Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Ecolab (NYSE: ECL) is the global leader in water, hygiene and energy technologies and services. Around the world, businesses in foodservice, food processing, hospitality, healthcare, industrial, and oil and gas markets choose Ecolab products and services to keep their environment clean and safe, operate efficiently and achieve sustainability goals.

Founded in 1923 and headquartered in St. Paul, Minn., Ecolab's global workforce of 49,000 associates help make the world cleaner, safer and healthier by delivering comprehensive solutions and on-site service to promote safe food, maintain clean environments, optimize water and energy use, and improve operational efficiencies for customers at nearly three million locations in more than 170 countries. Ecolab's ultimate competitive advantage is found in our industry-leading sales-and-service force. Every customer challenge is unique, which is why our 27,000 field associates partner with customers in their facilities, providing on-the-ground consultation and service. Our experts employ a rigorous process to gather data, apply advanced technology, rethink processes and provide solutions to address our customers' unique economic, social and environmental challenges. Behind every field representative is a team of researchers, scientists, engineers, regulatory specialists and other experts working diligently to tackle customer challenges, develop new solutions and meet emerging needs.

For over 95 years, Ecolab has been developing solutions to help sustain a healthy world for future generations. Our Total Impact approach evaluates the full impact of each product or service we provide to help customers increase efficiency, minimize use of natural resources and reduce waste—from sourcing and manufacturing to use and disposal. In 1928, we patented our first dispenser to provide the optimal amount of chemicals and reduce waste. In 1948, we introduced the first rinse additive, reducing energy needed to dry dishes by speeding up the drying process. In 1978, we eliminated ozone-depleting substances from our cleaning products, 11 years before the Montreal Protocol went into effect. In 2018, we delivered increased sales growth while also maintaining our combined investments in R&D, systems and field technology. Always striving to do better, we are setting bolder environmental performance goals that align with our business growth strategy as we continue to decouple resource use from growth. By 2020, we aim to reduce water usage by 25 percent and greenhouse gas emissions by 10 percent across all our manufacturing plants, compared to a 2015 baseline. Further, we have set a customer impact goal, aiming to conserve 300 billion gallons of water annually by 2030 by reducing water consumption within our own and our customers' operations. This represents water conservation equaling the annual drinking needs of more than 1 billion people.

Our innovative products and services touch virtually every aspect of daily life. From the raw materials that are the building blocks of nearly every products, to production and manufacturing, to retail and service environments, Ecolab is behind the scenes working with many of the world's most recognizable brands to improve performance, meet increasing demand, and reduce environmental impact.

Further information about Ecolab is available at www.ecolab.com. The answers to the questions of the Carbon Disclosure Project prepared by Ecolab contain various forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These include statements concerning future events, future financial performance, plans, strategies, expectations, prospects, impact of climate change, laws and regulations, and supply and demand. These statements, which represent Ecolab's expectations or beliefs concerning various future events, are based on current expectations that involve a number of risks and uncertainties that could cause actual results to differ materially from those of such forward-looking statements. We caution that undue reliance should not be placed on such forward-looking statements, which speak only as of the date made. Ecolab does not undertake, and expressly disclaims, any duty to update any forward-looking statement whether as a result of new information, future events or changes in expectations, except as required by law.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	January 1, 2018	December 31, 2018	No

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Algeria
Argentina
Australia
Austria
Belgium
Brazil
Bulgaria
Canada
Chile
China
China, Hong Kong Special Administrative Region
Colombia
Costa Rica
Croatia
Czechia
Denmark

Dominican Republic
Ecuador
Egypt
Equatorial Guinea
Finland
France
Germany
Greece
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Jordan
Kazakhstan
Kenya
Luxembourg
Malaysia
Malta
Mexico
Morocco
Netherlands
New Zealand
Norway
Pakistan
Peru
Philippines
Poland
Portugal
Puerto Rico
Qatar
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan, Greater China
Thailand

Turkey
Uganda
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Uruguay
Venezuela (Bolivarian Republic of)
Viet Nam

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	While the full Board of Directors monitors Ecolab's progress on sustainability, the Safety, Health and Environment (SHE) Committee of the Board has the highest level of responsibility for all sustainability matters, including climate-related issues. Climate change responsibilities have been assigned to this Committee as it falls within the scope of environmental matters that are part of the principle responsibilities and duties of the Committee.

	As stated in its Charter, the SHE Committee is responsible for reviewing and overseeing Ecolab's SHE policies, programs and practices that affect, or could affect, employees, customers, stockholders, and neighboring communities. This Committee reports to the Board of Directors and provides updates to the Board on the company's implementation of and progress against its sustainability goals, including climate-related goals (for example, Ecolab's goal to reduce GHG emissions per million dollar sales by 10% by 2020 from a 2015 baseline).

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Ecolab's Corporate Sustainability Team monitors the risks and opportunities related to climate change, as well as the company's overall sustainability performance by collaborating with our global SHE, supply chain, regulatory, and corporate risk departments. The Safety, Health and Environment (SHE) Committee of the Board of Directors receives regular updates on the implementation of and progress against sustainability and climate-related goals and activities from the CSO/Vice President, Corporate Responsibility who chairs the Corporate Sustainability team. The Board of Directors then receives an annual presentation from the SHE Committee on the company's progress against its sustainability goals, and implementation of projects and related activities, which includes climate change impacts, as appropriate.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues

Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Annually
Chief Executive Officer (CEO)	Assessing climate-related risks and opportunities	Annually

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Ecolab's Chairman of the Board and Chief Executive Officer has ultimate responsibility for climate change at Ecolab. This is because the CEO was appointed by the Board to the Safety, Health and Environment (SHE) Committee of the Board and climate change falls within the scope of the principle responsibilities and duties of this Committee.

Our Vice President, Corporate Responsibility leads Ecolab's Corporate Sustainability program in support of Ecolab's business strategy. This position is responsible for:
· development and execution of Ecolab's sustainability strategy globally,
· integrating sustainability principles and commitment across the company,
· execution and support of sustainability value propositions across Ecolab's commercial sectors,
· collaborating with the CEO and executive leadership on Ecolab's long-term sustainability plan,
· corporate reporting and disclosure including producing Ecolab's annual corporate sustainability report,
· Diverse stakeholder engagement and management, and
· global sustainability function development.

The Vice President, Corporate Responsibility sits on Ecolab's Sustainability Executive Advisory Team (SEAT) which is made up of 10 members of the company's executive leadership team and governs our sustainability strategy. The SEAT meets with the Corporate Sustainability Team on a quarterly basis and is responsible for operationalizing sustainability across the company; coordinating and communicating company policy and decision-making related to sustainability; setting annual goals and metrics for key sustainability priorities; sustainability outlook assessment; and risk management. Outputs of these quarterly meetings are reported by the Vice President, Corporate Responsibility to the SHE Committee of the Board, of which the CEO is a member.

Climate-related issues are monitored by the CEO and Vice President, Corporate Responsibility through the following Ecolab processes:
1. Annual enterprise risk assessment, which identifies and evaluates strategic, operational, financial and compliance related risks to the company both at the corporate and at the site level;
2. Bi-annual sustainability materiality assessment, which informs our corporate sustainability strategy and reporting activities, including climate-related issues;

3. Ethical and Environmental Standards survey, which monitors environmental performance in the global supply chain; and
4. Quarterly management meetings with the Sustainability Executive Advisory Team (SEAT) and the Corporate Sustainability Team.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

Certain functional leaders (e.g. supply chain) have their goals aligned with our corporate public environmental goals including our GHG goals. Employee bonus is tied to continuous improvement efforts, including in energy efficiency and/or carbon emissions reductions (MWh saved per year per facility, and/or MTCO2e emissions saved per year per facility) where achievement of targets at a facility, up through to regional roll up, for example, results in a monetary compensation bonus.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Certain functional leaders (e.g. supply chain) have their goals aligned with our corporate public environmental goals including our GHG goals. Employee bonus is tied to continuous improvement efforts, including in energy efficiency and/or carbon emissions

reductions (MWh saved per year per facility, and/or MTCO2e emissions saved per year per facility) where achievement of targets at a facility, up through to regional roll up, for example, results in a monetary compensation bonus.

