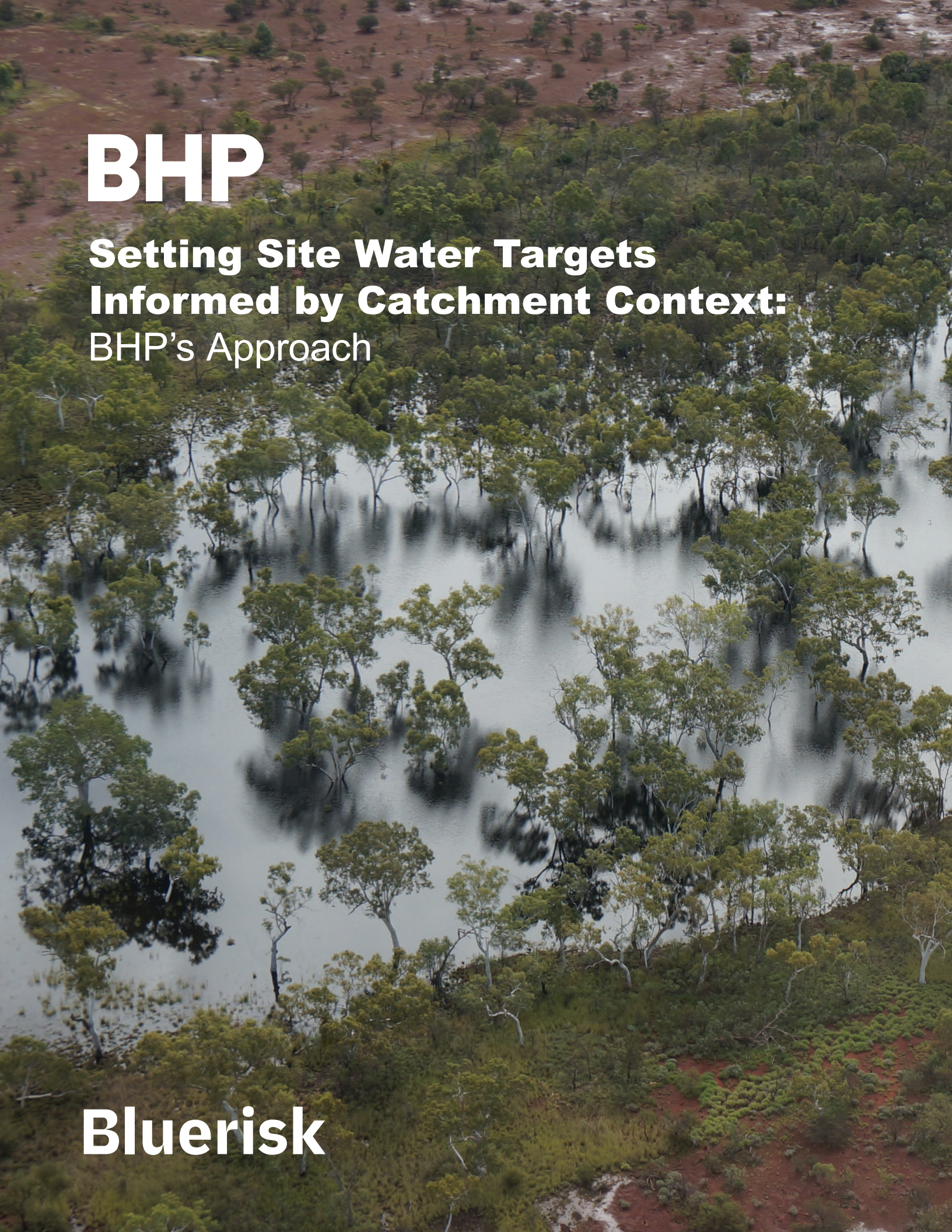

BHP

Setting Site Water Targets Informed by Catchment Context:
BHP's Approach

Bluerisk

Setting Site Water Targets Informed by Catchment Context:
BHP's Approach

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Contents

About This White Paper

Objective

The objective of this white paper is to share BHP's approach to setting context-based water targets (CBWTs) by applying three principles for setting site water targets that reflect the catchment context (UN Global Compact CEO Water Mandate et al. 2019). The targets should be

- **Meaningful:** water targets should respond to priority water challenges within the catchment and contribute to meeting the UN Sustainable Development Goals (SDGs) (Appendix 1);
- **Site and catchment-relevant:** the ambition of water targets should be informed by the site's scale and contribution to water challenges and desired catchment conditions; and
- **Risk- and opportunity-based:** water targets should reduce operational, catchment and regional water risk, capitalise on opportunities and contribute to public policy priorities.

At the time this white paper was written, to the best of our knowledge, there were limited examples of how to operationalise the three principles listed above. By sharing this approach, we seek to stimulate timely discussion and critical feedback to inform ongoing debate on how practitioners can set site-level CBWTs. Because BHP's target-setting approach is currently under development, the information presented here should be considered preliminary and may be revised and updated over time.

This white paper is not intended as a stand-alone document, but rather as a practical resource to illustrate how a major resources company is operationalising the three principles for setting site-level CBWTs. Given that most BHP sites had not yet set targets at the time this white paper was written, the paper shares key lessons learned on how to assess the context, and outlines a proposed approach to setting targets using this context. Specific catchment information and CBWTs for each operated asset will be published by BHP once they are completed.

To make the most of the information provided here, practitioners are encouraged to read and understand the guidance outlined in "Setting Site Water Targets Informed by Catchment Context: A Guide for Companies" (UN Global

Compact CEO Water Mandate et al. 2019) before attempting to apply the information shared in this white paper.

