuals and teams to reflect routinely, which in turn may help cultivate the practice as a "habit of mind." Again, the goal is not necessarily to implement a formal structure for reflection but rather to encourage moments where problems and concerns can be surfaced and reported as frequently as successes and in a way that results in actionable takeaway lessons.

Be clear about the intent and expectations around reflection practices

Failure is a loaded concept with negative connotations that affect how individuals manage it both in and out of a reflection. In terms of reflecting and learning, the focus is on whatever did not go according to plan, and what is to be learned from how that happened, in addition to the visible successes.

Reflections, particularly when formal, can appear strikingly similar to performance evaluations, which elicit negative responses in many individuals. Interviewees frequently voiced the importance of establishing clear expectations that—as opposed to a performance evaluation which examines past events with the intent of gauging effectiveness and efficiency—a reflection meeting is a search for what worked and what didn't ("failures") with the intent of improving future practices with insights ("learnings").

Making these distinctions when introducing a reflection program will help emphasize the practicality of reflection as a tool for improving future work by learning how to notice and navigate future challenges. Articulating this practicality as specifically as possible is essential for the wide adoption of a program of learning from failure.

Actively engage in reflection on failure with staff

Leadership can help assuage staff concerns and push a supportive message and a culture shift by openly discussing their own individual and team failures and how they learned from them. Leadership engagement in reflection on failure can signal a commitment to not ridicule or punish others who do so as well.

According to three interviewees who had experience with leaders who openly shared failure (through "fail fest" sharing sessions), the actions of senior leadership can have a surprisingly large positive impact on staff attitudes. Further, role models in the organization—who may or may not be in actual positions of leadership—can effectively encourage these practices by demonstrating that it is worthy of their everyday time. Others wanting to emulate those role models may quickly follow suit.

In terms of specific organizational norms, leadership and role models are essential for promoting "honest curiosity" (what some interviewees have likened to an appetite for risk and learning, or "failing forward") as a basis for effective reflection. This includes promoting transparency and psychological safety as expectations around routine reflection for better results (lessons learned). Leadership promotion of these values could enable widespread practice in an organization. Beyond the individual organization, cooperation predicated on sharing lessons from project failures between executives from different organizations can help the field of conservation become less competitive and more practical in achieving global objectives.

Team tactics to promote reflection and learning from failure

Establish norms around the timing and expectations of reflection

The literature and interviewees were aligned in their resounding emphasis on the importance of setting clear expectations and norms when preparing for a reflection session or when setting up a team culture that allows for frequent reflections. These norms can be co-created by the teams themselves but they are most often set by designated leaders who are responsible for the continued upkeep of these norms. Expectations are set formally through written meeting ground-rules and best practices for participant engagement documents, or a meeting to discuss reflection norms; they can also come in the form of a project timeline that sets bi-weekly team check-ins or contractual agreements that mandate a mid-project or more frequent Pause and Reflect. Being fully intentional and aware of where and when expectations are set is the gold standard for setting teams up for success. Once set, these norms need to be reinforced, with everyone, especially the designated leader, holding each other accountable to the expectations. When first proposing a reflection practice with a team that lacks a history of reflection, the group should consider taking extra time to acknowledge that reflection is a process-oriented practice that will accrue benefits over time.

Respect different perspectives

Everyone who reflects on a conservation project is going to do so from a unique perspective that will influence what criteria they choose to consider and ignore for reflection. Staff hierarchies and roles, cultural attitudes, personal interests, and other factors like age, gender, and experience may all impact how one reflects and manages failures, and these dynamics need to be accounted for in organizing a reflection. For example, many conservation practitioners agree that an aversion to reporting on failure is a "trained incapacity" stemming from the cultural dynamics described in the first section of this paper. While also respecting differences, it is important to encourage participants to collectively endorse a standpoint that is commonly focused on the task at hand—reflecting freely on what went wrong and why. This will require an established relationship of trust among the team as well as some more work in self-awareness and self-scrutiny, like identifying cognitive biases and personality traits, which becomes easier with iterative practice over time.[16]

Recognize and reduce bias

Similar to the influence of our individual standpoints, we as humans are all influenced by biases and cognitive pitfalls that we develop over life experience. Several cognitive pitfalls have been identified in conservation work, like the narrative fallacy, confirmation bias, and hindsight and outcome biases, among others, which all preclude a team's ability to recognize and manage failures. Catalano et al. (2017) explain that before failures can be effectively managed in reflection, these cognitive traps must be managed first. Most simply, this can be done by talking with your team about each other's biases in handling people and information at the start of a reflection session—identifying what these are at the outset will encourage more self-aware reflections to be made. Bias training can also be done separately with the help of outside facilitators, though this requires more financial investment and time commitments. Most importantly, reflection and learning from failure can be improved by simply encouraging reflective thought that accounts for psychological roadblocks.

