



RISING TO RESILIENCE

How Water Stewardship Can Help Business Build Climate Resilience



WWF is one of the world's leading conservation organizations, working in nearly 100 countries for over half a century to help people and nature thrive. With the support of more than 5 million members worldwide, WWF is dedicated to delivering science-based solutions to preserve the diversity and abundance of life on Earth, halt the degradation of the environment and combat the climate crisis. Visit www.worldwildlife.org to learn more.

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© Jason Houston / WWF-US Cover Photo © WWF / James M Water risks affect all businesses, regardless of their reliance on water. Climate change will accelerate and amplify these risks and create direct consequences for the water security of vulnerable communities and ecosystems worldwide. We must be ready to face the shocks and stressors that are sure to come because of climate impacts.

For the past 5 years, the World Economic Forum has ranked the water crises, or water-related issues, as top global risks that will cause destructive economic and social impacts across entire countries and industries. Companies have begun to take effective action to better steward water resources and they now have the means to build the resilience of these water resources to climate change impacts. As is true for corporate water stewardship, companies building resilience of water resources must look beyond their fenceline to collaborate and invest in the broader landscape to protect and restore the health of river basins to ensure ecosystem services are wellfunctioning.

We must come together and act now to take the necessary steps to reduce the vulnerabilities of communities and economies. Business now has the opportunity to bridge the gap between climate and water stewardship strategies, broadening the focus from today's corporate sustainability risks to tomorrow's global water security.

- Nicole Tanner, Corporate Stewardship Manager, Freshwater & Food, World Wildlife Fund

WE MUST COME TOGETHER AND ACT NOW TO TAKE THE NECESSARY STEPS TO REDUCE THE VULNERABILITIES OF COMMUNITIES AND ECONOMIES

Sound water stewardship can make a significant difference in building climate resilience in our operations, supply chains and the communities in which we operate. Through our global partnerships on water replenishment, including the important work with WWF across five continents, we have seen the opportunities of sound science-based risk management, ambitious watershed conservation, inclusive stakeholder engagement and collective action for strengthening water security and climate resilience.

Advanced water stewardship is key to building resilience to climate change.

- Ulrike Sapiro, Senior Director of Water Stewardship & Sustainable Agriculture, The Coca-Cola Company

The Coca-Cola Company (NYSE: KO) is a total beverage company with products sold in more than 200 countries and territories. Our company's purpose is to refresh the world and make a difference. Our portfolio of brands includes Coca-Cola, Sprite, Fanta and other sparkling soft drinks. Our hydration, sports, coffee and tea brands include Dasani, smartwater, vitaminwater, Topo Chico, Powerade, Costa, Georgia, Gold Peak, Honest and Ayataka. Our nutrition, juice, dairy and plant-based beverage brands include Minute Maid, Simply, innocent, Del Valle, fairlife and AdeS. We're constantly transforming our portfolio, from reducing sugar in our drinks to bringing innovative new products to market. We seek to positively impact people's lives, communities and the planet through water replenishment, packaging recycling, sustainable sourcing practices and carbon emissions reductions across our value chain. Together with our bottling partners, we employ more than 700,000 people, helping bring economic opportunity to local communities worldwide. Learn more at www.coca-colacompany.com.





INTRODUCTION

Water is the primary medium through which we feel the effects of climate change. Whether it is floods (too much water) or droughts (too little water), water is how many of us are already experiencing the front edge of climate instability. As consumption patterns and populations continue to grow, and as we continue to destroy freshwater ecosystems and their services, people, communities, and even economies face growing water-related challenges. These risks have repeatedly been recognized by the World Economic Forum in its Global Risks reports, where water has consistently ranked near the top¹.

At its core, climate change is a risk amplifier. Whether in biodiversity loss or freshwater challenges, an unstable climate will amplify the risks we currently face. A changing climate will change where crops can be grown, which communities have better access to water, and how humans design and rely upon infrastructure. Recent modeling by World Wildlife Fund (WWF) indicates that by 2050, as much as 51% of the world's population will face high levels of water risk. As we wade into this uncertain future where climate change is presenting us with increased levels of risk, new approaches, such as waterrisk scenario modeling², are required to proactively address vulnerabilities in our systems and build resiliency.

1. World Economic Forum (2020) "The Global Risks Report." Available online: https://www. weforum.org/reports/the-global-risks-report-2020. Last accessed August 19, 2020.