Who is entitled to benefit from these incentives?

Management group

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

The Enterprise Excellence Award is given to an associate or team who meets individual business unit or function goals while looking beyond and focusing on actions that benefit the entire organization and help Ecolab achieve its future goals, including our sustainability aspirations that include energy efficiency. Winning associates or teams build relationships across boundaries, break down silos, actively share knowledge and best practices, and model the Ecolab values. Engagement in this way enables Ecolab to achieve its operational GHG emissions reductions goals.

Who is entitled to benefit from these incentives?

Management group

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction target

Comment

The Enterprise Excellence Award is given to an associate or team who meets individual business unit or function goals while looking beyond and focusing on actions that benefit the entire organization and help Ecolab achieve its future goals, including our sustainability aspirations that include energy efficiency. Winning associates or teams build relationships across boundaries, break down silos, actively share knowledge and best practices, and model the Ecolab values. Engagement in this way enables Ecolab to achieve its operational GHG emissions reductions goals.

Who is entitled to benefit from these incentives?

Management group

Types of incentives

Recognition (non-monetary)

Activity incentivized

Energy reduction project

Comment

The Enterprise Excellence Award is given to an associate or team who meets individual business unit or function goals while looking beyond and focusing on actions that benefit the entire organization and help Ecolab achieve its future goals, including our sustainability aspirations that include energy efficiency. Winning associates or teams build relationships across boundaries, break down silos, actively share knowledge and best practices, and model the Ecolab values. Engagement in this way enables Ecolab to achieve its operational GHG emissions reductions goals.

Who is entitled to benefit from these incentives?

Management group

Types of incentives

Recognition (non-monetary)

Activity incentivized

Efficiency project

Comment

The Enterprise Excellence Award is given to an associate or team who meets individual business unit or function goals while looking beyond and focusing on actions that benefit the entire organization and help Ecolab achieve its future goals, including our sustainability aspirations that include energy efficiency. Winning associates or teams build relationships across boundaries, break down silos, actively share knowledge and best practices, and model the Ecolab values. Engagement in this way enables Ecolab to achieve its operational GHG emissions reductions goals.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction project

Comment

Facilities managers' may have monetary rewards built into their professional development plans related to meeting operational and environmental goal performance, including achievement of our GHG goals.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Facilities managers' may have monetary rewards built into their professional development plans related to meeting operational and environmental goal performance, including achievement of our GHG goals.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction project

Comment

Facilities managers' may have monetary rewards built into their professional development plans related to meeting operational and environmental goal performance, including achievement of our GHG goals.

Who is entitled to benefit from these incentives?

Facilities manager

Types of incentives

Monetary reward

Activity incentivized

Energy reduction target

Comment

Facilities managers' may have monetary rewards built into their professional development plans related to meeting operational and environmental goal performance, including achievement of our GHG goals.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	2	This time horizon for assessing climate-related risks and opportunities is aligned with our ERM process and other business practice time horizons.
Medium-term	2	5	This time horizon for assessing climate-related risks and opportunities is aligned with our ERM process and other business practice time horizons.
Long-term	5	20	This time horizon for assessing climate-related risks and opportunities is aligned with our ERM process and other business practice time horizons.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Annually	>6 years	

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Climate-related risks are identified and assessed at Ecolab through the following processes:

1. Climate-related risks are assessed within our annual Enterprise Risk Management process and Assessment of Significant Business Risks process, which look at risks >6 years into the future and are aligned with the recommendations of the Financial Stability Board (FSB) Task Force on Climate-related Financial Disclosures (TCFD);

2. The internal Enterprise level Audit Services team conducts company-wide reviews at each site once every three years;
3. Internal Environmental Management System audits and other internal audits are completed annually. Every three years, each certified site is required to undergo a complete re-certification audit to maintain certification status. The audits cover all aspects of the site environmental management system. This auditing process helps to continually improve environmental, health and safety performance including, but not limited to, efficient use of energy and water.

For the purposes of our corporate level Enterprise Risk Management (ERM) process, we define risks that have a 'substantive financial or strategic impact' at the corporate level as having an impact of greater than 5% of operating income, either as an isolated event or combination of factors that may impact our corporate strategy and business continuity.

Results of risk assessments, including risk types, the likelihood and impact of their occurrence, are documented by the Audit Vice President and Audit Department and presented to the Ecolab Board of Directors. The Chairman of the Board and CEO is ultimately responsible for ensuring appropriate adjustments to the business strategy based on the data presented.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current regulatory risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews compliance with and the impact of existing regulations, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because our operations are subject to climate and energy efficiency related regulations in certain jurisdictions. For example, we monitor the impact of the U.S. EPA standards for fuel efficiency on Ecolab's fleet. Ecolab operates a fleet of service vehicles driven by our account managers and service technicians as well as a heavy-duty delivery fleet under Nalco Champion, which has increased the size of our fleet. Any fuel efficiency regulations may require expenditure of capital to obtain more fuel-efficient vehicles. In addition, The U.S. EPA standards for fuel efficiency are expected to impact the availability of more fuel-efficient vehicles. It is uncertain how these forces will impact vehicle size, supply, demand and cost. While this risk is not deemed substantive for our organization, as climate and energy efficiency regulations are updated in the future, may see these costs increase.

		We are committed to complying with applicable legislation and have processes in place to monitor all current regulatory requirements.
Emerging regulation	Relevant, sometimes included	Emerging regulatory risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impact of emerging regulations, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included in our risk assessments because as a company with manufacturing facilities, we may be impacted by emerging regulations designed to promote a transition to a low carbon economy. For example, regulations that put a price on fossil fuel energy could be implemented in the future in areas where Ecolab has operations or activities. Ecolab currently pays tax in France and the United Kingdom related to our facilities' emissions and may face increased operational expenses if additional climate change regulations were implemented at the international, national, regional and/or state level. While our operations do not consume a significant amount of energy and this risk is not deemed substantive for our organization, as jurisdictions increase their use of regulatory frameworks to promote emissions reductions, we may see these costs increase in the future. We are committed to complying with applicable legislation and have processes in place to monitor regulatory requirements including emerging requirements.
Technology	Relevant, always included	Technology risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of technology risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because at Ecolab, sustainability is an integral part of everything we do, and we employ technology, information and onsite services to help customers achieve exceptional business results, while minimizing environmental and social impact. As climate change concerns become more prominent in our customers' requirements, product effectiveness and efficiency related to energy, waste and water impacts and the corporate sustainability efforts of our customers is changing the demand for our solutions. Changing customer requirements present both risks and opportunities for Ecolab to meet and exceed customer requirements and invest in new technology solutions that improve water and energy efficiency (e.g. deploying a clean-in-place technology in a Kraft-Heinz

		cheese plant in water stressed California). We are seeing an expansion in manufacturing applications requiring climate related solutions that couple the business performance required to be competitive. This customer shift has fueled further investment by Ecolab to meet and exceed customer requirements.
Legal	Relevant, always included	Legal risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of legal risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant in the form of exposure to environmental liability or lawsuits. Our business and operations are subject to extensive environmental laws and regulations governing, among other things, air emissions, wastewater discharges, the use and handling of hazardous substances, waste disposal and the investigation and remediation of soil and groundwater contamination. As with other companies engaged in similar manufacturing activities and providing similar products and services, some risk of environmental liability is inherent in our operations. Compliance with changing environmental laws and regulations, including evolving climate change standards, exposes us to potential financial liability and increases our operating costs. However, these costs are minor for Ecolab compared to peer material companies (i.e. building block chemical companies) where their natural resource, emissions and effluent footprint is significantly larger.
Market	Relevant, always included	Market risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of market risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because climate change impacts, such as increasing frequency and severity of extreme weather events, could adversely affect our customers. In some market segments such as the foodservice, hospitality and travel industries, this could impact demand for our products and services. For example, tourism and lodging are key market segments of Ecolab's business globally, and negative effects of climate change (e.g. precipitation extremes, droughts, changes in temperature extremes, increases or decreases in snow and ice, sea level rise, or tropical storms) could present a risk to Ecolab's business. Another example of market-based