Establish guidelines for psychological safety

Underpinning the possibility of any effective reflection is psychological safety, "the degree to which individuals are comfortable taking interpersonal risks in a group setting."[18] As mentioned above, considerable trust and respect must be established before any reflection session can happen. A psychologically safe meeting is one in which individuals are able to speak freely about their mistakes and concerns without fear of blame, retribution, or embarrassment.[19] Leaders should ensure that reflections follow strict standards of psychological safety and institute practices that create this safety, such as ensuring that all participants have an opportunity to speak and are rewarded for their feedback.

[16] See page 117 in *The Policy Process: A Practical Guide for Natural Resource Professionals* by Clark (2002).
[17] Catalano, A.S. (2017). Black Swans, cognition, and the power of learning from failure. *Conservation Biology*, 32(3), 584-596. https://doi.org/10.1111/cobi.13045.
[18] Catalano et al. (2017)
[19] Catalano et al. (2017)

Tailor the size and scope of reflection to what is necessary

Reflection practices need to fit the scale of the team's level of engagement, expectations set out by program or team leadership, and, if reflecting on a specific event or failure, the scale of that event. Interviewees repeatedly suggested that reflection sessions reflect the scale and scope of the failure, where major failures require major After Action Review sessions to ensure learnings are extracted and shared in a way that prevents future losses of time and capital. In contrast to large reflections on major events, for example, regular reflection on smaller daily activities may require no more than 10-15 minutes at the end of a workday. Overall, the reflection activity has to fit into the natural tempo of the team. A 4-hour, facilitated After Action Review is not a great fit for a minor stumble in a project arc or routine check-in, but would be necessary for examining larger crises. Routine, small-scale reflections can be done independently by teams with no outside support, while prescribed reflections on complex project developments may require outside facilitators and substantial time set aside. Much like all aspects of effective reflection that were previously discussed, "right-fitting" is something team leaders will get better at with time. It can often be beneficial to reflect on a reflection session—was too much time spent on what wasn't working? Did folks need more clarity around next steps? Was the communication style or were expectations leading up to the meeting clear?

Focus on deep-learning spaces and double-loop learning as a goal

Chris Agyris of the Harvard Business School describes organizational learning as a tool to detect and correct mistakes. He goes on to describe reflection in terms of two kinds of learning: single-loop learning and double loop learning. Conservation organizations will benefit from focusing on double-loop learning as they strive to both improve the ways teams function and increase the impact of higher-level programmatic functions. Single-loop learning is best described using a thermostat metaphor. The thermostat detects a change in temperature and then takes corrective action (activating heating or cooling) to return to the set temperature. In order to get to a double-loop learning space, that thermostat would need to note that the temperature is not at the set level, and then question the cause for the change in ambient temperature. In this double-loop learning scenario, rather than activate the heating or cooling to return the room to the set temperature, the metaphorical thermostat would instead mount an inquiry or reflection and notice that there is an open window constantly throwing off the ambient temperature. The corrective action after working in a double-loop learning space would be to close the window, rather than continue heating or cooling to adjust for the window's effect on the room.[20]

For conservation organizations, reflection can be seen as a tool to get to a double-loop learning space. Whether it is a field team reflecting on their daily data collection system, the HR department reflecting on the impact of their process for making hiring or promotional decisions, or a grant-making team reflecting on the incentive process of their target-setting structure, double-loop learning is key to extracting lessons that will lead to foundational change.

Successful double-loop learning is predicated on a culture of honesty and open communication that allows individuals to push back against existing norms. Until conservation organizations improve their transparency and upper management leads a charge against the current culture that promotes obscuring failure in the name of communicating success stories, it will be challenging to create change based on reflections from a double-loop learning space. Thinking and communicating in terms of double-loop learning will aid in pushing the field of conservation towards a place where reflection practices and organizational learning yields changes that address underlying organizational and systems challenges that threaten to derail projects, teams, and the preservation of earth's life support systems.

Hold the reflection activity to clear standards

Again, the actual reflection has to be fit for the team or event in question. There is no "one size fits all" approach that comes with a guarantee of positive results and learning. However, here are some general standards and accompanying questions that can make reflection more functional. The following standards are referred to as "appraisal standards" by Clark (2002) and we believe they can be applied to reflections and reviews.[21]

[20]See Chris Argyris' "Double Loop Learning in Organizations" for Harvard Business Review, https://hbr.org/1977/09/double-loop-learning-in-organizations.
[21]See chapter 4 in *Clark's The Policy Process: A Practical Guide for Natural Resource Professionals* (2002).