2. WWF (2020) "Water Risk Filter Brief: Water Risk Scenarios." TCFD-aligned scenarios to help companies and investors turn risk into resilience. Available online: https://tinyurl.com/y6xtma9s. Last accessed October 14, 2020.



Water risks affect all businesses—even if a company doesn't seem to have a large direct reliance on water. Water risks can be found across the value chain, including from disruptions in commodity production and distribution channels, damage to capital infrastructure, and consumers' lack of access to sanitation. Business has broadly acknowledged that climate change is an important issue to address and plan for. Water is increasingly recognized as an important issue as well. Business is rising to the occasion, as it is often uniquely positioned to champion innovative solutions to freshwater challenges and secure water for profit, people, and planet.

In "Rising to Resilience: How business can help build climate resilience," WWF laid out how companies should value nature as a solution to climate change, what resilience and sustainability mean for business, and how they should plan and act. **In this report, we aim to provide practical application for businesses on how to integrate climate resilience into their water stewardship strategies.** Long-term climate resilience for companies can be defined as the ability to achieve and maintain long-term goals in the face of shocks and stresses. In this sense, water insecurity represents one potential form of shock and disturbance and stewardship, by incorporating climate resilience principles, represents a central response mechanism to adapt and transform as needed.

Water is inherently variable: freshwater systems have variable flow rates with shifting water quality driven by seasonal changes, weather events, and water-use decisions by others. The dynamic nature of water challenges means that even without climate change, businesses and communities have always needed to develop strategies that help manage this variability to ensure water security. Too much water (extreme flooding) is problematic, as is too little water (prolonged drought), and climate change is amplifying these extremes with greater frequency. With climate change exacerbating water risks, businesses find it beneficial to enhance their water stewardship strategy as a means of building climate resilience.

Fundamentally, this report aims to build a bridge between existing water stewardship language and framing, integrate concepts of climate resilience drawn from the climate change community, and offer a tangible pathway forward for companies.



HOW ARE CLIMATE AND WATER LINKED?

Climate change as a water risk multiplier.

Climate plays a central and critical role in the water cycle. The temperature, humidity, precipitation, wind, and pressure (among other factors) that constitute a location's climate dictate the volume and timing of water availability, and in turn, the water quality and freshwater ecosystems that will thrive in that location. From a corporate perspective, climate patterns help us determine what crops to grow (soil moisture) and what to expect during periods of drought and flood. With climate change, we are seeing wind and precipitation patterns change, warm areas get warmer, and storms come on stronger and more frequently. Shifting water availability (through space and time) creates challenges for communities and businesses that rely on a steady supply of water. In many cases, the policies, practices, and infrastructure that were put in place many years ago are often no longer appropriate for these future scenarios. The result is that businesses and communities may be illequipped to address both heightened and different water risks than they had originally planned for.

The water stewardship community discusses risks in terms of physical (e.g., scarcity, flooding, and water quality), regulatory (e.g., weak laws, policies, enforcement, and infrastructure), and reputational (e.g., community conflict and brand damage) water risk. It is also worth noting that water risks can manifest as both acute (singular, near-term) or chronic (repetitive over the long term) risks, but both may be mitigated through resilience-building projects.

Figure 1 illustrates potential climate change-induced issues that are linked to water risks.



The Task Force on Climate-related Financial Disclosures (TCFD) characterizes risks and opportunities according to Figure 2. While this framing (transition and physical) differs slightly from how the water stewardship community has traditionally presented water risks (physical, regulatory, and reputational), both acknowledge exposure to risk and the opportunity for solutions can be addressed through strategic planning, including tools such as scenario planning. Risk management that accounts for both positive and negative financial impacts is consistent in both climate resilience and water stewardship thinking. In short, the logic in Figure 2, which comes from the resilience community, also underpins the logic guiding valuation efforts in the stewardship space (e.g., Water Risk Filter Water And ValuE, or WAVE, tool).



The TCFD framework is broadly aligned to water stewardship approaches. The framing of water risk differs slightly (as seen), and planning efforts are where most water stewardship efforts land, but broadly the thinking is very much aligned.

Source

HOW CAN I TAKE ACTION?