		risk is fluctuating petroleum prices impacting our energy services customers.
Reputation	Relevant, always included	Reputational risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of reputational risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included as our customers are increasingly looking to partner with suppliers that demonstrate corporate responsibility, offer innovative products that help address and mitigate climate-related risks, and transparently report on climate management and performance. If we are not considered to be making meaningful progress on climate change or if our products and services do not meet customer requirements, we could be subject to reputational risk through decreased scores in public sustainability rankings such as CDP, shareholder resolutions, and general increased scrutiny by media and customers. We strive to be a leader in sustainability and continue to proactively integrate environmental stewardship principles into our business goals, products and services to drive operational efficiency and reduce environmental impact for our customers. While the use of fossil fuels for our production, goods and service may be viewed as a contributor to climate change and could be a focal point for future improvement, Ecolab has developed a renewable energy strategy to mitigate this risk in the future.
Acute physical	Relevant, always included	Acute physical risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of acute physical risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because some of our operations are located in regions vulnerable to an increase in the severity, duration and/or frequency of extreme weather events such as changes in precipitation extremes, droughts, changes in temperature extremes, increases or decreases in snow and ice, sea level rise and tropical storms. For example, Hurricane Harvey impacted our operations in 2017, leading to temporary closure of three of our manufacturing facilities, though we did not experience

		significant damage and repairs. However, Ecolab manufacturing operations are located globally and across multiple geographic and climatic regions, which minimizes our vulnerability to unforeseen disasters. The company has various Crisis Management and Business Continuity Plans to mitigate business interruption. On our commercial side, this increases demand for our water and energy solutions since customers are looking to develop and implement mitigation plans and solutions to minimize the impact of acute risks.
Chronic physical	Relevant, sometimes included	Chronic physical risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of chronic physical risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because physical changes arising from sustained temperature increases could directly impact our operations. For example, Ecolab's global manufacturing facilities are located in many different regions around the world, including areas that may be susceptible to changes in average temperatures. These temperature changes could result in increased operational and manufacturing costs associated with heating and cooling our physical real estate assets. This also has implications for our commercial business as it would increase demand in technology and solutions that help our customers mitigate and adapt to the changing climate. These are typically in areas of increased water scarcity or droughts for our multi-national customers
Upstream	Relevant, sometimes included	Upstream risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of upstream risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included in our risk assessments because we are indirectly exposed to the impacts of physical and transitional climate risks on our suppliers. For example, if key supplier operations are disrupted due to increased severity and frequency of severe weather events this could lead to increased costs and/or a lack of availability of products and services we need to run our business. In addition, we have strategic supplier partnerships with large multi-national material/chemical companies designed to collaborate on innovation and climate related projects impacting our commercial

		technology portfolio. A number of these projects will impact water and energy efficiency internally and externally.
Downstream	Relevant, always included	Downstream risks may be informed by climate-related issues and are included in our annual corporate enterprise level Assessment of Significant Business Risks process. This is conducted by our corporate Audit Services team which reviews the potential for and impacts of downstream risks, and reports findings to our executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. This risk type is relevant and included because we are seeing increased interest from our customers in products and services that support climate change mitigation efforts, such as water and energy efficient products. If we fail to meet the expectations of our customers, this could have a negative impact on our ability to secure new business and/or could result in a loss of one or more customers and associated revenue. In addition, if our customers do not effectively anticipate and manage physical climate changes, this could affect their operations and potentially impact demand for our products and services. Through technology, information and onsite service, we help our customers achieve exceptional business results, while minimizing environmental and social impact. We support water and energy risk assessments and audits of our customers' operations, and use proprietary tools and smart technology to improve their water and energy efficiency and support their long term environmental and sustainability goals.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Ecolab has rigorous, multi-faceted processes for analyzing risks and opportunities related to climate change for its business operations and product development. These include:

1. Our Strategic Planning Process is used to identify global trends that present risks and opportunities for our business and develop our Strategic Plan.

2. Our enterprise level Audit Services team coordinates company-wide "Assessment of Significant Business Risks" reviews on an annual basis. These comprehensive reviews are conducted using a survey tool designed to identify strategic, operational, financial and compliance related risks to the company both at the corporate and site level. Risks are documented along with the likelihood and impact of their occurrence and results are presented to the executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur.

3. Our Ethical and Environmental Standards survey and reporting process provides monthly energy, water, effluent and other key environmental data from our global supply chain to senior management in order to monitor and improve on-going environmental performance in the supply chain.

4. Our bi-annual sustainability materiality assessment informs our corporate sustainability strategy and reporting activities, including climate-related issues. This process leverages the results of our enterprise Assessment of Significant Business Risks to align the materiality of sustainability topics with key business drivers. Outputs of this assessment are also integrated into the Assessment of Significant Business Risks annual comprehensive review where critical sustainability risk and opportunity drivers and issues across the company are linked to core business risks and opportunities for further evaluation into the nature of potential impacts, the level of stakeholder concern, and our ability to affect and/or manage these issues. The process also ranks and prioritizes topics of relevance to our stakeholders for management action and disclosure.

Example of how our processes are applied to physical risks and opportunities: Droughts in California, among other locations, affect our own business operations as well as our customers. When creating our Strategic Plan, we look at short-term (up to 2 years) and long-term (5-20 years) megatrends influencing our operations and corporate strategy. We identified that extended droughts were occurring in areas where: 1) we have operations, 2) there is a large volume of our customer base, and 3) there is high country-level GDP, and we saw a connection with our revenue-at-risk. To support an initial risk evaluation, we developed (and now widely use) the Ecolab Water Risk Monetizer to evaluate specific sites and conducted a portfolio wide evaluation that quantifies potential cost and financial implications of water risks. The outputs of this analysis are used to inform our risk assessment findings for operational business continuity planning, as well as business opportunities related to deploying our own products and services in supplier, Ecolab, and customer operations to reduce water consumption in areas facing severe drought. We made this tool freely available to the public and now use the tool with customers and suppliers to help them to assess water-related risks due to climate change.

Example of how our processes are applied to transitional risks and opportunities: Both current and emerging regulations impacting the cost of energy are relevant and included in our annual Assessment of Significant Business Risks (as are all regulatory and compliance related requirements), as our operations are subject to climate and energy efficiency regulations in certain jurisdictions. For example, we monitor the impact of the U.S. EPA standards for fuel efficiency on Ecolab's fleet. Ecolab operates a fleet of service vehicles driven by our account managers and service technicians as well as a heavy-duty delivery fleet under Nalco Champion. Any fuel efficiency regulations may require expenditure of capital to obtain more fuel-efficient vehicles. In addition, The U.S. EPA standards for fuel efficiency are expected to impact the availability of more fuel-efficient vehicles. During the annual Assessment of Significant Business Risk, the status and financial impact of current fuel prices and those subject to regulation are forecasted against Ecolab's short- and mid-term (2-5 years) Strategic Plan to evaluate potential cost implications. Outputs of this analysis are used to inform our growth strategy, capital, and operational expenditures planning to ensure our fleet strategy is aligned with fuel economy standard trends. This enables downside cost protection, as well as the ability of Ecolab to take advantage of state and federal incentives for purchasing fuel efficient vehicles and using alternative fuels. Thus, by proactively tracking and staying ahead of these regulations, we are able to convert this inherent risk into an opportunity.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Other, please specify

Increased costs of goods sold

Company- specific description

With a global supply chain that encompasses facilities in coastal regions around the world, including the Gulf of Mexico, our supply chain may be vulnerable to an increase in the severity, duration and/or frequency of tropical storms experienced in these regions. Tropical storms and associated conditions such as high winds, extreme rainfall and flooding could results in physical damage to our suppliers' buildings, manufacturing facilities, transportation and distribution routes and accessibility, as well as equipment. This may lead our suppliers to experience lost productivity, asset loss, raw material price fluctuations and/or delayed product release, which may in turn increase Ecolab's cost of goods sold or even revenue if Ecolab is unable to serve customers as a result of supply chain disruption.