In this white paper, the project team defines CBWTs as time-bound water targets that:

- Are set at the level of an operating site, or at a group of physically co-located operating sites ('asset level'). For BHP, and for the purpose of this white paper, an 'asset' refers to one or more sites which are managed as an integrated operating unit, in one geographic location, that extract common minerals and are operated by BHP;
- Are made publicly available;
- Aim to improve the company's management of water;
- Aim to support shared approaches to water resource management within the regions where the company operates; and
- Contribute to meeting the company's water stewardship vision and commitment.

Audience

This white paper is intended for three principal audiences within companies with a small number of large operational sites with water-related activities, located in different catchments:

- **Practitioners at a corporate level,** who are responsible for seeing that CBWTs are set and for supporting business units and assets with respect to setting water targets;
- **Practitioners at a corporate and asset level,** who are working with sites to set their CBWTs and support their water resources strategic planning and operational management efforts more broadly; and
- **Practitioners at an asset level,** such as technical water specialists and hydrologists, who are charged with identifying and implementing activities that can contribute to meeting a CBWT.

This white paper is also intended for secondary audiences, including practitioners within government agencies, other industrial sectors, and organisations interested in advancing or contributing to corporate water target setting efforts.

Context – background to BHP

BHP has a Water Stewardship Position Statement which includes a vision for a 'water secure' world by 2030 and a commitment that each operating asset will set CWBTs (Appendix 2). BHP's assets are exposed to a broad spectrum of water-related risks (BHP 2020a) because of the nature and location of BHP operations (Box 1) (BHP 2022). BHP interacts with a diverse range of water resources, including ground, surface, and sea water.

Its operations use water in a variety of ways, for example, from processing ore and controlling dust in mining operations to cooling and enhanced product recovery in petroleum operations. BHP also handles and manages water in other ways, such as diverting and pumping surface and groundwater to access ore and protect operations from storm events.

BOX 1. ABOUT BHP

BHP is a leading global resources company headquartered in Melbourne, Australia, with products sold worldwide. BHP is focused on the resources the world needs to sustainably develop and decarbonise: copper for renewable energy; nickel for electric vehicles; iron ore and metallurgical coal for the steel needed for global infrastructure and the energy transition; and potash for sustainable farming. Around 80,000 employees and contractors work at BHP.

Revenue* for FY2021 was US$60.817 billion.

* Revenue is based on BHP Group realised prices and includes third-party products.

Approach

The approach outlined in this white paper has been developed for a global resources company with a small number of large, long-life fixed assets that have large local footprints and strong interconnections with surrounding communities. The company seeks to enable its operated assets, regardless of their geography, in terrestrial and marine environments, to set water targets in a consistent way that would

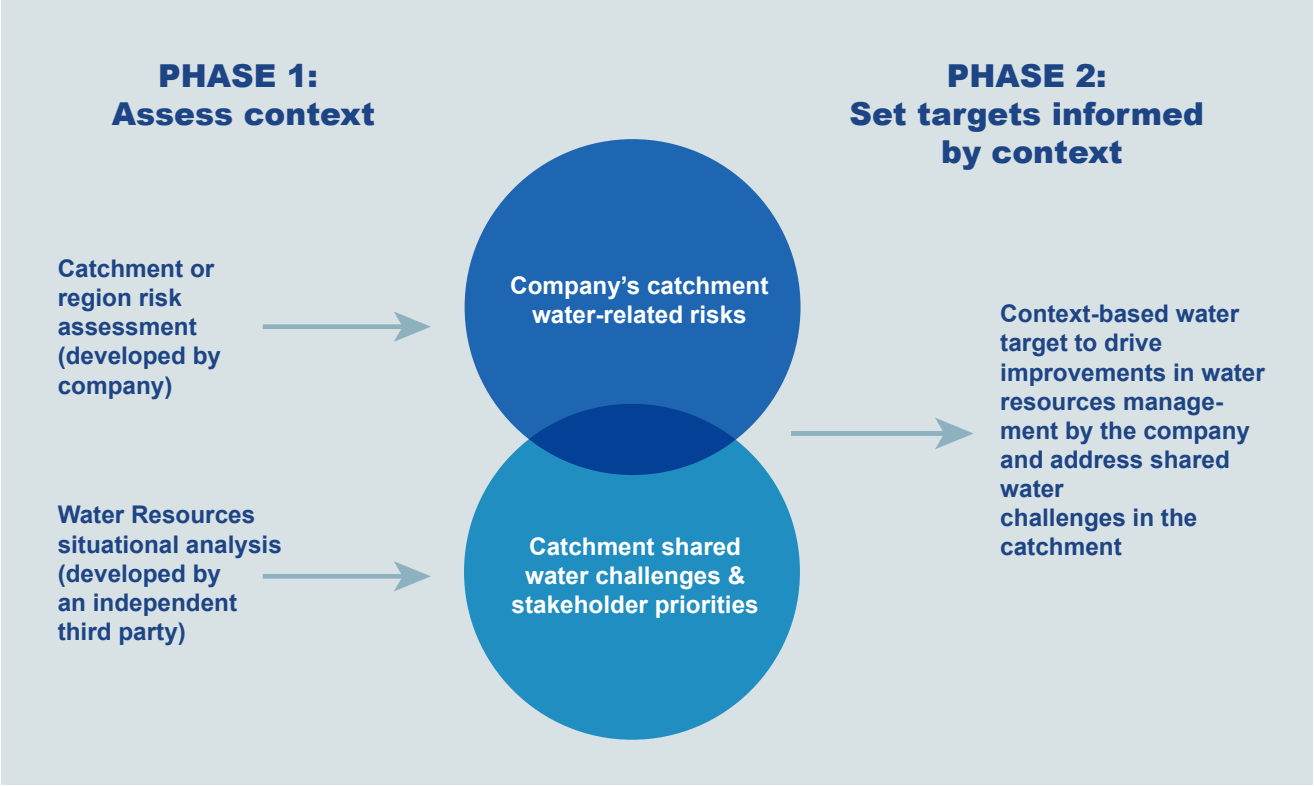
- Improve the company's management of water and support shared approaches to water management within its operating regions;
- Strengthen the assets' relationship and trust with local stakeholders;
- Incorporate best practice, elements and recommended actions for effective water target setting (UN Global Compact CEO Water Mandate et al. 2019, Abraham et al. 2020, Kammeyer et al. 2019, and Baleta and Shiao 2020);
- Fulfil sector and company-level water stewardship commitments (for BHP these include ICMM's Water Stewardship Position Statement (ICMM 2017) and BHP's Water Stewardship Position Statement (BHP 2019));
- Meet internal company requirements (such as BHP's Environment and Climate Change, and Risk Management requirements); and
- Comply with internal company standards (such as BHP's Water Management Standard).