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Reviews should probably be:

Dependable and Rational
- Are policies and criteria for reflecting generally agreed on?
- Are the data used dependable?
- Are the facilitating questions and topics relevant and explicit?
- Are definitions of successes and failures accounted for?

Comprehensive and Selective
- Is the reflection comprehensive of all relevant factors and yet selective of what's important?

Independent
- Are participants protected from threats or inducements?
- Are internal reflections supplemented by external (or third-party) review?

Continuous
- Is reflection continuously reiterated rather than intermittent?

Reflection Guides: question frameworks and suggested practices

Multiple question frameworks and practices for reflection can benefit the conservation community. We highlight five here in order of increasing complexity.

Four core questions

A fast reflection guide for "rapid post-project assessment" typically used within an After Action Review (CEBMA 2010).[22]
This is the foundation of reflective practice used in military, medicine, and technology corporations based on 4 core questions that can be used in any scenario:

1. What was expected to happen?
2. What actually occurred?
3. What went well and why?
4. What can be improved and how?

Before and After Action Review

A framework that focuses on "real-time learning" from the Fourth Quadrant Partners (4QP) Emergent Learning Platform:

- First, design a framing question that is based on your goals. 4QP suggests language like, "What will it take to…? How can…?"

- Then, perform a Before Action Review (BAR) and an After Action Review (AAR), which inform each other and are reiterated with reference to each other over time (see table below).

This table shares the questions 4QP provides as guidance for BAR and AAR.[23]

Before Action Review	After Action Review
What are our intended results?	What were our intended results?
What will success look like?	What were our actual results?
What challenges might we encounter?	What caused our results?
What have we learned from similar situations?	What will we sustain or improve?
What will make us successful this time?	What is our next opportunity to test what we learned?
When will we do an AAR?	When will we do our next BAR?

[22]Salem-Schatz S, Ordin D, and Mittan, B. (2010). Guide to the After Action Review: A simple, but powerful method for rapid post-project assessment. *Center for Evidence Based Management*. https://www.cebma.org/wp-content/uploads/Guide-to-the-after_action_review.pdf.
[23]See the 4QP Emergent Learning Platform, http://www.4qpartners.com/4qp-el-platform.html.

Problem-oriented reflection

A simple line of questioning to orient towards a problem (Clark 2002). This is another way to reflect thoroughly, which should be reiterated routinely to refine the goals of a project.[24]

- What outcomes do we prefer?
- What are discrepancies between our goals and the actual/anticipated state of affairs?
- What alternatives are available to solve the problem?
- Would each alternative contribute toward solving the problem?
- Did each alternative work when tried in the past on relevant occasions?
- Why or under what conditions does your alternative work satisfactorily or not?

The "diagnostic approach"

Organizing problem-solving into four broad phases that can be reflected upon with specific questions for improving performance. This was adapted from Clark (1993)'s description of this method for organizational learning.[25]

PHASE	TASK	QUESTIONS TO ASK
Description	Describe the situation/project with observations and relevant data.	How did our outcomes align with our goals? What exactly happened along the way?
Diagnosis	Identify and explain the underlying causes for observed situation/results.	What are the key variables affecting our success/failure? How do we define the problem?
Prescription	Propose actionable solutions to address the diagnosis.	What should we do to address the variables of the problem? How should we improve on how we worked last time?
Action	Act on your proposed solutions and continuously reflect on the action plan.	What are the implications of implementing the prescriptions? What variables are helping or hindering the achievement of goals? What historical precedents exist for achieving our goal? Who will do what to achieve the change we seek? Who will do evaluation and follow-up?

[24]See chapter 5 in Clark's *The Policy Process: A Practical Guide for Natural Resource Professionals* (2002).
[25]Clark, S.G. (1993). Creating and Using Knowledge for Species and Ecosystem Conservation: Science, Organizations, and Policy. *Perspectives in Biology and Medicine*, 36(3), 521-522.

After the reflection

Numerous interviewees expressed that there are currently underdeveloped systems for sharing knowledge effectively after reflections—especially reflections that follow an evident failure as opposed to reflection as a preventative measure. There was widespread disinclination to read and extract learnings from the extensive post-mortem or project reporting documents that are conventionally used to capture learnings from evident failures. Instead, a number of interviewees suggested a system for sharing learnings from failure that is based on conversations with individuals that were a part of the "failure." Rather than building a system that requires project teams to absorb the context of past projects that failed, a number of interviewees expressed interest in a system where an abstract of the failure is available in a database, with an associated contact. If a failure in the database seems similar to a challenge that might arise in an ongoing project, the project leads can reach out to the contact from that failure and engage in a context-specific conversation with them where learnings are shared with more detail and flexibility. This proposal from the interviewees is just one of a number of ideas that conservation organizations have been experimenting with in recent years. As the field of conservation learns, grows, and changes, new systems will need to emerge to share learnings and this is just one promising candidate.