In particular, the U.S. Gulf Coast is a region with significant refining, petrochemicals and chemicals operations which provide us raw materials. Hurricanes or other severe weather events impacting the Gulf Coast, such as 2017's Hurricane Harvey, could have adversely affected our ability to obtain raw materials at reasonable cost, or at all, particularly for our Global Energy segment. These impacts can lead to temporary closure of one or many of supplier manufacturing facilities, require repairs and possibly even rebuild costs, of which could impact the availability and sourcing of raw materials for Ecolab's products and services.

Time horizon

Current

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

25,000,000

Potential financial impact figure – maximum (currency)

125,000,000

Explanation of financial impact figure

The prices of raw materials used in our business can fluctuate and in recent years we have experienced periods of increased raw material costs. Changes in prices, unavailability of adequate and reasonably priced raw materials or substitutes, or the inability to obtain or renew supply agreements on favorable terms can adversely affect our consolidated results of operations, financial position or cash flows. Further, volatility and disruption in economic activity and conditions caused by a variety of factors, including climate-related physical risks such as extreme weather events, could disrupt or delay the performance of our suppliers which may adversely affect our business. A 1% change in our raw material chemicals spend can impact our total cost of sales by more than $25 million, with a 5% change approximately $125 million, which illustrates the impact of potential supply chain disruptions and availability of raw materials due to volatility and climate-related physical disruptions.

Management method

With the exception of a few specialized chemicals that we manufacture, raw materials are generally purchased on annual contracts and are available in adequate quantities from a diverse group of global suppliers. Global sourcing is used so that purchasing or production locations can be shifted to control product costs or availability at globally competitive levels. Raw material purchasing activities are included in the scope of our company-wide Enterprise Risk Management process and our Strategic Supplier Initiative (SSI), engaging our top tier (7 suppliers) representing 19% of our Raw Materials spend. SSI suppliers like Dow are incentivized to participate in this initiative, where we co-innovate on projects and products, to reduce their operating costs and lower their environmental impact and climate related risks. This enables improved business continuity and mitigation activities to ensure suppliers have access to the resources they need to maintain operations when facing climate related risks. In 2020, we will spin-off our Upstream energy business, which is particularly exposed to physical

climate risks to Gulf Coast suppliers which will reduce Ecolab's net exposure to suppliers' physical climate risks. Our cost of management is based on costs for two FTEs dedicated to the SSI program, and shared resources across our RD&E (2.5 FTE) and Regulatory Affairs (1.5 FTE) programs to manage these relationships, including executive sponsorship.

Cost of management

750,000

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Increased capital costs (e.g., damage to facilities)

Company- specific description

With manufacturing facilities in China, Singapore and the Philippines, our Asian operations are vulnerable to an increase in the severity, duration and/or frequency of tropical storms experienced in these regions. Tropical storms and associated conditions such as high winds and extreme rainfall could result in physical damage to our buildings and equipment, leading to lost productivity, asset loss and/or delayed product release. Severe weather events may also result in staff not being able to travel to work with potential lost work time. In addition, our operations in Brazil, Mexico and the United States, including our Nalco Champion Headquarters in Texas, are vulnerable to an increase in the severity, duration and/or frequency of severe weather conditions and seasonal storms such as tornados and hurricanes. In 2017, Hurricane Harvey impacted our operations, leading to temporary closure of three of our manufacturing facilities, though we did not experience significant damage and repairs. As our manufacturing operations are located globally and our vulnerability to unforeseen disasters is leveraged across multiple geographic regions, we believe our risk is minimized.

Time horizon

Current

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000

Potential financial impact figure – maximum (currency)

5,000,000

Explanation of financial impact figure

The financial risks associated with increased extreme weather patterns include manufacturing facility repair costs, potential plant closures, lost work time, lost revenue, and increased insurance premiums. Ecolab has seen costs premiums for insurance increase over the last few years which may be related to an increased threat of storms and related climate change events (i.e. Hurricane Katrina and Hurricane Sandy), however they are not material and on a percent of revenue basis they have been declining. During the 2017 hurricane season, for example, Ecolab experienced losses at a number of facilities along the Gulf Coast which affected our insurance premiums. In some cases, we were also required to use our insurance deductibles ranging from $1 million to $5 million, which represents the maximum potential financial impact but still a minimal cost to the business.

Management method

Climate-related risks are assessed within our Enterprise Risk Management (ERM) process and Annual Business Significance Risks Assessment, which is aligned with recommendations of the Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD). As part of our Annual Business Significance Risks Assessment, Ecolab has developed a site selection process and an inventory of sites and locations with identified risks and management responses. We continue to diversify the locations of our facilities and consider risks of facilities that may be affected by extreme weather when determining where to expand or open new facilities. The findings from this Assessment are applied by our business units. For example, in the event of a natural disaster impacting our operations, we have various Crisis Management and Business Continuity Plans to mitigate business interruption. These plans were activated during Hurricane Harvey which affected our Texas facilities. The cost to manage acute physical climate risks to our operations is based on FTE staff in the ERM function, in collaboration with Safety Health & Environment and Supply Chain staff, who manage the Annual Business Significance Risks Assessment, compile the inventory of plants globally, and conduct the site selection process. While this is part of our ERM team's overall management responsibilities, we estimate that 25% of 2 FTEs time in ERM and 10% of 2.5 FTEs time in SH&E and Supply Chain is allocated as well.

Cost of management

500,000

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Market: Changing customer behavior

Type of financial impact

Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description

Ecolab serves many industries that rely on water and energy to operate. As climate change impacts the availability and price of water and fossil-based energy, customers are increasingly looking for solutions that enable them to improve operational efficiency and save costs, including reducing water use and the energy required to pump, heat or cool water. If we do not maintain our leadership position and invest in the continuous improvement of our products' environmental performance, changing customer expectations and preferences could lead to reduced demand for Ecolab products and services, and/or require further investment by Ecolab to meet and exceed customer requirements. This would present financial risks to Ecolab including reduced revenue and potentially stock price.

In addition, climate-related regulatory or market events that negatively impact our customers, including by reducing exploration and production investments in the energy sector, may reduce margins in our Global Energy segment. For example, in 2016, oil industry activity remained depressed due to continued excess supply. As a result of these conditions and their corresponding impact on our business outlook, we recorded total charges of $76.8 million or $0.17 per diluted share, comprised of inventory write-downs and related disposal costs, fixed asset charges, headcount reductions and other charges. Any climate regulations that reduce oil and gas demand may have a similar impact on Ecolab.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

76,000,000

Potential financial impact figure – maximum (currency)

4,000,000,000

Explanation of financial impact figure

Market risks that impact our customers may reduce our margins. For example, in 2016 oil industry activity remained depressed due to continued excess supply and we recorded charges of $76.8 million. Meanwhile, shifts in customer preferences could result in lost revenue if we fail to keep up with customer demand for more energy- or water-efficient products. While we have a diverse customer base and no customer or distributor constitutes 10% or more of our consolidated revenues, a cumulative shift in customer trends or the loss of any significant customers could have a material adverse effect on our consolidated results of operations or cash flows. In the regulatory-driven water market, there is potential for increased market share and access of up to $4 billion of competitively-held water treatment applications in our European markets alone (estimated based on our existing market share in the European market for water treatment applications, against total available market share).

Management method

To drive focus on growing revenues, maintaining our leadership position and managing changing customer expectations, we have adopted a goal to reduce water withdrawal by 300 billion gallons a year by 2030 in our customers' and own operations. In addition to our $216 million RD&E pipeline to support this goal, we have developed two tools, the Water Risk Monetizer and the Smart Water Navigator, to help inform how customers' can realize operational water efficiencies and reduce their risks related to water withdrawal, consumption and discharge. We invest in R&D, which is critical to maintaining our leadership position within the industry and providing us with a competitive advantage as we seek additional business with new and existing customers. We also use an eROI program to measure and communicate the sustainability benefits we provide to customers via eROI case studies. These case studies document and monetize all positive impacts for customers, which is critical to driving and sustaining growth with our industrial customers who have diverse needs and risks related to water. In 2018, Ecolab invested $216 million in R&D, has invested more than $2 million in its publicly available water tools to date, which includes 1.5 FTE eROI program managers with costs greater than $150,000 per year. In addition, cost of dues, activities, participation, in-kind support and travel to participate in industry groups is roughly $250,000-500,000 per year for sustainability-related commitments.