By setting site water targets that reflect the catchment context, assets can address shared water challenges and in doing so help reduce water-related business risks both to the asset and to the company more broadly. To that end, the approach includes two phases (Figure 1), both designed to be applied at the asset level:

- **Phase 1: Assess context** to identify water-related risks, shared water challenges, and stakeholder priorities; and
- **Phase 2: Set targets informed by context** to guide assets in setting CBWTs and documenting the business case and value proposition.

The two phases are described in further detail later in this white paper.

FIGURE 1. TWO PHASES TO SETTING CONTEXT-BASED WATER TARGETS



Useful terms

Asset: For BHP, this means one or more sites with water-relevant activities which are managed as an integrated operating unit and operated by BHP. Those considered in this paper are co-located in one region and extract common minerals.

Catchment: The area of land from which all surface runoff and subsurface waters flow through a sequence of streams, rivers, aquifers, and lakes into the sea or another outlet at a single river mouth, estuary, or delta; and the area of water downstream affected by the site's discharge. Catchments, as defined here, include associated groundwater areas and may include portions of water bodies (such as lakes or rivers). In different parts of the world, catchments are also referred to as watersheds or basins (AWS 2019).

Collective Action: Coordinated engagement among interested parties within an agreed-upon process in support of common objectives. Collective action can take a variety of forms, ranging from a relatively informal exchange of perspectives to highly structured processes of joint decision making, implementation and accountability. A successful collective action will typically build from a shared sense of risk, responsibility, and benefit among interested parties, and the collective action process will emphasise joint, two-way dialogue that leads to stronger outcomes than those achievable through unilateral action (UN Global Compact CEO Water Mandate 2013).

Context-based water target: Also referred to as site water targets informed by catchment context or contextual water target. They are intended to describe a site's contributions to achieving a strategic objective for one or more priority shared water challenges, and enable the asset to define actions required to reduce risk, address shared challenges, and support the attainment of the desired catchment condition.

Regional area of influence: The asset's regional area of influence refers to the land and marine area relevant to the site's water stewardship actions and engagement. It should incorporate the relevant terrestrial catchment(s) or marine environment but may extend to relevant political or administrative boundaries. It is typically centred on the site's physical location but may include separate areas where the origin of water supply is more distant (AWS 2019 modified by authors).

Root cause: For the purpose of this white paper, root cause refers to the initiating cause of a shared water challenge. Where a shared water challenge is identified, it is important to understand its initiating cause to develop appropriate mitigation actions, and know whether collective action is appropriate. For example: what is the cause of a decline in water levels in a borehole used by the local community? It could be caused by high extraction by nearby users, caused by a general decline in water levels across the catchment, happened because the borehole is becoming clogged.

Shared water challenge: A shared water challenge is a water-related issue, concern, or threat shared by the site and one or more stakeholders within the catchment(s). Examples include physical water scarcity, deteriorating water quality, and regulatory restrictions on water allocation (AWS 2019).

Shared vision: The shared vision refers to the desired outcome or strategic goal relating to the reduction or elimination of a water challenge. For example, the shared vision for a polluted-water area could be to achieve a certain water quality status that is required to sustain the needs of the local community's domestic, agricultural, and water users.

Strategic objective: Strategic objective refers to a common goal shared with other catchment stakeholders that contributes towards meeting the shared vision. A good strategic objective should aim to minimise or eliminate the root cause of at least one shared water challenge and describe the catchment outcomes it aims to achieve (i.e. the shared vision), considering changes in catchment context over space and time. While helpful, a good strategic objective does not require a measurable desired result or list of actions to be taken to help achieve the desired result. Examples of good strategic objectives could include: 'manage groundwater withdrawals to help restore sustainable groundwater recharge rates', 'enhance the local water infrastructure distribution system to increase access to water to local communities', or 'reduce nutrient loading from agriculture to restore downstream freshwater and coastal ecosystem services'.

Target: See ‘Context-based water target’.

Target options: Different targets under consideration for further refinement or selection, which could contribute to the achievement of a desired strategic objective.

Target pathway: Suite of interventions or actions to be implemented to achieve a desired target, including the business case and value proposition, monitoring and evaluation requirements, key milestones, timelines, roles, responsibilities, indicative cost, and proposed funding sources.

Target pathway options: Different target pathways under consideration which could contribute to the achievement of a desired target.

Water resources situational analysis (WRSA): Public-facing process and document, led by an independent third party in consultation with external stakeholders, designed to identify shared water challenges, their root causes, shared vision, and collective action opportunities, in the site’s regional area of influence.

Abbreviations

AWS	Alliance for Water Stewardship
CBWT	Context-Based Water Target
ICMM	International Council on Mining and Metals
SDG	Sustainable Development Goal
UN	United Nations
WRSA	Water Resources Situational Analysis

PHASE 1: Assess Context

To identify water-related risks, shared water challenges, and stakeholder priorities, BHP's approach has been to have assets start by completing a catchment water risk assessment and water resources situation analysis (WRSA).

Catchment water risk assessment

The catchment water risk assessment is a document BHP develops for internal purposes to help the asset identify and manage water-related risks and opportunities within the catchment. The water risk assessment is developed by following internal environment and climate change requirements (BHP 2020b) and an internal risk management standard and guidance note for water risk management, which outlines specific requirements for how to evaluate and manage water-related risks.