In "Rising to Resilience: How business can help build climate resilience," a four-step process was outlined to guide companies through integrating climate resilience into business practices. Building on these same steps, we offer a derivative version specifically targeted to audiences approaching climate resilience through the lens of water stewardship. As noted previously, corporate water stewardship offers a strong starting spot for companies to not only mobilize efforts on water risk but also to embed climate resilience planning.

WWF'S FOUR STEP PROCESS

STEP 01

Assess Risk: Assembling Available Knowledge & Resources, Planning for Change, & Developing a Long-Term Capacity for Informed, Flexible Management

STEP 02

Develop a strategy to manage for change, not just persistence

STEP 03

Implement local solutions that are nature-friendly, responsive, and flexible

STEP 04

Monitor, evaluate, and adaptively manage

Assess Water Risks & Opportunities: Harness Scenarios to Enhance Climate Awareness



Understand water in your value chain to define and focus scope

Develop awareness of your current water risk exposure and systemic drivers through an evidence-based understanding of each context

Develop awareness of your future water risk through climate-linked scenarios

Refine the focus of your climate resilience efforts to focus on key vulnerabilities

A water-risk assessment across the full range of a company's value chain may seem daunting at first. However, by understanding key impacts and dependencies within the value chain, it's possible to take a first strategic step to understanding your water risk. Traditionally, this process has taken the form of a water footprint exercise or an LCA-based "water footprint" that utilizes local water data. Such an exercise is very useful in understanding where the material water impacts across a value chain occur—often in raw material production and manufacturing and processing. In addition, it is also important to consider some of the non-water-intensive elements in the value chain (e.g., logistics, distribution, and sales), where resilience is critical to address waterrelated



extreme weather events such as floods or droughts. For example, distribution centers can become stranded due to floods or barge traffic can be grounded due to drought-induced low water levels in canals.

With select parts of the value chain identified, assess how you are currently exposed to water risk using tools such as WWF's Water Risk Filter or World Resource Institute's (WRI) Aqueduct, two tools that offer companies freely accessible platforms to assess risks and status. WWF's experience in water-risk assessment suggests looking at both basin and operational risk as well as through the lens of existing production and future growth.

Building from these current water-risk conditions, next look at different scenarios of how water risk might look in the next 10–30 years, under a changing climate. It is vital to extend your analysis to incorporate the systems that provide and depend on water or ecosystems and communities in the landscape. Understand where ecosystems that provide water are at risk from climate change, where communities are at risk, and how each will respond.

There may be regional or national studies or you can use new functionality being built into the risk assessment tools. While climate change projection layers (e.g., projected drought) are useful, exploring scenarios is particularly important. WWF's Water Risk Filter now allows companies to build on waterrisk assessments and explore various scenarios over a 10- and 30-year time frame (2030 and 2050) with the aim to enhance the ability to explore resilient water stewardship responses. Similarly, WRI's Aqueduct tool has several future water stress projections and a flood analysis functionality that allows you to look specifically at future flood risks. Once you understand what current and future water risks you might be exposed to, use a strategic materiality lens on your assessment to determine how to prioritize and focus your climate resilience response across your value chain:

Which material suppliers, operations, and customers face current or future high water risk? Are there notable clusters in select basins or key sites that may be bottlenecks within the value chain?

Which geographies represent key current and future sourcing regions and operations when accounting for projected business growth?

What key (current and future) markets are vulnerable to water stress that might affect how your customers use your products?

Which water-related risks are key to focus on (to develop climate resilience for) in each context?

As materiality is considered, the WAVE tool may also prove useful as it allows users to explore the potential financial impacts from various water risk scenarios at a site level. This may help companies convert risk into financial impact and evaluate financial materiality.

Note that it is especially important to understand where waterrisk exposure lies clustered within a basin since effective climate resilience often depends on systemic landscape solutions. Once water risks, opportunities, and scenarios have been explored, companies are well positioned to consider the next step around risk responses—i.e., resilient water stewardship responses.

WWF's Scenarios

In fall 2020, WWF is releasing a series of scenarios, designed to support companies working through how climate change and future scenarios may affect the water risk of their value chain. For more details, click here.