Cost of management

220,000,000

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Ecolab serves many industries that rely on water and energy to operate. As climate change impacts the availability and price of water and fossil-based energy, customers are increasingly looking for solutions that enable them to improve operational efficiency and save costs, including reducing water use and the energy required to pump, heat or cool water. This presents opportunities to expand market share of innovative water and energy optimizing solutions from Ecolab's system portfolio. For example, our APEXTM Warewashing System, our DryExxTM beverage line lubrication system, and our 3D TRASARTM system for cooling tower and boiler feed water conditioning, reduce the use of water and energy compared to conventional systems.

Cooling water and energy applications across all industries will require even better resource management strategies to deal with increased costs and scarcity, creating broader opportunities for the water technologies mentioned above and also for waste treatment in order to better protect the environment. With our Nalco Champion business,

we are engaged in serving customers who have more water and energy intensive institutional and industrial operations. This increases the opportunity for us to leverage the value proposition of water and energy saving offerings and pursue significant top line growth. The addition of Nalco Champion also offers opportunities for increasingly cost-effective synergies in technology and innovation, delivering more profitable and cost-effective programs for customers across most if not all businesses and regions.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

88,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Developing and expanding our low emission goods and services presents opportunities for increased growth rate, market share and profitability. We have identified many opportunities in our target markets, including food & beverage processing and commercial buildings, to gain a competitive advantage through our water and energy optimizing solutions. At a global level, Ecolab's market growth opportunity represents approximately an $88 billion spread across all our primary business units (this was estimated based on our existing market share in F&B processing and commercial buildings, against the total available market share).

Strategy to realize opportunity

To drive corporate focus on growing revenues, maintain our leadership position and manage changing customer behaviors we have adopted a goal to reduce water withdrawal by 300 billion gallons a year by 2030 in our customers and own operations. In addition to our $216 million RD&E pipeline to support this goal, we have developed two tools, the Water Risk Monetizer and the Smart Water Navigator, to help inform how customers' can realize operational water efficiencies and reduce their risks related to water withdrawal, consumption and discharge. We invest in R&D and believe that doing so is critical to maintaining our leadership position within the industry and provides us with a competitive advantage as we seek additional business with new and existing customers. We also use an eROI program to measure and communicate the sustainability benefits we provide to customers via eROI case studies that document

and monetize all positive impacts for customers which is critical to driving and sustaining growth with our industrial customers which have diverse needs and risks as it relates to water.

Cost to realize opportunity

220,000,000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company-specific description

Climate change will cause increased risks to water availability and quality, which we anticipate will drive greater water use regulation globally. As Ecolab serves customers in many industries that rely on water to operate, there is an opportunity for us to develop new products and services and expand our existing portfolio of conservation, reuse, recycle, and zero liquid discharge technologies that improve water efficiency in a more tightly regulated market. We anticipate these opportunities will be global, but will be especially pronounced in densely populated, arid and temperate regions including BRIC and emerging markets.

In addition, policies and regulations designed to promote the transition to a low carbon economy, including carbon taxes, cap-and-trade, and fuel/energy taxes and regulations, are being implemented around the world. We anticipate greater regulation of GHGs emitted by our customers will drive opportunities to leverage many of our energy and water services, and improve access to new and emerging markets. For example, demand for our waste water anaerobic digestion systems that efficiently capture methane from organic waste may be in higher demand in regions with regulated carbon pricing schemes. Capturing methane gas from waste generated onsite reduces methane emissions and can be a source of clean energy for heating or powering the processing

facility

Reducing water and energy consumption for customers operating in highly regulated environments presents opportunities for Ecolab to gain a competitive advantage and expand market share and revenue.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

If we do not act upon this opportunity, we risk losing business and our competitive position. Specific to water-related regulatory opportunities, there is the potential for increased market share and access of up to $4 billion of competitively-held water treatment applications in our European markets alone (this was estimated based on our existing market share in the European market for water treatment applications, against the total available market share).

Strategy to realize opportunity

We invest significantly in experts that can evaluate our customers processes and identify opportunities to reduce water and energy consumption and we employ a Total Impact Approach to evaluate the full impact of each product or service and invest in R&D activities that help customers optimize water and energy while maintaining performance requirements and meeting regulatory and compliance related requirements. For example, we partnered with a large dairy food processor in an emerging market looking to reduce the footprint of their products to increase their brand profile with their customers, and completed a project to treat high-strength whey permeate and generate significant quantities of energy. The patented system converts the production plant's soluble waste by-products into biofuel and treated water and offsets 30-40% of its natural gas consumption, reducing 8,750 tons of CO2e annually. We use eROI case studies to document all positive environmental impacts for customers and drives growth with our industrial customers. In 2018, Ecolab invested $216 million in research and development, with sustainability as a strategic driver in

many ongoing projects. In addition, our eROI program is managed by 1.5 FTE with costs greater than $150,000 per year. Lastly, the cost of dues, activities, participation, in-kind support and travel to participate in industry groups is roughly $250,000-500,000 per year for sustainability-related commitments around product transparency.

Cost to realize opportunity

216,600,000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

Ecolab's business success depends on meeting and exceeding the expectations and requirements of its key stakeholders, including customers, investors and employees. We believe there is opportunity to enhance our corporate reputation through our environmental programs and climate-related goals, thereby strengthening relationships with key stakeholders, gaining a competitive advantage, and boosting the attractiveness and stability of Ecolab as a strong investment. We conduct a bi-annual sustainability materiality assessment to prioritize the sustainability issues of greatest relevance to our business and highest importance to our stakeholders. The results of our sustainability materiality assessment inform our corporate sustainability strategy and reporting activities, including climate-related issues. Our most recent materiality assessment confirmed that improving water and energy management, increasing operational efficiency and preserving natural resources continue to be issues of high importance to our stakeholders, including customers.

Our customers are increasingly looking to partner with suppliers that demonstrate corporate responsibility and transparently report on climate management and performance, and this will continue to increase in importance as climate change awareness grows. In 2018, eight of our customers representing $108 million in sales requested our participation in the CDP Supply Chain survey. Looking ahead, as our customers face drivers to reduce their own GHG emissions, we may also see increased

demand for our products and services if we can positively differentiate ourselves and the GHG emissions benefits of our product and service offerings in the marketplace. Increasingly, we are seeing an interest from customers in getting accurate data to measure the success of their own sustainability programs, and rely upon Ecolab to provide this information.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

108,000,000

Potential financial impact figure – maximum (currency)

4,000,000,000

Explanation of financial impact figure

A shift in customer preferences could result in increased revenue and market share due to customers seeking suppliers with robust sustainability strategies as well as energy- and water-efficient goods and services. In 2018, eight of our customers representing $108 million in sales requested our participation in the CDP Supply Chain, which represents a minimum range of financial impact (e.g. retaining those relationships and associated revenue). Specific to water-related regulatory opportunities, there is the potential for increased market share and access of up to $4 billion of competitively-held water treatment applications in our European markets alone (this was estimated based on our existing market share in the European market for water treatment applications, against the total available market share).