Although some of BHP's risks are directly related to water (e.g. a water supply shortage), many risks have water as a causal factor, such as

- Geotechnical instability and safety risks caused by elevated pore pressures in pit slopes and tailings dams, and
- Environmental, cultural or community impacts associated with mine dewatering activities.

Because of that, water risk assumptions, variability, internal and external uncertainties, decisions and trade-offs, treatment time frames, and interdependencies must be understood within the assets' surrounding catchments and jurisdictions. To establish the context for water-related risk management, the risk identification approach considers the following water-related activities:

- planning and design
- operations
- water supplies
- operational water management
- water-related impact management
- compliance.

To assess water-related risks, each asset incorporates the identified water-related risks into the asset risk register and processes and reviews the risk outcomes, technical assumptions, risk rankings, and risk controls and control effectiveness every year to assess whether the risk assessment should be updated in response to any changes in the internal or external context.

The following information is documented during the water-related risk assessment:

- A description of the technical, regulatory and production scheduling (or planning) variability and uncertainty;
- Water interdependencies with other risk management activities (e.g. water as an input to geotechnical and tailings design, and closure);
- Benchmark impact time frames, operational limitations, and the practicality of treatment measures; and
- Current and emerging risks with common impacts and controls, using a "bowtie" method to estimate their combined likelihood.

Special attention is required to understand the timeframes needed to identify and prepare for risks, which in some cases can take over five years to emerge and therefore need to be embedded into the core business processes to manage risks through long-term mine plans.

Water resources situational analysis

The WRSA is intended as a public-facing document, developed by an independent third party in consultation with regional stakeholders, to:

- Identify and document regional shared water challenges, their root cause or causes, and shared vision and collective action opportunities, based on publicly available information and stakeholder input; and
- Establish or strengthen relationships and trust with and between stakeholders and stakeholder groups that can support an ongoing exchange on critical information over time on shared water challenges as well as on solutions to improve water management and increase resilience.

The WRSA is informed by:

- Publicly available information on regional shared water challenges and their root cause, including but not limited to:
  - The sustainability of and impacts on the volume and quality of water resources, and related environmental, social or cultural values, taking into account interactions of all other parties and climate change forecasts (in line with SDGs 6.3, 6.4, 11.5, and 13.1);
  - The state of water infrastructure, water access, sanitation and hygiene of local communities (in line with SDGs 6.1 and 6.2);
  - The environmental health of the catchments that feed the water resources taking into account the extent of vegetation, run off and any conservation status of the area (in line with SDG 6.6); and
  - Water governance arrangements and their effectiveness (in line with SDG 6.5).
- Stakeholder input, from key stakeholder groups across sectors, to support a shared understanding and approach to water management.

In line with the need to transparently disclose water-related risks, management, and performance

Box 2. Independent Third Parties

Independent third parties working with BHP to develop WRSAs when this white paper was written included:

- Alluvium Consulting
- CSIRO Chile Research Foundation
- Curtin University
- Goyder Institute for Water Research
- The Gulf of Mexico Alliance
- The University of Queensland Sustainable Minerals Institute (SMI)
- The University of the West Indies at St. Augustine
- The University of Western Australia

at an asset level, each WRSA is developed with the intention that it will be made publicly available. The aim of sharing the results of the WRSA is to stimulate opportunities for coordinated collective action on water, by helping build a common understanding of the shared water challenges and stakeholder priorities with other water users.

It is important that the results are trusted by external and internal stakeholders alike, therefore WRSAs should be conducted by a credible, independent third party, such as a research institute or university, working individually or in coalition with other local experts outside the company (Box 2). The third party carrying out the WRSA should be trusted by the catchment stakeholders and have demonstrated experience in stakeholder engagement and in assessing the environmental, social, cultural, and economic aspects of water resources within the area surrounding each asset.

