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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 business partners such as suppliers and retail network.

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 the world is facing 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 today⁴ and roughly half of the world’s population is experiencing severe water scarcity for at least part of the year. 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.

Volvo Cars and its partners

¹ European sustainability reporting standards (ESRS) – [Appendix A: Defined terms](#)

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](#)



- Volvo Cars impact and dependency on water are mainly regarding freshwater and much less so marine resources. We are dependent on freshwater as a resource in our full value chain. Based on an internal assessment in 2024, the freshwater consumption in the whole lifecycle of a battery electric vehicle is predominantly from material production and refining including the batteries (~75%), followed by retail, use phase, maintenance and end-of-life (~20%), and our own operations (~5% of the total)⁶.
- About 2% of Volvo Cars total pollution impact from its full value chain is on the marine ecosystem, and about 11% is on freshwater ecosystem⁷. Most of our pollution impact on water is found within the upstream and downstream value chain.

Volvo Cars position

Reduction and efficiency of water use, and quality of water

- Volvo Cars have guidelines, ambitions, and roadmaps for our own operations 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. We have a corporate level target to reduce our water withdrawal per manufactured car in our own operations by 50% between 2018 and 2030⁸.
- Reuse and recycling of water can help reduce water withdrawal in a basin to alleviate pressure on freshwater ecosystems and minimise the impact on other users' water rights. Therefore, we aim to, where possible, to increase the amount of internal reusing and recycling of water and, where appropriate, use harvested rainwater as an alternative source.
- For our own operations, we will continue to report and follow up on the pollution to water as per legal demands, and in the future we aim to set global pollution ambitions and remediate where needed.
- 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, consumption and discharge from our business partners.
- We have communicated our expectations on water withdrawal reduction with our markets where our retail partners are located, and will continue ensuring awareness around our ambitions on water and improving transparency through reporting procedures.

Volvo Cars actions

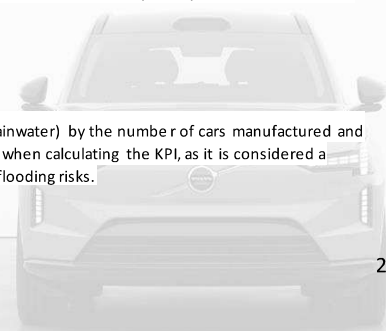
Full value chain assessment:

- We have assessed water consumption in our full value chain to understand the hotspot areas in the value chain stages, material and components that has high water intensity.
- We have assessed our water related risks, in 2025, including identifying the locations that are located in high and extremely high water stress and water risk areas among our own operation sites of our directly contracted suppliers for direct material, and our third party retailer sites.

⁶ Volvo Cars internal Biodiversity assessment (Volvo Cars internal asset)

⁷ Volvo Cars internal Biodiversity assessment (Volvo Cars internal asset)

⁸ The water withdrawal target is calculated by dividing the total water withdrawal (excluding harvested rainwater) by the number of cars manufactured and comparing this ratio to the 2018 baseline. Rainwater harvesting is excluded from total withdrawal figures when calculating the KPI, as it is considered a sustainable practice that reduces reliance on conventional water sources and mitigates urban runoff and flooding risks.



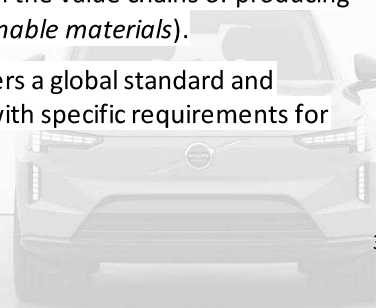
The analysis is based on the recommendations from The Corporate Water Stewardship guidelines, and used World Resources Institute Aqueduct 4.0 Water Risk Atlas tool, Worldwide Fund (WWF) Water Risk Filter, and our internal enterprise risk management system tools. The assessment will support our continued efforts to reduce negative impacts and water related risks.

Own operations: Reduction and efficiency of water use, and quality of water

- We currently purchase almost all freshwater in our own operations from 3rd party providers. We continue encouraging application of circular economy principles that encourage reuse and recycle to 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 have created a roadmap of activities including leakage control, reusing and recycling, and process optimization in our own manufacturing 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.
- We aim to fulfil 'LEED BD+C', 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.
- We further emphasise water management, and our ambitions, towards our employees and customers through internal and external communications.

Upstream and downstream: Reduction and efficiency of water use, and quality of water

- We continue to increase our knowledge and evaluate our directly contracted suppliers of direct materials in terms of water topics, for example, whether suppliers' sites are located in areas of high or extremely high water stress or risk, whether sites monitor and measure their water withdrawals and discharges, and whether the sites have targets to reduce water withdrawal and consumption or increase the site's water reuse and recycling. In 2025, we initiated a process to review suppliers' facilities based on risk and performance. This process enables us to act effectively in the event of risks.
- We request our business partners to have in place practices that enable efficient water management appropriate for their operations. This includes implementing clear and measurable targets for reducing water withdrawal and consumption and preventing pollution from its water discharge. These targets should consider the nature and context of the business partner's operations, including the geolocation (for example areas of high water-stress). Business partners shall also use resources responsibly and actively work to improve resource efficiency, including but not limited to water (see *Volvo Cars Code of Conduct for Business Partners*).
- We have set ambitions to reach 30% of recycled and bio-based material per car by 2030 (including but not limited to aluminium, steel and plastic materials). This effectively avoids a considerable amount of water withdrawal and consumption in the value chains of producing and refining such materials (see *Volvo Cars position on sustainable materials*).
- 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.



- We request our entire retail network to report water withdrawal from third-party supply (i.e. tap water). 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.

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 meet 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.
- Volvo Cars will continue to develop relevant requirements and evaluate the upstream supply chain with regard to suppliers' performance in minimising the risk of water pollution.
- 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.
- The quality of water for our employees is assured by the procurement of third-party sources for all our sites.