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SECTION VI

Conclusions and Call to Action

The field of conservation is not yet effective at learning from failure. Though there is widespread interest and a handful of scattered initiatives exist, reflection and learning from failure is the exception to the norm. In many cases, as our interviewees explained, the current culture and structures disincentivize reflection and instead allow for failures to be obscured and ignored in favor of promoting success stories. The field is poised for change, however, and implementing partners and funding organizations alike have an opportunity to integrate simple, time-effective practices that can lead to a culture shift that promotes and prioritizes learning and improving after failure. These changes will come from dynamic leaders, early adopters, and champions that will begin pushing for a culture shift by implementing reflection and knowledge sharing in their teams.

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Appendix A: Purpose and Methods

As part of the "Failure Factors Initiative" to improve the management of failures in conservation, we, as authors, were presented with the question of how the conservation field can use reflective inquiry to learn from projects that do not go according to plan. In answering this question, we document the current state of reflecting in the field of conservation and provide best practices and recommendations for unlocking the benefits of reflection and learning from failure. All of the information presented here comes from our preliminary review of the published literature on these subjects and, more substantially, one-on-one interviews with 15 professionals in the field of conservation and philanthropy. Based on our training as graduate students in the Yale School of the Environment, we followed an analytical approach for synthesizing our literature review and the words, sentiments, and reflections of our interviewees.

Sentiments and quotes captured in semi-structured interviews with key informants made up the bulk of information shared in this report. Interviewees held positions at Birdlife International, Fail Forward, the Gordon and Betty Moore Foundation, Margaret A Cargill Philanthropies, The Nature Conservancy (TNC), Seafood Alliance for Legality and Traceability (SALT), Imperial College London, US Agency for International Development (USAID), the Walton Family Foundation, Wildlife Conservation Society, and World Wildlife Fund. To respect confidentiality, further identifiers have not been included. Interviews were initiated and the following interview questions were included. Many, though not all, of these questions came up in the hour long interview. During the interviews, one of the authors would direct the line of questioning while the other took notes. Interviews were not recorded and as a result only a handful of direct quotes are used, rather we primarily share 'sentiments' that were captured in the meticulous notes taken during interviews.

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Table 1. Semi-structured interview questions. Frequently asked questions are bolded for the purposes of this report.

Fail Factor Initiative: Lessons for Team Reflection and Learning from Failure
Semi-structured Interview Guide

Central Questions 1:

1. **What is your job (at X)?**
   a. **How would you describe your leadership role within the organization?**

2. **How does your organization reflect on projects that did not go according to plan (failed)?**

3. How have you been involved in After Action Reviews (AAR) or Pause & Reflect (P&R) sessions?
   a. Is it required by your organization? A funder?
   b. Did your organization set aside time and/or money to make this happen?

4. At what level in your organization are reflection sessions used?
   a. Does it happen in the C-suite? All across levels (like they do in the military)?

5. **From your perspective, what can we learn about using reflection sessions at different levels within the organization?**

6. If you don't use a reflection meeting like AAR/P&R, do you have an informal or formal process for capturing lessons learned from projects that didn't go as planned?

Central Questions 2:

7. What are the best approaches to cultivating a climate of openness and trust in a reflection session?
   a. What techniques have you seen a facilitator use to cultivate this climate of openness? How do they establish a set of community norms/rules? What approaches have been most successful? What would improve these techniques?

8. What techniques have you experienced that allow your opinion to be properly heard during the reflection sessions?

9. What approaches to sharing outcomes/findings from reflection/review lead to learning across the broader organization?

10. What is the preferred timing for a reflection meeting?
    a. Are there costs or benefits to team reflection throughout the duration of a project as opposed to only reflecting after project completion?

Supplemental Questions 1:

11. Do you have examples of reflection/reviews influencing behavior? What led to that change?

12. What do you think would be the greatest barrier to fostering a productive discussion of project failure among team members?

13. How important is it for a leader (president, team lead) to establish a culture of team reflection and review of failure?

14. What process, if any, should be used to capture the discussions of a reflection session during the meeting itself?
    a. Feelings on the traditional flip chart and writing statements on a board? Use of recording devices and meeting minutes?