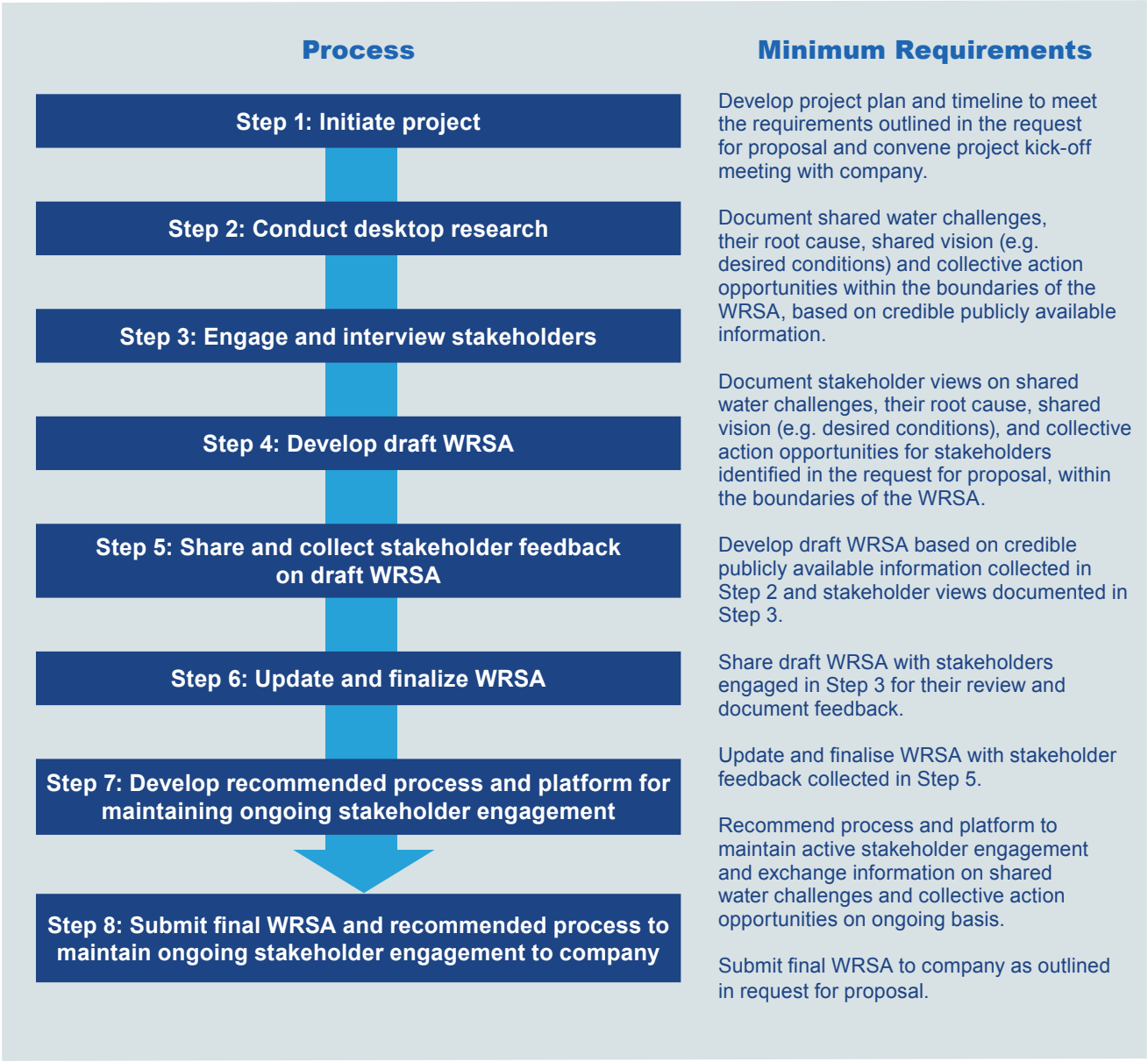
The first step in the process, prior to engaging the third party to develop the WRSA (Figure 2), is to establish the geographic boundary of the WRSA. Based on BHP's experience so far, the following considerations are important to keep in mind while defining the geographic boundary of the WRSA:

- The asset's regional area of influence and surface and groundwater catchment boundaries should be recognised.
- The area should be large enough to include shared regional water issues and challenges now and in the future, and not be focused solely on the asset's water issues alone.
- The boundary should be defined in such a way that the targets are achievable and can deliver measurable outcomes in the area.
- The boundary should make sense to stakeholders, by incorporating appropriate physical, social, cultural, and administrative jurisdictional boundaries.

To do this, each asset should engage a cross-functional team of practitioners from the asset to help inform the selection of the geographic boundary, including representatives from:

- operations
- health, safety and environment
- community and Indigenous affairs
- government relations
- corporate affairs
- social value
- water planning and technical
- legal
- water risk and stewardship.

FIGURE 2. PROCESS TO DEVELOP A WRSA



PHASE 2: Set Targets Informed By Context

With the information obtained from the catchment-level risk assessment and WRSA, assets then start the process of setting public, context-based, business-level CBWTs (Figure 3).

At the time this white paper was written, BHP was trialling the approach for setting CBWTs. This remaining information should be considered preliminary and may be revised and updated over time.

Further, this section was designed to meet the needs of BHP assets and should be adapted or modified prior to being used by other organisations.

FIGURE 3. STEPS FOR ASSETS TO SET CBWTS

		OBJECTIVE
1	**Identify priority water challenges**	• Confirm and/or increase asset understanding of water risk drivers and long-term threats to water resources; and • Make sure new asset water targets address water risks and stakeholder shared water challenges.
2	**Develop target and pathway options**	• Identify water targets options that address asset water risks and priority shared water challenges; • Test potential target options against key opportunity assessment criteria; and • Socialize target options with asset leadership and key stakeholder groups.
3	**Develop preferred target pathway**	• Select preferred target options based on asset leadership and key stakeholder input; and • Develop target implementation pathway to ensure timely delivery of desired outcomes.
4	**Publish and implement targets**	• Integrate target implementation pathway into planning and budget cycles; • Publish targets; • Monitor implementation, evaluate need to adapt; and • Disclose progress.

Step 1: Identify priority water challenges

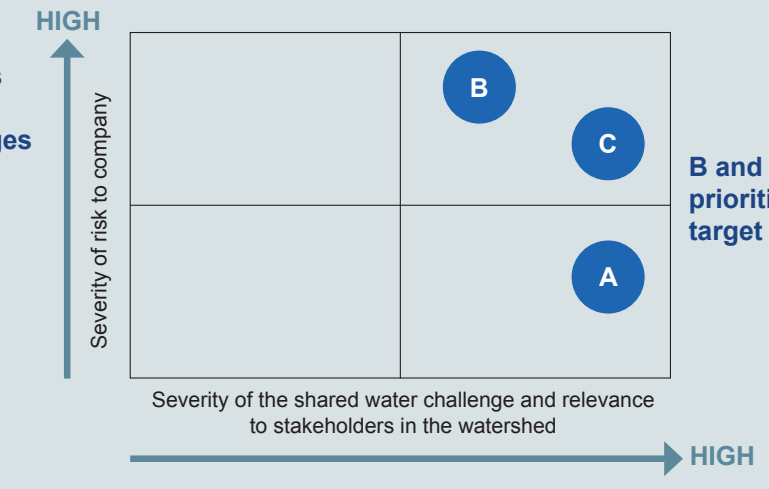
To make sure targets respond to priority water challenges within the catchment, assets should use the results of the catchment-level risk assessment and WRSA to identify which shared water challenges are most relevant and important based on the level of asset-related risk and opportunity the water challenge poses and the local stakeholders' priorities.