Strategy to realize opportunity

As our customers increase their efforts to measure and report environmental performance, we have an opportunity to standardize how we communicate value to customers. We do this through our trademarked eROI program via case studies and business reviews. eROI case studies serve as tools to communicate the value we provide to customers and accelerate sales, with more than 400 eROI case studies have been created to demonstrate sustainability value for customers, including in the areas of energy, water, air emissions, waste, improved asset life and safety. The eROI value capture program represents a tremendous opportunity to differentiate Ecolab as a leader in helping customers achieve both performance and sustainability goals. Ecolab also produces an annual Corporate Sustainability Report and supporting GRI Index

report focused on where we have the greatest impact: our customers, our operations, and the communities in which we live, aligned to the Global Reporting Initiative's Standards framework. In addition, Ecolab responds to the RobecoSAM Sustainability Assessment, and the many other surveys, and we are a signatory of the United Nations Global Compact and CEO Water Mandate. The cost of dues, activities, participation, in-kind support and travel to participate in industry groups is roughly $250,000-500,000 per year for sustainability-related commitments around product transparency. In addition, our eROI program is managed by 1.5 FTE with costs greater than $150,000 per year.

Cost to realize opportunity

475,000

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	A trusted partner at nearly three million customer locations, Ecolab (ECL) is the global leader in water, hygiene and energy technologies and services that protect people and vital resources. In 2018, we helped our customers conserve more than 188 billion gallons of water, save 19 trillion BTU's of energy and 2.4 billion pounds of greenhouse gas emissions, and eliminate 54 million pounds of waste. Identified risks and opportunities related to our products and services include potential impacts to our corporate brand and reputation, as there are opportunities for Ecolab to gain market share and sales growth of its products and services that are designed to solve dynamic climate-related risks affecting customers. Thus, while the magnitude of the impact is medium-high, the development of our products and services to address the identified climate-related risks and opportunities is core to our purpose and core to existing business activities.
Supply chain and/or value chain	Impacted	Our unique combination of expertise and innovative solutions makes the world cleaner, safer and healthier while protecting people and vital resources across the entire value chain. From the raw materials that are the building blocks of nearly every product, to production and manufacturing, to retail and service environments where products meet people, Ecolab is behind the scenes working with our customers to improve performance, meet increasing demand and reduce environmental impact. Currently, we have global strategic sourcing agreements with large multinational chemical and material companies. These strategic partners are also customers that depend on Ecolab's smart technology, expertise and services to manage and mitigate climate and operational risks associated with water and energy. For

		example, in 2017 Dow's Tarragona, Spain facility was looking to reduce their dependency on fresh water from the water stressed Ebro River for their Petro chemical refining plant. They brought in experts from Nalco Water, an Ecolab Company, to develop a more circular solution. Today with Ecolab's unique technologies and expertise, the plant is using 40% reclaimed water and has reduced the freshwater withdrawal from the Ebro river by 22% and effluent discharge by 49%. Thus, while our value chain may be impacted by climate-related physical and transition risks or opportunities and we consider the potential magnitude of the inherent impact to be medium, through the delivery of our products and services it presents a significant revenue opportunity.
Adaptation and mitigation activities	Impacted	Potential and realized risks stemming from climate change have impacted our business continuity planning and management activities, including adaptation and mitigation activities, as manifested in the form of water stress, drought, and access to water quantity and quality. Using our annual water risk assessment, we identify sites vulnerable to climate change and proactively adopt both mitigation and adaptation strategies to reduce risk at our manufacturing sites. For example, we adopted the Alliance for Water Stewardship (AWS) and certified three of our manufacturing plants to the International Water Stewardship Standard – Taicang, China (2014), City of Industry (2017) and Carson, California (2017). At our largest water use plant in Clearing, Illinois (southwest Chicago) we adopted a mitigation strategy to reduce our water withdrawal sourced from Lake Michigan (and effluent discharged). Lake Michigan is currently water stressed due to quality issues (nutrient load). Through tools like the Water Risk Monetizer (WRM), Ecolab invested in a top of the line water reclaim system in 2018 that when fully operational will save 100 million gallons of water per year. These water reduction projects across the enterprise have also delivered energy savings as well. However, the overall magnitude of this impact is low as these activities have been incorporated into our existing business continuity planning and management programs, as well as Ecolab's existing Create and Maintain Value efficiency site programs.
Investment in R&D	Impacted	We take a comprehensive look at the environmental, economic and social impacts of our product and service offerings and consider how each solution increases efficiency, minimizes the use of natural resources and improves safety – from sourcing to manufacturing, to use and disposal. We work very hard to deliver an innovation pipeline which will generate a vitality index of around 30%, which means we want 30% of our sales coming from products and programs introduced within the prior five years. This presents an opportunity for gaining market share across all our business areas due to the dynamic nature of climate-related risks, which our products and services are designed to solve for when in-use at our more than three million customer locations. In 2018, we delivered another $1+ billion innovation pipeline and we forecast our

		2019 innovation pipeline to deliver more than $1.3 billion in total annual revenue in five years – a medium-high magnitude of impact.
Operations	Not yet impacted	Our operations may be impacted by climate-related physical and transition risks or opportunities. Although the risk is considered “about as likely as not”, if there were an increased frequency of extreme weather events this could disrupt our manufacturing operations and that of our supply chain. We consider the potential magnitude of this inherent impact to be substantive, however rated as low, and current in terms of timeframe. To date Ecolab has not experienced any events that have resulted in substantive damage or impact to our operations, expenditures, cost of business or revenues to date, but it is possible these may occur in the short-term (within the next 2 years).
Other, please specify	Not evaluated	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Climate-related impacts on revenue are factored into our financial planning process via the Annual Business Significance Risks Assessment. A trusted partner at nearly three million customer locations, Ecolab (ECL) is the global leader in water, hygiene and energy technologies and services that protect people and vital resources. With annual sales of $14.3 billion and 49,000 associates, Ecolab delivers comprehensive solutions, data-driven insights and on-site service to promote safe food, maintain clean environments, optimize water and energy use, and improve operational efficiencies for customers in the food, healthcare, energy, hospitality and industrial markets in more than 170 countries around the world. Accordingly, increased understanding and awareness of climate change, its causes and effects, as well as relevant policy, reputational and financial risks and opportunities are driving increased customer demand for our products and services. This in turn drives additional revenue for our business. We incorporate these shifts in customer demand and product development into our financial planning processes, for example, in the development of our annual R&D budgets to meet this demand. The magnitude of this impact is medium.
Operating costs	Impacted	Climate-related impacts on operating costs are factored into our financial planning process via the Annual Business Significance Risks Assessment. Ecolab operations are not water and energy intensive, therefore operating costs are not substantial. However, we invest in mitigation strategies in our “hot spot” operations to reduce

		water and energy use. Those projects do require operating expenses to implement. However, management of these risks presented to our business by climate change are part of the operating cost of our business. The magnitude of this impact is low.
Capital expenditures / capital allocation	Impacted	Climate-related impacts on capital expenditures are factored into our financial planning process via the Annual Business Significance Risks Assessment. From our risk assessments, we have mitigation and adaptation strategies that may require capital. For example, at our largest water use plant in Clearing, Illinois (southwest Chicago) we adopted a mitigation strategy to reduce our water withdrawal sourced from Lake Michigan (and effluent discharged). Lake Michigan is currently water stressed due to quality issues (nutrient load). Through tools like the Water Risk Monetizer (WRM), Ecolab invested in a top of the line water reclaim system in 2018 that when fully operational will save 100 million gallons of water per year. These water reduction projects across the enterprise have also delivered energy savings as well. The magnitude of climate-related impacts on capital allocations is expected to be low when factored against total capital expenditures company-wide.
Acquisitions and divestments	Impacted	We are constantly looking for ways to not only innovate solutions that help our customers mitigate climate-related risks, but also inform our acquisition strategy. As such, climate-related impacts on acquisitions and divestments are factored into our financial planning process via the Annual Business Significance Risks Assessment. The magnitude of this impact is medium-low.
Access to capital	Impacted	Climate-related impacts on access to capital are factored into our financial planning process via the Annual Business Significance Risks Assessment. We believe in careful stewardship of our finances, managing our costs with great care, maintaining a sound balance sheet, following conservative financial policies and consistently investing in the key drivers for future growth. Ecolab has beaten the S&P 500 in 22 of the last 28 years and has met or exceeded our forecast in 105 of the last 106 quarters. Our access to capital for sound business decisions supports numerous business operations including those relate to climate risks. For example, due to the growing demand of the investor community for transparency and disclosure of environmental and climate-related risks, we align with various industry best practices for reporting and transparency including the Global Reporting Initiative. We do not currently have a reliable means of predicting the magnitude of this impact, nor can we break out how our access to capital will be affected by climate-related issues versus other drivers. However, the magnitude of this impact is expected to be low at this time.