Water Risk Filter

Scenarios of overall water risk

The Water Risk Filter overall water risk maps for 2030 and 2050 and associated scenario narratives

Pessimistic Scenarios

 Unequal and unstable socio-economic development

4°C

2°C

1.5°C

High GHG emission levels

Current Trend Scenarios

Similar to current
 socio-economic development
 trends

Intermediate GHG emission levels

Optimistic Scenarios

- Sustainable socio-economic development
- Ambitious reduction in GHG
 emission levels

TODAY

Overall Risk

2030

2050

STEP

Develop Water-Risk Responses & Water Stewardship Strategy: Manage for Change & Climate Resilience, Not Just Persistence



Develop initial contextual water stewardship responses that address both internal (site) and external (basin) actions



Review potential water stewardship actions for climate resilience, scenario suitability, adaptability, and responsiveness at various scales



Integrate climate resilience actions into an updated contextual water stewardship and business strategy for implementation

With a better sense of where to focus within the value chain and what, contextually, to focus on, companies should next turn their attention to setting up climate resilience responses through water stewardship. From the outset, it is important to recognize a fact that at first may sound obvious: Our world is always changing. This concept is often lost in risk response planning, which means integrating climate resilience into water stewardship means planning explicitly for continual change. Responses to water challenges, especially those that are likely to be exacerbated by climate change, tend to occur at two levels: inside operations (internal action) and within a basin (collective action and engagement with governance mechanisms). This concept is central to the premise of water stewardship. Typically, companies begin in the priorities that have been identified during the water-risk assessment



(Step 1 above) by implementing internal actions as there is greater control, flexibility, and short-term benefits. Implementation of the core requirements of the Alliance for Water Stewardship (AWS) standard is an excellent pathway to cover these internal and foundational water management dimensions of water stewardship while also understanding context in greater depth. However, internal actions tend to be limited in scope and can be insufficient to build systemic basin resilience, thereby inherently calling for action beyond the fence line through a collective approach or action. As sites look to external actions, it is worth noting that the AWS standard's advanced criteria provide an array of actions that can enhance water resilience through contextual collective action responses. In all cases, actions should be contextually appropriate—water resilience does not work through a "one size fits all" approach.

It is worth noting that water stewardship and resilience are particularly critical for raw material producers (or growers). With 90% of water consumption sitting in this portion of the value chain, ensuring robust water stewardship in crop and materials production is essential. To this extent, it is important that commodity standards employed for "sustainable sourcing" are contextually relevant when it comes to water and that they tackle the right issues given the resilience issues in play.

ACTIONS SHOULD BE CONTEXTUALLY APPROPRIATE - WATER RESILIENCE DOES NOT WORK THROUGH A ONE SIZE FITS ALL APPROACH

OVERARCHING PRINCIPLES FOR CLIMATE RESILIENCE

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AVOID HARMING NATURE

"Do no harm" is a basic but critical factor that must be front and center. All companies must reduce future harm to ecosystems and thoroughly analyze the impacts and trade-offs of their initiatives.

USE NATURE TO HELP PEOPLE

Climate resilience strategies should consider the critical benefits that nature can provide for people - protection from coastal flooding, ground water recharge, soil retention, pollination, and moreand take steps to ensure stakeholders are invested in successful outcomes.

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HELP NATURE ADAPT

Companies must design strategies that allow nature to adapt to the growing changes around us. They should take an active role in ensuring the continued prosperity and stability of natural resources, wildlife, and ecosystems for all people.

What is evident in these principles is that a core part of enhancing climate resilience is fundamentally about working with nature. The past 40 years has seen a significant loss of not just species, but also habitats and the ecosystem services that come with such areas. Freshwater biodiversity has been particularly hard hit (a decline of over 83% since 1970), leaving these ecosystems highly vulnerable to climate impacts. As we enter a period where we are increasingly in need of the climate resilience that nature offers, we've stripped away our defensive systems. Yet this is where opportunities also lie. Ecosystems, like businesses and society, are not static. They can be rebuilt, restored, and enabled. What is perhaps most exciting from a business perspective when it comes to nature-based solutions is that unlike built infrastructure, which invariably degrades through time, green infrastructure can not only improve through time (i.e., increase in asset value), but due to its self-repairing nature, often has much lower operational expenditures. However, to maximize the benefits and climate resilience provided by nature, nature itself needs help adapting to new and extreme changes brought about by climate change. Flexible adaptive management is a key trait to embed into corporate practices for stronger climate resilience. As you consider climate resilience actions, existing water stewardship strategies should be reviewed to group existing actions into one of the following three categories:

> Actions that already address climate change risk or help build climate resilience to some degree (*like a disaster response plan, for example, for existing risks that are already worsening or will in the future due to climate change*)