15. **What process, if any, should be used to share the outcomes and findings of a reflection meeting?**

Supplemental Questions 2:

16. What are the preferred characteristics for someone facilitating a reflection session?
    a. Should the facilitator be someone who was involved in the project discussed? Did they need complete objectivity? Should it be the team leader?
    b. Do you have a preference for an internal (done by organization itself) or external (outside facilitators) reflection?

17. What is the preferred setting for a reflection meeting?
    a. Do you have a preference for formal (office meeting) vs. informal (dinner) sessions?

18. **Who should be included in an AAR/P&R?**
    a. **Project staff? Cross management level? Leadership? Mix of staff hierarchy/seniority?**

19. What are the best approaches to reduce blaming or finger pointing in a reflection/review?
    a. How do you create norms that avoid name blaming?

20. What techniques have you experienced that led to productive cross-management level reflection?

21. **Do you have anything else to share with us about implementing reflection/review meetings for learning from conservation failure?**

Appendix B - Types of change agents

To facilitate adoption of a reflective culture within an institution, one must recognize the personalities within the organization and what characteristics each might bring to shifting culture towards implementing such practices. It may be especially useful to first focus on working with those are already doing reflective practices or have expressed interest in doing so. These individuals should be given the necessary encouragement, confidence, and tools to implement effective reflection to invigorate this practice throughout the organization. If staff find that these practices are effective and that they have value in improving conservation work—which takes time and practice—these individuals may perpetuate and spread the practice on their own, to their peers, over time.
Below are examples of different types of staff that can play roles within an NGO that seeks to encourage team and individual reflection about what is working, what may need to change, and why. Each persona can improve communication and reflection on failure in different ways, thus these interpersonal skills should be valued in both the hiring practices and reward structures within an organization. The conservation field can embrace learning from failure before any reflection activities are formally institutionalized at the organizational level by locating the individuals who can fill these roles and, through word of mouth and modeling, encourage their colleagues to adopt reflective practices.

Early Adopters: those who already have an established level of trust and openness to trying to create routine reflection and learning opportunities. They will likely already have success stories in using this practice and should be encouraged to share those positive experiences with others to spread the message.

Champions: individuals who are motivated by the idea of reflection, see its value, and can effectively rally partners towards trying it should be encouraged to do so and potentially rewarded. Whether they are leaders or innovative team members, their goal should be to "light little fires" in their community of practice—advocating for small-scale opportunities to show others the value of this exercise, which in turn can be encouraged further. It is important to keep in mind that champions should not try to force any ideas on colleagues or over-sell the concept—they just need to be outspoken in proposing and encouraging reflective practices.

Devil's Advocates: within an actual reflection meeting, appointing individuals to step into this role would ensure opportunities to challenge team members to talk more critically about what is working, what isn't, and why, while also providing psychological safety for that designated individual to be inquisitive and challenging since they are tasked with "playing" the role. The assigned individual would have the responsibility of asking questions like: "Is our goal really being advanced?" "What negative impacts did this action have?" "Who might be harmed by this plan?" and "What is likely to go wrong with this?" Nominating more than one individual randomly to serve this role would further create safety for them to challenge their partners—and the role can rotate with every iteration so that everyone has an understood expectation to play the part.

Generalists: those who are good at forming bridges and synthesizing information from individuals who come from more specialized silos. Generalists are naturally good at understanding the key points and significance of what specialists are talking about and bringing those concepts together into a more understandable form for everyone. They are the ones who ask, "Why is this important?" and look for the critical piece of an experience, rather than scientific trends and methods. In the context of very little sharing or reporting of learnings between small team units, the interviewee who shared this idea likened "generalists" to bees that pollinate various isolated corners with different and new ideas from others. Identifying these individuals and encouraging them to start collecting and sharing learnings from diverse teams that reflect would make this entire process run more effectively and lead to wider organizational learning.

Seasoned Travelers: those who have accumulated a lot of valuable wisdom and learnings over the course of a lengthy career can help this process significantly. Ensuring that these individuals have a seat at the table of reflection activities can help keep these reflections based on reality and provide a sounding board for comparison of ideas based on their experiences. Importantly, if the wisdom of these individuals is not somehow captured and shared throughout the organization before they retire or leave, all of the potential opportunities for organizational learning from those experiences will leave with them. Part of the growth mindset many want to strive for in conservation is learning from those with rich experience and actively keeping that knowledge alive. As these are typically the oldest individuals, they may be left out of dynamic conversations between younger staff. Understanding and rectifying this situation by helping "wise" individuals participate frequently in reflections can help enhance organizational learning.

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