VOLVO

Organization	Owner	Document type	Version
Volvo Car Corporation	50130 Global Sustainability	Position paper	2

Document name	Valid from	Security class
Volvo Cars position on water management	2024-10-14	Public

Volvo Cars position on water management

Purpose of this document

This paper describes how Volvo Cars works with water management throughout its own operations and with partners such as suppliers and retail network. This work is fully integrated in the company's strategy towards becoming a circular business. Water management and the impact on aquatic systems are closely related to the topic of biodiversity.

In this paper we commonly refer to the term water "*use"* when explaining a broad scope of water management. Otherwise, we use the terms *withdrawal*, *consumption*, and *discharge* when applicable and in line with the definition in European Sustainability Reporting Standards (ESRS)[1].

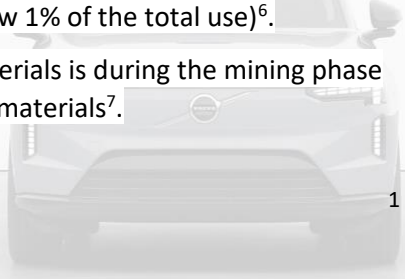
Background and challenge

General

- Water scarcity is one of the key challenges facing the world in the 21st century. The continuing availability of water underpins action on food security, energy security, poverty reduction, economic growth, conflict reduction, climate change adaptation and biodiversity loss.[2]
- Water risks could eliminate up to EUR 5.6 trillion from the global GDP and impact the achievement of all sustainable development goals.[3]
- About two billion people worldwide do not have access to safe drinking water today[4] and roughly half of the world's population is experiencing severe water scarcity for at least part of the year [5]. Only 0.5% of water on earth is useable and available freshwater – and climate change is dangerously affecting that supply.[5]
- Water, climate change and biodiversity are closely inter-linked. Climate change is impacting rainfall patterns, shrinking of ice sheets, floods, and droughts. Pollution of freshwater and marine ecosystems are damaging species and ecosystems with deteriorating capacity for e.g., natural carbon sinks and for supplying freshwater, crucial for all life on the planet.
- There is a growing focus on water management from legislators, investors, and rating institutes.

Volvo Cars and its partners

- Volvo Cars impact and dependency on water are mainly with freshwater and much less so with marine resources. We are dependent on freshwater as a resource in our full value chain. Based on our assessment in 2022, the use of freshwater in the whole lifecycle of our products is predominantly within the supply chain (~85%) followed by the use phase (~15%) and our own operations (both manufacturing and non-manufacturing) (below 1% of the total use)[6].
- In our supply chain[6], majority of water use for primary raw materials is during the mining phase which can be around 80% higher for primary versus secondary materials[7].



- Based on our internal assessment, in 2022, about 1% of Volvo Cars total pollution impact from its full value chain is on the marine ecosystem, of which about 9% is on freshwater sources. Most of Volvo Cars pollution impact on water is found within the upstream value chain, where more than 97% of the freshwater pollution and more than 99% of the marine pollution occur.[6]

Volvo Cars position

Reduction, efficiency of use, and quality of water - Own operation

- Volvo Cars have guidelines, ambitions, and roadmaps for our manufacturing and non-manufacturing sites on how to measure, report and reduce water withdrawal.
- Volvo Cars will continue to increase the efficiency of our processes within our own operations regarding water withdrawal. For this purpose, for several years, we had an internal target to reduce our per-car withdrawal of water within our manufacturing operations towards 2025. During 2023 a new ambition was set to reduce our per-car withdrawal of water in our own operations by 50% between 2018 and 2030.
- It is our aim, where possible, to increase the amount of internal reusing and recycling of water and, where appropriate, use non-potable water as an alternative source. Reuse and recycling of water help reduce water withdrawal in a basin to alleviate pressure on freshwater ecosystems and minimize the impact on other users' water rights. Current level of internal reusing and recycling is estimated to be ~20% in our manufacturing plants.
- For our own operations, we will continue to report and follow up on the pollution to water as per legal demands, and within the next two years we aim to set global pollution ambitions and remediate where needed.

Reduction and efficiency of use *of water - Upstream & Downstream*

- Since most of the water use is occurring in our upstream and downstream value chain, we will continue to ensure awareness around our ambitions on water and request information on water withdrawal, and discharge. Within the next two years we aim to have further reporting procedures and specific ambitions in place for the supply chain and our retail partners.

Volvo Cars actions

Use of freshwater - Own operation, upstream, and downstream

To reduce its withdrawal of freshwater, Volvo Cars has assessed water use in its full value chain[6]. Accordingly, within our own operation, upstream, and downstream value chain we:

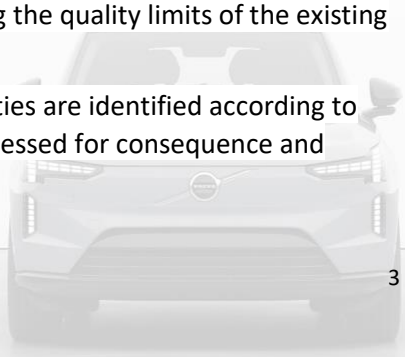
- have initiated application of circular economy principles to water use that encourage reuse over primary water withdrawal, which will reduce the demand on freshwater withdrawal. Examples of such initiatives are recycling and reuse of water in our manufacturing paint shops and carwashes at our own retailers in some countries. We currently purchase almost all freshwater in our own operation from 3rd party providers.
- have initiated an internal analysis of our water related risks, in 2024, including mapping the locations of our own operation sites (manufacturing and non-manufacturing including own retailers) and our directly contracted suppliers' sites to water stress areas according to the World Resources Institute (WRI) definition. The analysis is based on the recommendations and references from corporate water stewardship guidelines, where Volvo Cars has used World Resources Institute Aqueduct 4.0 Water Risk Atlas[8], Worldwide Fund (WWF) Water Risk Filter[9], and our internal enterprise risk management system tools. We have also applied the framework

from United Nation Global Compact Chief Executive Officer Water Mandate[10] for this evaluation. The knowledge and transparency that will be acquired through this study, will support our continued efforts to reduce negative impacts and risks related to the environment, people, and our business.