An output synthesising the results from the catchment-level risk assessment and WRSA, such as a summary table or a chart, can be helpful to rank and prioritise shared water challenges based on results of both the internal and third-party assessments (Figure 4).

FIGURE 4. EXAMPLE OF HOW TABLES AND CHARTS CAN HELP RANK SHARED WATER CHALLENGES AND RISKS

	FROM CATCHMENT WATER RISK ASSESSMENT RESULTS	FROM WRSA RESULTS				
	Water-Related Risk	**Shared Water Challenges**	**Root Cause**	**Desired State**	**Relevant Stakeholders**	**Relevant Ongoing Efforts**
A	Regulatory and reputational risks stemming from limited regulatory oversight of non-point source pollution from agriculture.	• Poor water quality threatening healthy aquatic ecosystems	• Contaminated urban stormwater • Run-off from agricultural land	• Good water quality status that can support healthy aquatic ecosystems	• Companies in agricultural industries • Water authorities • Municipal councils	• Government water quality program • Natural resource investment program • Municipal wetlands program • Watershed partnership for river health
B	The cumulative impacts of mining activities alter surface and groundwater quantity within the catchment effecting long-term water availability.	• Reduced water volumes and/or availability	• Increased water consumption by agriculture, mining and other heavy industry • Changed rainfall & flow patterns • Reduction of groundwater recharge	• Sustainable surface and groundwater balance	• Companies in the mining, and agricultural industries • Water authorities • Irrigation water authorities • Local and state government	• Central government water supply strategy • Sustainable agriculture water alliance • Local mining industry council
C	Regulatory and reputational risks stemming from limited regulatory oversight of the cultural and spiritual connections to water	• Limited recognition of cultural and spiritual connections to water	• Poor regulatory oversight • Changed rainfall & flow patterns	• Strong recognitions and protection of the cultural and spiritual value of water	• Indigenous communities • Water authorities • Local and state government	• Indigenous land and water program • Central government water supply strategy • Natural resource conservation program

Prioritise water-related business risks and shared water challenges



B and C can be prioritised for target setting

BOX 3. Target Project Charter

The target project charter should document:

The shared water challenge and water-related risk the target aims to address;

The shared vision in the basin;

The strategic objective the target contributes to;

The business case and value proposition;

Detailed information on desired outcomes and impacts;

How the asset will measure success;

What key performance indicators will be used, at what frequency, with what data, and by whom;

The activities required to achieve the targets;

Key milestones and dates;

Roles and responsibilities; and

Indicative cost to meet the target and sources of funding.

Step 2: Develop target and pathway options

For the identified priority shared water challenges, assets should identify potential strategic objectives based on the WRSA results. A strategic objective is a common goal shared with other catchment stakeholders that contributes towards the shared vision for the catchment.

A good strategic objective should aim to minimise or eliminate the root cause of at least one shared water challenge and describe the catchment outcomes it aims to achieve. For example, objectives like these might serve:

- 'Reduce the impact of groundwater withdrawals through managed aquifer recharge to help restore sustainable groundwater recharge rates',
- 'Enhance the local water infrastructure distribution system to increase access to water to local communities', or
- 'Reduce nutrient loading from agriculture to restore downstream freshwater and coastal ecosystem services'.

For each strategic objective, assets define potential target options, each of which may be an outcome or process-oriented target. Each potential target can then be assessed, using principles and opportunity assessment criteria (Appendix 3) to:

- Score and rank target options based on what aspects are most important for the asset and catchment stakeholders;
- Make sure the ambition of water targets is informed by the site's scale and contribution to water challenges and desired conditions in the catchment, reduces water-related risk, capitalises on opportunities, and contributes to public policy priorities; and
- Identify flaws or weaknesses that otherwise might go unnoticed.

Using tables and charts (Figure 5), assets build on the average opportunity scores for each target to choose between options and identify which target offers the greatest strategic opportunity for the company to address risk by improving how the asset manages water resources and supporting shared approaches to water management within the catchment.

Before starting Step 3, all assets socialise the proposed target and pathway options internally within the company, get directional endorsement from business leadership, and, when possible, engage external stakeholders to share the proposed target options, particularly those stakeholders engaged during the development of the WRSA.

Step 3: Develop preferred target pathway

After internal socialisation, business leadership directional endorsement and external stakeholder engagement, assets develop a proposed target pathway using a target project charter (Box 3) for the preferred target identified in Step 2.

Before starting Step 4, assets socialise the proposed target pathways and get business, executive, and senior leadership approval.

Step 4: Publish and implement targets

In line with the need to transparently disclose water-related risks, management, and performance at an asset level, each asset will publish its context-based asset-level water targets as a deliverable of the company's suite of public targets.

The activities required to achieve the targets, as outlined in the pathway development work, have to be integrated into each asset's core business planning and delivery processes. Progress towards meeting water targets should be integrated into internal monitoring and reporting processes so that it can be shared across the company and disclosed publicly on a regular basis.

Recognising that context can change and that new lessons may emerge while implementing the targets, assets should develop a process to conduct mid-term evaluations to revisit the results of the WRSAs and basis for the CBWTs.