Actions whose success or failure depends on climate change, but are not currently designed to address it

Actions that have no relation to climate change whatsoever

Once actions are filtered, actions falling into categories A or B should be prioritized and where gaps emerge, entirely new activities not currently included in the strategy should be explored. Furthermore, solutions that naturally adapt to a changing climate should be favored. Nature itself is well-adapted to change in many circumstances and nature-based solutions often represent highly resilient solutions that can cope with change. Wetlands and riparian buffer strips can help reduce nutrient loading into ground and surface water by acting like a natural filter. In that way, they help mitigate physical water risk (related to water quality impairment) through natural processes.

As you filter through the actions, consider how these solutions might work under various scenarios. If a solution works well under different climate scenarios, it is likely well-suited to change. Evaluating potential responses against different scenarios helps to explore whether proposed responses are resilient to different futures.

It is also important that any strategy be responsive to a changing context. While strategy should never be static, a contextual water stewardship strategy has check points for reevaluation built in as best practice. Two future reports by WWF, "Putting Business Water Strategy into Context" and "Putting Water Targets into Context," will further unpack the need for dynamic and contextual water strategies to create business value. What is critical in this notion is that increasingly we are treating water, water targets, and more generally water strategy as much more dynamic than in the past.



STEP

Implement Smart Basin Resilience Responses: Responses Should Be Contextual, Responsive, Flexible, & Take Advantage of Nature-Based Solutions



Develop internal governance for dedicated capacity with resources, especially for building partnerships

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Implement at various scales and collaborate to enhance resilience at the basin level

As one turns to implementing the actions selected in Step 2, it is important to dedicate staff time and capacity with specific responsibilities assigned and coordinated. Ensuring that staff have both the resources and approvals to implement a program that addresses climate impacts and builds resilience in its various forms is just as important as ensuring there is an internal governance structure that facilitates decision making and effective mechanisms to tackle the problems at hand. In addition to improving a shared understanding of climate impacts and what climate resilience will mean, having a small team dedicated to climate resilience can assist different parts of a company's value chain to effectively mobilize.



Implementation needs to be undertaken in various forms and at different scales. The earlier report notes three types of interventions when it comes to implementation (each of which operate at different scales, from site to basin):

Engineered approaches such as infrastructure to control flooding or provide water

III Nature-based approaches that use ecosystems' natural benefits to help reduce impacts from hazards such as flooding, scarcity, or drought

IIII Investments in human capacity such as training programs to improve people's ability to understand and manage risks

Traditionally, there has been an overreliance on (I) above. The notions that dams will singularly stop flooding or universal adoption of drip irrigation will save us from drought are historically the primary logic that has been brought to the table. Engineered approaches such as dams and drip irrigation have created many unintended consequences. For example, dams often release water during extreme weather events to manage water levels in reservoirs, thus in fact exacerbating floods. Dams also stop floods from recharging groundwater and nutrients. Drip irrigation has also expanded production and driven greater water demand in many regions. While engineered options can be beneficial, these options must be considered as only part of the solution and coupled with flexible solutions-i.e., (II) and (III)-that build resilience and not just infrastructure. Nature-based solutions (II) help to restore many of the functions lost due to an overreliance on (I), while building local relationships and partnerships (III) will increasingly be critical to underpin collective action. It is worth noting that both (II) and (III) are likely to be more cost-effective means to build climate resilience, with (II) in particular becoming more effective at scale.

Building upon this point, it is critical to flag that **nature-based solutions provide the most benefits at larger scales.** For example, a local constructed wetland to capture pollution runoff and excess stormwater will still provide local benefits, but will not be as effective, especially for increasingly intense storms, as managing an entire watershed through protection and restoration of upstream forests or downstream wetlands. Accordingly, for companies to address their basin water risks in deep and meaningful ways, they will need to build partnerships in basins at scales needed to solve the shared water challenges that are driving the social and environmental problems they face. This notion has been at the heart of water stewardship for some time as well, highlighting the overlap in these concepts.

When prioritizing and potentially investing in nature-based solutions, it is also important to consider how they are directly vulnerable to climate change. Many projects have failed because they haven't evaluate their effectiveness under a changing climate —for example, mangroves that were planted without considering rising sea levels, or reforestation with trees that immediately die due to extreme drought or flooding. The return on investment of nature-based solutions, or the climate resilience benefits they provide, is greater if those solutions are also stress-tested and designed based on climate projections of prioritized impacts.