Assets	Impacted	Climate-related impacts on assets are factored into our financial planning process via the Annual Business Significance Risks Assessment. For instance, as part of the implementation of our GHG emissions reduction goal and strategy, we invested in our real estate portfolio to identify opportunities to improve the resource efficiency in our operations and manufacturing plants worldwide. For example, in late 2018 Ecolab inked a virtual power purchasing agreement (VPPA) with renewable energy producer Clearway, which is constructing a 418-megawatt wind farm in Texas. When the facility opens in 2020, Ecolab will participate in 100 megawatts of that capacity – enough to power 27,000 single family homes for a year. The deal is expected to cover 100 percent of Ecolab's annual electricity use in the United States, and will enable us to reduce greenhouse gas emissions by 25 percent, more than doubling Ecolab's goal of a 10 percent reduction by 2020.The magnitude of climate-related impacts on our assets is expected to be medium-low when factored against our entire asset portfolio.
Liabilities	Impacted	Climate-related impacts on liabilities are factored into our financial planning process via the Annual Business Significance Risks Assessment. For example, we address the liability of our real estate portfolio using resiliency plans in case of climate-related disasters or severe weather which could impact our owned assets. These plans address potential raw material availability risks, supply chain disruption risks and operational risks, enabling Ecolab to ensure business continuity and minimize disruption to our operations and customers. The magnitude of climate-related impacts on our liabilities is expected to be low.
Other	Not evaluated	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

For over 95 years, Ecolab's core business has provided water, hygiene and energy technologies and services to help our global customers keep their environment clean and safe, operate efficiently and achieve sustainability goals. Therefore, our business objectives and strategy are explicitly linked to, and influenced by, the climate change risks and opportunities we monitor and manage on a regular basis. We operate at the nexus of the world's most critical business, environmental and social challenges. For economies to thrive, business needs to meet that demand while using fewer resources. Aspects of climate change that are influencing our strategy range from physical impacts (e.g. increased extreme weather events impacting Ecolab facilities and suppliers) to regulatory (increased regulation of energy, GHGs and water affecting our customers) and other (shifting customer preferences and the opportunity to grow our business by delivering positive sustainability benefits for customers).

Our Strategic Planning Process is used to identify global trends that present risks and opportunities for our business and develop our Strategic Plan. We look at short-term (up to 2 years) and long-term (5-20 years) megatrends influencing our operations and corporate strategy, including climate-related issues. Building off our Strategic Plan, our annual, enterprise level Assessment of Significant Business Risks is conducted using a survey tool designed to identify strategic, operational, financial and compliance related risks to the company both at the corporate and at the site level. Risks are documented along with the likelihood and impact of their occurrence and results are presented to the executive management team and Ecolab's Board of Directors to ensure appropriate strategy adjustments occur. For example, in this assessment process we have evaluated the current status and financial impact of current fuel prices and those subject to regulation and forecasted this against Ecolab's short- and mid-term (2-5 years) Strategic Plan to evaluate potential cost implications. This analysis was used to inform our growth strategy, capital, and operational expenditures planning to ensure our current fleet strategy is aligned with fuel economy standard trends. In addition, our bi-annual sustainability materiality assessment informs our corporate sustainability strategy and reporting activities, including climate-related issues. This process leverages the results of our enterprise Assessment of Significant Business Risks to align the materiality of sustainability topics with key business drivers. Outputs from this assessment are also integrated into the Assessment of Significant Business Risks annual comprehensive review where critical sustainability risks and opportunities across the company are linked to core business risks and opportunities for further evaluation into the nature of potential impacts, the level of stakeholder concern, and our ability to affect and/or manage these issues. The process also ranks and prioritizes topics of relevance to our stakeholders for management action and disclosure. In 2019, we updated our sustainability materiality assessment and our findings confirmed that improving water and energy management, increasing operational efficiency and preserving natural resources continue to be issues of high importance to our stakeholders, including customers.

Our business strategy is linked to an emissions reduction target. By 2020, we aim to reduce water usage by 25 percent and greenhouse gas emissions by 10 percent across all our manufacturing plants, compared to a 2015 baseline normalized to sales. Further, we have set a

customer impact goal, aiming to conserve 300 billion gallons of water annually by 2030 by reducing water consumption within our own and our customers' operations. This represents water conservation equaling the annual drinking needs of more than 1 billion people.

One example of a substantial business decision influenced by climate change relates to the strategic merger of Ecolab Inc. and Nalco Holding Company to create Nalco Champion in 2011. This merger has continued to provide significant new markets in water services, energy services, and paper services that leverage efficiency solutions, and Nalco technology has provided improved water & energy efficiency in Institutional, Food & Beverage, and Healthcare markets. Aspects of climate change that influenced this decision included our ability to increase resource efficiency, reduce the use of water and improve the management of wastewater in oil and gas services market. Another example relates to the use of our annual water risk assessment to prioritize water conservation and efficiency efforts across the business, which is affected by water-related risks due to climate change. In 2017, two of our sites that exceeded criteria thresholds completed Alliance for Water Stewardship Certification and in 2018, another site installed a top of the line water reclaim system that when fully operational will save 100 million gallons per year, thus reducing our inherent risk.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
RCP 8.5	Water risk scenario analysis: As a specialty chemicals company, Ecolab faces less exposure to climate risks than its raw material chemical industry peers. However, we believe that climate change impacts on water present a material risk to our company. We complete an annual water risk assessment of our direct operations in alignment with our Annual Enterprise Risk Assessment. In 2018, we used WRI's Aqueduct tool to identify global facilities operating within water stressed regions that are potentially affected by climate change. We then combined operational data such as water withdrawal, effluent and production metrics with water risk inputs and financial cost valuations from the Water Risk Monetizer (WRM) tool to evaluate water risk at an operational level. The risk assessment included analysis of water related conditions under alternative climate scenarios (e.g. IEA 450 and IPCC RCP 8.5) to help us determine our resilience to potential future changes. How scenarios were identified, and time horizons considered: The analysis modelled potential changes in water demand, water supply, water stress, and seasonal variability for three periods centered on 2020, 2030, and 2040 for two climate scenarios, RCP4.5 and RCP8.5, and two shared socioeconomic pathways, SSP2 and SSP3 which are incorporated into the Aqueduct tool. For our overall water risk assessment, we focused on the 2030 "business as usual" scenario (SSP2 RCP8.5) which represents a world with stable economic development and steadily rising global carbon emissions.

	Scope of the assessment: Our starting point for the assessment was 100% of our direct operations. We removed from the list of facilities for assessment those where we estimate for water data and production and are otherwise very small users of water (this includes an estimated 5% of water withdrawal and effluent from Offices, Distribution, Warehouses, Flex/R&D and related facilities). We focused our assessment on the remaining 139 manufacturing and campus/technology center facilities, representing 95% of our total global water withdrawal and effluent footprint. Results of the scenario analysis and how results have informed our strategy and objectives: We identified 19 facilities, representing 30% of our total water withdrawal, that currently operate in river basins with current and/or future defined water stress and where our 10-year potential Revenue at Risk is greater than 10% (based on the Water Risk Monetizer tool). Of these, only 3 strategically important sites representing 27% of our total water footprint and 8.2% of our total production volume met the threshold for substantive risk and may be affected by Ecolab's water withdrawal. The scenario analysis indicated that 29 of our sites representing 7.46% of our water withdrawal will see an increase under the 2030 Business as Usual scenario in exposure to water stress based on our definition (% of water withdrawals in areas with high or extremely high baseline water stress). These annual water risk assessment results help us prioritize where to focus our water conservation and efficiency efforts across the business. For example, we adopted the Alliance for Water Stewardship (AWS) Standard and certified three of our manufacturing plants – Taicang, China (2014), City of Industry (2017) and Carson, California (2017). In 2018, our Clearing plant in Illinois installed a top of the line water reclaim system in 2018 that when fully operational will save 100 million gallons of water per year. Our overall risk remains low and below our defined substantive risk threshold, and is diversified across our global portfolio of production facilities. Ecolab will continue to consider other physical and transitional risks and opportunities in its annual scenario analysis and enterprise risk evaluation processes in the future.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

10

Metric

Metric tons CO2e per unit revenue

Base year

2015

Start year

2015

Normalized base year emissions covered by target (metric tons CO2e)

50.6

Target year

2020

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

8.3

Target status

Underway

Please explain

Ecolab achieved 46.4 MTCO2e/million dollar sales, resulting in an 8.3% reduction from baseline intensity in 2018. Net revenue is adjusted to constant 2015 dollars to factor out inflation when normalizing Ecolab's emissions performance against the baseline year, following best-practices guidance from the GHG Protocol and EPA Climate Leaders. Ecolab's net revenues are adjusted for inflation using Producer Price Indexes (PPI) from the Bureau of Labor Statistics.