- have created a roadmap of activities including leakage control, recirculation, and asset upgrades in our own operations, up to 2030. These together will help us adjust and achieve our ambitions through three main action categories known as reduce, reuse, and recycle.
- aim to fulfil 'LEED BD+C'[11], level Gold, on all large construction projects undertaken within our operations. LEED framework supports green building design, which includes mandatory measures within e.g., water efficiency.
- further emphasize water management, and our ambitions, towards our employees and customers through internal and external communications.
- will during 2024, investigate and increase our knowledge of water withdrawal, water consumption, and water discharge at our directly contracted suppliers.
- invite a selection of suppliers to disclose through Carbon Disclosure Project (CDP)[12] for climate, water, forest and plastics. The information disclosed is used for risk assessment and identifying high performance suppliers.
- request our suppliers to use resources responsibly and actively work to improve resource efficiency, including but not limited to water. Our business partners should further adopt circular principles to minimize the use of primary resources and implement practices that enable efficient water management appropriate for their operations. This includes implementing clear and measurable targets for reducing freshwater use and improving water quality. These targets should consider the nature and context of the business partner's operations, including the geolocation (for example areas of high water-stress).
- have set ambitions for recycled material content in our products (including but not limited to steel) which effectively avoids a considerable amount of water withdrawal in the value chains of such materials (see Volvo Cars position on sustainable steel)[13]. We are also part of the Responsible Steel initiative, which offers a global standard and certification program for more sustainable steel production, with specific requirements for water stewardship.
- are requesting our retail network to report water withdrawal, which more than 70% are already doing. We have the ambition that our retail network should reduce water withdrawal and increase water reuse and recycle. We therefore provide guidelines on water infiltration areas, rainwater harvesting, water recycling and water-saving equipment. To set realistic ambitions, Volvo Cars is currently gathering insights from our retail network by conducting interviews with our national sales companies and selected retailers, as well as sending surveys to a wider range of retailers.

Quality of water - Own operation, upstream, and downstream

- Within Volvo Cars operations, for example in the wastewater from the paint shops, we have strict procedures in place to ensure that discharges are meeting the quality limits of the existing permits or other applicable regulations.
- Areas with chemical usage within engineering and testing facilities are identified according to corporate procedures for risk analysis and control. Risks are assessed for consequence and



probability. If risks of occurrence are moderate/high, or if incidents occur, we have procedures for risk mitigation and incident reporting.

- The quality of water to our employees is assured by the procurement of third-party sources for all our sites.
- The pollution of water from our supply chain is a topic that will be further investigated and be part of the work for our biodiversity strategy and ambition.
- Volvo Cars is planning to request our business partners to provide access to clean drinking water, sanitary facilities, and, where required, rest areas or accommodations for occupants and visitors. This is aligned with United Nation's Sustainable Development Goals (SDG 6)[14] and WASH[15] (Water, Sanitation, Hygiene) guidelines.
- All our retail partners with a workshop must have or be connected to an appropriate separation system for wastewater and comply with all local regulations regarding pollution and water management.

References

1. ESRS – Appendix A: Defined terms 10 Draft ESRS E3 Water and marine resources November 2022.pdf (efrag.org)
2. Water Europe, Water Europe – A Common Vision for a Water-Smart Society
3. EURACTIV, Making Water a Top Priority in 2024: New Water Europe Manifesto – EURACTIV.com
4. UN, Department of Economics and Social Affairs, Statistics division, — SDG Indicators (un.org)
5. United Nations, Water – at the center of the climate crisis | United Nations
6. Volvo Cars internal Biodiversity assessment in 2022 (Volvo Cars internal asset)
7. In the context of circularity, primary materials are extracted or harvested directly from natural sources (e.g., mining) and used for the first time to manufacture goods. Secondary Material have already been used in products and reintroduced into the production cycle and come from recycling or reusing existing products, waste, or by-products (e.g. recycled metals)
8. WRI Aqueduct 4.0 Water Risk Atlas - Aqueduct Water Risk Atlas (wri.org)
9. Worldwide Fund (WWF) Water Risk Filter - WWF Water Risk Filter
10. United Nation Global Compact Chief Executive Officer Water Mandate - What is the Mandate? – CEO Water Mandate
11. Leadership in Energy and Environmental Design, Building Design and Construction https://www.usgbc.org/leed
12. Carbon Disclosure Project (CDP) cdp.net
13. Volvo Cars position on sustainable steel - volvo_cars_position_on_sustainable_steel.pdf (volvocars.com)
14. UN Sustainable Development Goals (SDGs) - Sustainable Development Goals | United Nations Development Programme (undp.org)
15. UNICEF WASH - Water, Sanitation and Hygiene (WASH) | UNICEF