WHEN PRIORITIZING & POTENTIALLY INVESTING IN NATURE-BASED SOLUTIONS, IT IS ALSO IMPORTANT TO CONSIDER HOW THEY ARE DIRECTLY VULNERABLE TO CLIMATE CHANGE

Monitor, Evaluate, Report, & **Adaptively Manage: Link** Adapuvery munager – Climate-Water Risks & Water **Stewardship Responses**



STEP

Improve your monitoring for impact by harnessing innovative technologies such as remote sensing



Evaluate efforts to reconsider how climate resilience can be integrated into purposeful business models

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Align efforts on reporting for climate and water and ensure they cover material aspects of your value chain



Iterate: Be adaptive by leveraging the resilience framework to test, measure, and enhance work overtime

Perhaps one of the weakest areas of water stewardship performance has been around monitoring and evaluation, making the issue of adaptively managing for climate-water risks an area in need of attention.

Water data is inconsistently available globally and locally and many programs designed to solve water issues do not set up systems to measure outcomes. There are many low-tech solutions that can be installed to better understand the success of a program, including stream gauges, well sensors, and routine watershed health surveys. However, because watersheds are large and monitoring equipment needs maintenance over many years, program implementers concentrate on less meaningful,



cheaper mechanisms and easier metrics that can be measured under direct control and leave larger watershed-wide activities to public sector agencies, etc., thereby hindering attempts to understand the watershed impact of any water program.

What is promising in this regard, however, is the rapid expansion of new technologies—from remote sensing (RS) and Artificial Intelligence (AI) to Big Data and the Internet of Things (IoT). The ability to harness data for monitoring and evaluation has never been more cost viable. New, joint systems will be required to collaboratively work with near-real-time water data and increasingly these are becoming available (e.g., Global Flood Observatory, soil moisture mapping at the continental scale). Already, there are strong, regularly updated data sets that harness these approaches and can support monitoring and evaluation of climate-related water risks such as droughts and floods (see here for the data sources that underpin the Water Risk Filter, which can be adapted).

As such data becomes more readily available, there will be a need to also develop stronger systems for adaptive management. The ability to rapidly process data into actionable information to adaptively manage for change is a skill we encourage companies to develop.

Additionally, information can and should be gathered from various scales and stakeholders. Decision scaling and scenario planning are tools and processes that use regular stakeholder consultation alongside modeling analysis to determine "robust" actions—meaning they work under multiple climate extremes—under a range of different climate scenarios. These tools help identify win-wins, or solutions that work for multiple stakeholders, and allow for a range of levels of complexity, from simpler approaches to academic modeling exercises where economic performance is evaluated for specific proposed actions under multiple climate scenarios to determine the most optimal interventions that meet stakeholder priorities, are cost-efficient, and perform well under different climate extremes.

Throughout this report we have emphasized the need to not only consider the full value chain, including customers. As companies evaluate and engage on

these issues, they need to begin to understand the strategic value of a more comprehensive approach to water risk and resilience challenges. Companies need to recognize that this has value beyond efficiency and cost savings; purpose-driven companies are not simply more resilient, but in fact can develop new services and products as a means of growing their businesses. In addition to the potential for new revenue streams, in embracing resilience with purpose, companies can attract and retain talent and enhance customer/ brand loyalty.

Three Key Lessons about Building Climate Resilience from The Coca-Cola Company



ASSESSMENT

A holistic, landscape-scale approach to assessing risks and building resilience is critical.



ENGAGEMENT

Multiple sources of information, including anecdotes from local communities, regional data, and climate models are important in the development of targeted interventions.



INVESTMENT

Information exchanges, from affected communities and farmers to national-level scientists and vice versa, are integral in order to most effectively assess and manage risks. Managing for change means iterating and repeatedly evaluating, and reporting, efforts. The following questions aim to help as you go through this iterative evaluation process:

ASSESSMENTS AND TOOLS

Do your existing tools account for water and climate resilience across the value chain? Do you know if your actions already address climate change or help build climate resilience across your operations and supply chain? Does the success of your actions depend on climate change? Do your actions have no relation to climate change whatsoever?