FIGURE 5. EXAMPLE OF HOW TABLES AND CHARTS CAN HELP IDENTIFY STRATEGIC OBJECTIVES AND CONTEXT-BASED WATER TARGET OPTIONS

	Examples of shared water challenges to be addressed	Examples of strategic objectives (i.e. the strategic imperative to aim towards)	Example of context-based water target options (i.e. company's contribution to the strategic objective)	Target score (from Appendix) (doesn't meet expectations = 1, meets expectations = 2, reflects global leadership = 3)	Indicative cost to 2030 (i.e. low, medium, high)
A	Poor water quality threatening healthy aquatic ecosystems	Reduce sediment, nutrient, and pesticide loading to catchments to support healthy aquatic ecosystems	Increase rehabilitated land versus disturbed land on mining lease by 30%	3	Medium
			Support external organizations to reduce 220 tones of nutrients from being released to the environment.	3	Medium
B	Reduced water volumes and/or availability	Reduce water consumption to ensure water availability for healthy aquatic ecosystems, cultural connections, and prosperous communities	Provide 80% treated wastewater for direct beneficial reuse by agriculture	2	High
			Eliminate 100% of groundwater abstraction by 2030	3	High
			Collaborate with industry to develop water savings trading platform	2	Medium
			Fund collaborative basin model to define sectoral water allocation caps on annual basis informed by seasonal climate forecasts	3	Low
C	Limited recognition of cultural and spiritual connections to water	Increase awareness and regulatory oversight of the cultural and spiritual value of water within the basin	Develop company value of water awareness month	1	Low
			Conduct a social and cultural value of water impact assessment across all operations and supply chains	2	Low
			Join local industry and civil society working group to support the development of a cultural and spiritual value of water policy	3	Medium

Discussion and Learnings to Date

BHP is at the beginning of its journey to set asset-level CBWTs. The company will undoubtedly continue to learn and adapt over time in response to insights gathered from experience, stakeholder engagement, and changes in the catchments in which it operates.

The approach documented in this white paper was developed for BHP, a global resources company with a small number of large, long-life fixed assets, with a large local footprint and strong interconnections with surrounding communities. However, there have been a number of key learnings so far that other companies embarking on this journey may find useful as they set out to understand water-related risks, catchment shared water challenges, and stakeholder priorities at the locations where they operate. These include key points on getting started, understanding the catchment context, stakeholder engagement, communication, and driving collective action. Another key learning is that process matters.

Getting started

- Conducting the water risk assessments and WRSAs and engaging stakeholders in credible and meaningful ways can take a lot of time. Conducting the WRSA alone can take from four to eight months, depending on the catchment and information available. Companies will have to take a long-term view and work with their assets to set appropriate timelines and expectations to allow the approach to be fully implemented and lead to meaningful catchment outcomes.
- Because this approach was being applied for the first time and there are limited examples of how to operationalise CBWTs, some concern arose over the implications of: having an independent third party conduct the WRSA, engaging stakeholders during the WRSA, and publishing the results. In response, before starting the WRSA, each asset completed an assessment of the potential threats to and opportunities for the asset of implementing this approach. By doing so, assets were able to identify appropriate controls to risks and to pursue opportunities that overall enhanced the long-term asset support for this approach.

Understanding the catchment context

- Meaningful and collaborative catchment solutions can only be informed by data that are trusted and representative not only of the company's views but also that of the stakeholders in the catchment. Accordingly, BHP's WRSAs were conducted by credible, independent third parties that were trusted by stakeholders and capable of assessing the catchment context independently of BHP's views of the region. Suitable candidates to conduct the WRSA include organisations that have expertise in water resource management, desktop research, and stakeholder engagement, as well as in project delivery and communication. BHP assets found that it is often most effective for multiple third parties to work together to contribute complementary skills and achieve the capabilities required.
- To obtain an independent and unbiased view of the shared water challenges and stakeholder priorities, it is important that a company applying this approach remains independent of the information-gathering process and not influence the findings of the WRSA. To achieve that, BHP assets set clear terms of reference with any third-party organisation(s) conducting the WRSAs to help the project meets its goals without the risk of BHP influencing or being seen to influence the specific findings. Assets participated in the WRSA development process as one of the stakeholders to be engaged by the independent third party(ies) conducting the WRSA.

Stakeholder engagement

- BHP assets are located all over the world in a wide variety of environmental, social, and cultural settings. During the development of the WRSAs, BHP assets found that, ultimately, different engagement approaches and timelines were required for different stakeholder groups. For example, conventional corporate stakeholder engagement processes and timelines appropriate for engaging other industries in the catchment may not be culturally appropriate or meaningful for engaging with local Indigenous people.
- Developing WRSAs in collaboration with local stakeholder groups highlighted the importance of understanding stakeholder expectations and priorities for engagement early on, in ways that allow assets to develop and implement approaches to engagements that are in line with stakeholder expectations. This is particularly the case when water resources and the natural environment more broadly underpin both the cultural and spiritual values of the communities across a catchment.

Communication

- The target audience for information is a really important consideration when preparing materials for publication. At BHP, all assets asked the independent third parties conducting the WRSAs to prepare the final results in an accessible format, one that ideally would not exceed ten pages, written in the language of the region, and including, whenever possible, visual aids to help synthesise and communicate results in a clear and concise way. This kind of preparation can help make the information more accessible to stakeholders in the catchment and ultimately drive more stakeholder engagement during the identification and prioritisation of opportunities to contribute to collective action and long-term catchment outcomes.

Driving collective action

- BHP started this process with the intent of meeting its water stewardship commitment (Appendix 2) by setting two CBWTs at each asset: one to improve water management within the asset, and one to support shared approaches to water management within the regions where the asset operates through collective action. However, initial engagement with assets and other stakeholders quickly revealed that targets are not the best way to drive asset engagement in collective

action, given that a company cannot commit to others taking action.

- In response to this learning, BHP adapted its approach by removing the distinction between internal and collective action water targets. Moving forward, CWBTs will address shared challenges in the catchment. Targets can be met through internal actions within the company, as well as through external actions in the catchment, and in collaboration with others. Engagement in collective action will take place outside the realm of CBWTs as a centrepiece to BHP's water stewardship strategy.

Process matters

- BHP's experience so far has only reinforced that engagement and knowledge sharing, across stakeholder groups, is critical to build a common understanding of water-related challenges and opportunities. The approach to setting and implementing these targets may be as valuable as the outcomes it delivers. This underscores that the approach companies decide to take will be critical to helping build trust and credibility with stakeholders and strengthen a company's social licence to operate

CONCLUSION

This white paper is meant to be updated over time, based on what BHP learns when its assets complete Phase 2 of the approach and set targets, to inform others on how BHP is guiding actions to reduce water-related risk and conserve water resources so they can continue to support healthy ecosystems, maintain cultural and spiritual values and sustain economic growth.