WATERSHED AND LANDSCAPE (COLLECTIVE ACTION AND INITIATIVES)

Are your programs leading to the intended outcomes at the watershed or landscape level? Were there any unintended outcomes from your program? Do you see the environment improving in its ability to bounce back after climate shocks?

OPERATIONS (COLLECTIVE ACTION)

How effective will site-level actions be, or are joint efforts in the basin required? If it is the latter, are teams properly equipped to engage? What can be done at the landscape level to build climate resilience? How can companies get started?



SUPPLY CHAIN (COLLECTIVE ACTION, STANDARDS, AND INITIATIVES)

How can companies support suppliers to engage in forms of collective action/initiatives? Can existing standards be used to support collaboration at a local level between suppliers?



POLICY ADVOCACY (CORPORATE POLICY AND SECTORAL NORMS)

What kinds of policy changes are required and what can companies do as a sector to strengthen water and climate resilience?



CONSUMER ENGAGEMENT

How are your customers experiencing climate change and can you help to address their challenges through the products and services you provide (or even awareness through marketing)? In other words, can your business model be adjusted to help enhance their climate resilience? Lastly, we come to reporting and disclosure. These issues have always been core to the notion of responsible water stewardship. Indeed, sharing of data helps to align efforts and sets the stage for collective action and advocacy. From the development of CDP Water, to more recent adjustments to the GRI 303 (water) standard, WWF encourages companies to report on contextual water risks and responses, particularly as more investors are interested in environmental risks. With the arrival of TCFD, it has only increased momentum, but it must be recognized that climate impacts typically manifest as water impacts and as such, climate reporting often takes shape as water-related disclosure. Recent TCFD guidance on developing an enterprise-level assessment of climate-related risks is important to consider and is increasingly accounted for in tools aimed to support this work (e.g., Water Risk Filter Scenarios).

The key questions that companies should ask themselves around reporting are:

Are your assessments and reporting focusing on the most material aspects of your value chain? In other words, are you reporting on the parts of your business that matter when it comes to water? Are you capturing sustainability and environmental issues in your risk filing?

Are your assessments contextually responsive? In other words, are you focused on the issues that matter in that place, now and in the future?

Are you reporting on scenarios and discussing responses that are resilient? In other words, is your proposed solution future-fit?

Being able to answer these questions will not only help to shape resilience strategies but will also strengthen the ability of companies to respond to shareholder concerns as they are raised. Put simply, diligent reporting puts companies ahead of investors and prepares them for when climate-related questions arise.



CONCLUSION

In many regards, notions of climate resilience have long informed water stewardship. Understanding the context of water and ensuring engagement beyond the fence line are the basis for both good water stewardship and resilience. This report has sought to be a bridge between the climate community's approach to climate resilience and water stewardship. It offers a short, four-step process to walk companies through embedding climate resilience into existing water stewardship strategies.

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We encourage companies to bear in mind the following notions as they go through this process:



Climate change is a water-risk multiplier, amplifying existing risks and opportunities.



Water offers a strong starting place for companies to develop a climate resilience plan.



Water stewardship already embeds some aspects of climate resilience as both are an adaptive journey, but these two concepts become stronger when integrated.



All companies need to shift how they are responding to water to better account for climate resilience.



Like climate resilience, water resilience cannot be fully achieved at the site scale. It requires basin-level efforts and much greater attention on nature-based solutions—accordingly, it will require a strong focus on building relationships and partnerships in basins.

Mot

Water stewardship efforts need to continue to better embrace climate resilience thinking, and WWF will develop tools in support of this briefing. As stated, climate resilience, like water stewardship, is a journey, but one that has the potential to not only protect businesses from climate impacts but also drive greater competitive advantage over peers who do not protect themselves and fundamentally reframe business strategy for the better. Many companies seek to implement water stewardship strategies as well as programs that ensure their business is building necessary climate resilience in key areas.

Climate change reinforces the notion that water is the ultimate shared resource. We can only manage it sustainably if all water users in a river basin work together. Businesses, every level of government, and local communities must collaborate to ensure water is responsibly governed and shared. Creating a water-secure future means that we need to take into consideration the impacts of climate change and ensure that our freshwater resources are climate resilient. It is our hope that businesses will use the four-step approach outlined here to embed climate resilience thinking into a water stewardship program, and in the process, better secure water for people and nature under a changing climate.

> CLIMATE RESILIENCE, LIKE WATER STEWARDSHIP, IS A JOURNEY, BUT ONE THAT HAS THE POTENTIAL TO FUNDAMENTALLY REFRAME BUSINESS STRATEGY FOR THE BETTER

A CASE STUDY ON FRESHWATER

Water is a priority sustainability issue for The Coca-Cola Company (TCCC). Building on its water stewardship work of the past 15 years, TCCC has increasingly prioritized adding resilience to its water sustainability programs and strategy.

Through a pilot program with WWF in Guatemala's Pasabien watershed, TCCC gathered learnings for the greater Coca-Cola system, reflecting the recommended steps for business action described in this report. The Pasabien watershed is relevant for TCCC's bottling operations, as both an agriculture commodity sourcing region and a consumer market.

udra Melton / WWE-LIS

THE COCA COLA COMPANY

ASSESS WATER RISKS & OPPORTUNITIES

TCCC began by evaluating its regional priorities for producers, bottlers, and products and determined, via collaboration with WWF, that the Sierra de Las Minas landscape and larger Motagua watershed were priorities for risk assessment and resilience action planning.

Key criteria used included:

Business touchpoints through bottling operations and agricultural ingredients sourcing

2 Existing history of engagement to develop integrated watershed management plans

3 Potential for conflict over limited water resources

Current and potentially worsening climate change impacts

WWF and TCCC determined that risk analysis should be strengthened to understand future climate change impacts, to help address the adaptation needs for communities and freshwater ecosystems, and to build resilience in the landscape for the long term.



STEP TWO DEVELOP WATER RISK RESPONSES TO BUILD CLIMATE RESILIENCE

TCCC and WWF have been leading on water stewardship in the Pasabien since 2007 with the establishment of the La Sierra de las Minas Waterfund, the work to advance Integrated Water Resource Management (IWRM), and the implementation of water-efficiency programs in the operations. Watershed risk assessments guided investment in replenish and watershed protection, fire prevention, and reforestation programs.

With the new insights on expected climate change impacts, many existing water stewardship activities needed to be either updated or redesigned to explicitly tackle climate change, now and in the future. For example, reforestation has been a very useful and important exercise to address sedimentation, groundwater recharge, or reduced flood risk, and the integration of climate resilience in water stewardship provided more granular information, including which areas were most important to reforest to reduce risks of hazards like flooding or landslides.

Further, it was clear that stakeholder and community engagement would play an even bigger role under climate change. WWF had already led an established stakeholder engagement process to develop integrated watershed management plans for the Pasabien and neighboring Teculutan basins in the Sierra de Las Minas region of Guatemala. There were already a number of actions in that plan that were important for building resilience—like strengthening local water management institutions or creating maps of risks like landslides, fires, and flooding—but not explicitly designed to account for the multiplier effect of climate change. WWF's Climate Resilience team worked with colleagues in Guatemala and stakeholders on the ground in the basin to assess the activities in these existing plans for their climate relevance, as part of this first step toward building a resilience action plan.





STEP THREE IMPLEMENT CONTEXTUAL, RESPONSIVE, & NATURE-BASED SOLUTIONS

The partners then identified opportunities for action where climate change created new and unseen risks to the local community and TCCC bottling operations and where more needed to be done. Working with the national climate change institute in Guatemala, the partners further identified areas of high risk so that they could begin planning interventions like an early warning system for drought, protected area management in the headwaters of the basin, and reforestation using tree species adapted to changing conditions.

For example, TCCC will increasingly use the early warning system for flooding and hazard maps produced by ICC to guide future reforestation efforts that are more resilient to these increasing risks of climate change.

STEP FOUR MONITOR, EVALUATE, & REPORT

TCCC and WWF mapped this process to distill lessons important for the company's resilience as well as ecosystems and communities that support it, e.g., by integrating the learnings in its 2030 Water Security Strategy.

For example, climate resilience will be integrated into the local and global risk assessments and identification of priority locations. The aim is to drive greater focus to high-risk water regions and become more resilient through regenerative water use in bottling operations.

The climate resilience approach will also lead to a more holistic approach to replenishment and contributions to watershed health. Community water programs will reach beyond Access to Water and Sanitation (WASH) and explore with partners how to adapt community infrastructure and water services to the local impacts of climate change.

TCCC sees this as a journey that will require constant evaluation and adjustment through robust internal governance processes, collective action, and trusted partnerships.