Appendices

APPENDIX 1: SDGS AND ASSOCIATED WATER CHALLENGES THAT INFORM SITE WATER TARGETS

SDG 6 Clean Water and Sanitation	Water Challenge
Water, Sanitation, and Hygiene (SDG 6.1 and 6.2)	People and communities lack sufficient access to safe and affordable drinking water, sanitation and hygiene.
Water quality (SDG 6.3)	Water that presents health threats to humans and/or ecosystems. Water that is unfit for its intended use due to quality impairments.
Water quantity (SDG 6.4)	Demand (human and environmental) for water exceeds the available supply indicating water resources are out of balance.
Water governance (SDG 6.5)	The political, social, economic, and administrative systems which affect the use, development, and management of water resources are ineffectual, corrupt, underfunded, or otherwise inadequate.
Important water-related ecosystems (SDG 6.6)	Water-related areas of environmental, cultural, and spiritual significance are degraded and there is a loss of freshwater ecosystems.
Extreme weather events (SDG 11.5 and 13.1)	People and communities are at risk of catastrophic impacts due to extreme water-related weather events such as droughts and floods. The frequency and intensity of these events are increasing due to climate change.

Source: UN Global Compact CEO Water Mandate et al. 2019.

APPENDIX 2: BHP WATER STEWARDSHIP POSITION STATEMENT

Our water stewardship vision A 'water secure' world by 2030	**Now is the time for us all to think big and take action to tackle the challenges facing water.** Fresh and marine water resources on which the environment, communities and livelihoods depend are under increasing pressure, especially from climate change, pollution and population growth. **BHP's vision is for a 'water secure' world by 2030,** an aim consistent with the United Nations' Sustainable Development Goals. A world where water resources are conserved and resilient so they can continue to support ecosystems, maintain cultural and spiritual values and sustain economic growth. A world where the human right to safe and accessible water and the traditional rights of Indigenous peoples are realised and upheld. A world where water governance is effective and beneficial, ensuring communities and ecosystems thrive for future generations. **To make this vision a reality, we all have a role to play.**
Our water stewardship commitment Realising the vision within our operations	**Within our operations, BHP commits to advancing our 2030 vision by setting public, context-based, business-level targets that will aim to both improve our management of water and support shared approaches to water management within the regions where we operate.** Our Water Stewardship Strategy will underpin these targets, across the life cycle of our operations: • **Value Water** – Effectively value water in investment and operational decisions by considering all beneficial uses of water. • **Manage Risk** – Effectively manage water-related risks and opportunities at a regional level in the short and longer-term. • **Disclose Performance** – Transparently disclose water-related risks, management and performance at an Asset level and ensure our public profile reflects our performance. • **Collective Action** – Collaboratively improve regional water policy and governance and shared water challenges within our communities and across our value chain with all stakeholders. • **Learn and Innovate** – Proactively share, source, develop and apply knowledge and technology to water management. We commit to listening and learning from others to better understand and continuously improve our approach to water stewardship. We will share our learnings and seek to help our non-operated asset partners, customers and suppliers lift their performance.
Our water stewardship contribution Advancing the vision beyond our operations	**Beyond our operations, BHP will contribute to advancing our 2030 vision by engaging across communities, government, business and civil society with the aim of catalysing actions to improve water governance, increase recognition of water's diverse values and advance sustainable solutions.** **We will work with others to make regional, national and international progress towards addressing shared water challenges by focusing on the following priority areas of action:** • **Transparency** – Enhancing the collection and meaningful reporting of water use and performance data by all users is fundamental to effective governance of water resources. • **Collaboration** – Enabling inclusive water governance is essential to delivering outcomes that reflect the water's shared spiritual, cultural, recreational, ecological and economic values. • **Knowledge and innovation** – Expanding knowledge of shared water resources and supporting solutions-driven collaborations are crucial to accelerating policy-, nature- and technology-based innovations.

Source: BHP, 2019

APPENDIX 3: EXAMPLE OF TARGET PRINCIPLES AND OPPORTUNITY ASSESSMENT CRITERIA

For each target option, BHP assets can assess and rank a target using the following principles and opportunity assessment criteria, to help sort them in order of what principle might be most important for an asset or stakeholders (or both), as well as to identify fatal flaws or weaknesses that otherwise might go unnoticed.

Target Principles	Poor (i.e. does not meet expectations) (score = 1)	Good (i.e. meets expectations) (score = 2)	Excellent (i.e. reflects global leadership) (score = 3)
Credible Target is aligned with stakeholder priorities and contributes to self sustaining long-term advancement	Delivers little more than compliance and/or what stakeholders already believe should happen	Ambition is proportional to BHP's contribution to shared water challenges and contributes to sustainable progress	Ambition exceeds BHP's contribution to shared water challenges, contributes strongly to sustainable progress, and may realise opportunities
Capacity and comparative advantage Target is achievable by 2030 and works to BHP's particular strengths	High degree of uncertainty that target can be achieved, not an area of strength for BHP	Expected to be achieved and requires activity that BHP does well	Expected to be achieved with opportunity for co-benefits and draws on BHP's unique resources or attributes
Meaningful Target responds to BHP risk and/or opportunity	Does not reduce BHP's risk exposure	Material water-related risk control that builds long-term resilience	Material water-related risk control that builds long-term resilience and social value
Measurable Target supports monitoring and reporting	Unable to measure progress	Qualitative monitoring and reporting	Quantitative monitoring and reporting
Consistent Target aligns with BHP positioning and asset strategy	Misaligned with company and asset strategic objectives	Significantly advances company and asset strategic objectives	Provides a step change in BHP and the asset's water stewardship status

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