% change anticipated in absolute Scope 1+2 emissions

5

% change anticipated in absolute Scope 3 emissions

0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	4	778
Implementation commenced*	1	4
Implemented*	16	1,115
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type

Energy efficiency: Processes

Description of initiative

Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)

276.41

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
115,000

Investment required (unit currency – as specified in C0.4)
422,000

Payback period
4 - 10 years

Estimated lifetime of the initiative
16-20 years

Comment
Upgraded heating system

Initiative type
Energy efficiency: Processes

Description of initiative
Machine replacement

Estimated annual CO2e savings (metric tonnes CO2e)
132.06

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
78,000

Investment required (unit currency – as specified in C0.4)
384,000

Payback period
4 - 10 years

Estimated lifetime of the initiative
16-20 years

Comment
Replaced oil burners with gas burners for process heat

Initiative type
Energy efficiency: Building services

Description of initiative

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

29.74

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1,300

Investment required (unit currency – as specified in C0.4)

39,094

Payback period

>25 years

Estimated lifetime of the initiative

6-10 years

Comment

Facility Lighting Upgrade

Initiative type

Energy efficiency: Building services

Description of initiative

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

20.82

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1,300

Investment required (unit currency – as specified in C0.4)

35,924

Payback period

>25 years

Estimated lifetime of the initiative

6-10 years

Comment

Facility Lighting Upgrade

Initiative type

Energy efficiency: Building services

Description of initiative

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

11.15

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1,000

Investment required (unit currency – as specified in C0.4)

21,170

Payback period

21-25 years

Estimated lifetime of the initiative

6-10 years

Comment

Facility Lighting Upgrade

Initiative type

Energy efficiency: Building services

Description of initiative

HVAC

Estimated annual CO2e savings (metric tonnes CO2e)

81.06

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

10,631

Investment required (unit currency – as specified in C0.4)

30,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Hot box replaced with heat pump

Initiative type

Energy efficiency: Building services

Description of initiative

Motors and drives

Estimated annual CO2e savings (metric tonnes CO2e)

27.02

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3,544

Investment required (unit currency – as specified in C0.4)

7,600

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Variable frequency drive installation

Initiative type

Energy efficiency: Processes

Description of initiative

Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
115.82

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
21,687

Investment required (unit currency – as specified in C0.4)
781

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Changed photoelectric switch model on chiller

Initiative type
Energy efficiency: Processes

Description of initiative
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
12.06

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2,258

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Reduced chiller operation time

Initiative type

Energy efficiency: Building services

Description of initiative

Building controls

Estimated annual CO2e savings (metric tonnes CO2e)

73.17

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

53,600

Investment required (unit currency – as specified in C0.4)

145,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Implemented water, electricity and heat monitoring system

Initiative type

Energy efficiency: Building fabric

Description of initiative

Insulation

Estimated annual CO2e savings (metric tonnes CO2e)

117.08

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
45,800

Investment required (unit currency – as specified in C0.4)
135,000

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Extrusion building roll-up doors

Initiative type
Energy efficiency: Building services

Description of initiative
HVAC

Estimated annual CO2e savings (metric tonnes CO2e)
24.42

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
7,816

Investment required (unit currency – as specified in C0.4)
24,900

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
Heat pump substitution

Initiative type
Energy efficiency: Processes

Description of initiative

Heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)

114.99

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

32,000

Investment required (unit currency – as specified in C0.4)

98,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Replaced steam heat exchanger with hot water heat exchanger and implemented heat recovery for air compressors

Initiative type

Energy efficiency: Processes

Description of initiative

Waste water treatment

Estimated annual CO2e savings (metric tonnes CO2e)

48.04

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

5,916

Investment required (unit currency – as specified in C0.4)

290

Payback period

<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Reduced steam to improve operation capacity of WWTP

Initiative type
Energy efficiency: Processes

Description of initiative
Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)
24.02

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2,957

Investment required (unit currency – as specified in C0.4)
145

Payback period
<1 year

Estimated lifetime of the initiative
6-10 years

Comment
Reduced loss in steam piping

Initiative type
Energy efficiency: Processes

Description of initiative
Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)
7.21

Scope
Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

931

Investment required (unit currency – as specified in C0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

Reduced CAHU steam

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Ecolab helps customers conserve resources and achieve sustainability goals through our Create and Maintain Value (CMV) program, which provides on-site support and service to help customers save water, energy, and wastewater, and prolong equipment life. Ecolab has applied CMV at customer sites around the world, and we continue to leverage this expertise and experience to deploy the program across our global facilities, since 2012 with sites where we could achieve the most significant resource savings.
Financial optimization calculations	Ecolab helps customers conserve resources and achieve sustainability goals through our Create and Maintain Value (CMV) program, which provides on-site support and service to help customers save water, energy, and wastewater, and prolong equipment life. Ecolab has applied CMV at customer sites around the world, and we are now leveraging that expertise and experience to deploy the program across our global facilities, beginning in 2012 with sites where we could achieve the most significant resource savings.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Company-wide

Description of product/Group of products

Many of Ecolab's innovative products and services help customers reduce energy use. The benchmark for comparison for each application listed in this section is the historic performance of the technology that was replaced in the year the product was launched. Methodologies are described separately for each application. For example: In 2017, we helped customers save an estimated 2.4 trillion BTUs globally through the use of our PARETO Mixing Technology, which enhances chemical performance by optimizing the injection of chemical additives into industrial-process streams. By allowing reuse of warmer process water in papermaking, papermakers avoid the need to heat water from freshwater temperature to process. The methodology used to estimate these reduced energy requirements is based on the quarterly calculated energy savings delivered by the technology based on historical and forecasted marketing and sales data.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

We compare the performance of new products with the historic performance products being replaced. Energy savings in MWh are converted to CO2e using the US EPA eGRID 2018 Subregion Emissions Factors Database.

% revenue from low carbon product(s) in the reporting year

100

Comment

Our solutions help customers achieve ambitious business and environmental goals. With an unparalleled combination of science and service, we deliver exponential outcomes that benefit customers and communities. Fundamental to our approach is an understanding that real and lasting change is accelerated when economic and environmental benefits align. We call this our eROI outcome: The exponential value of improved performance, operational efficiency and sustainable impact. Measurement is a critical component of our process to deliver exponential outcomes. Using our proprietary eROI value approach, we measure our impact and quantify customers' return on investment.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
January 1, 2015

Base year end
December 31, 2015

Base year emissions (metric tons CO2e)
396,380

Comment

Scope 2 (location-based)

Base year start
January 1, 2015

Base year end
December 31, 2015

Base year emissions (metric tons CO2e)
270,104

Comment

Scope 2 (market-based)

Base year start
January 1, 2015

Base year end
December 31, 2015

Base year emissions (metric tons CO2e)
289,621

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

409,173

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

254,767

Scope 2, market-based (if applicable)

256,468

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

6,792,970

Emissions calculation methodology

Ecolab has used Environmentally Extended Economic Input Output (EEIO) analysis for a portion of its annual supplier and procurement spend data. This is a categorization model to convert $USD spend based on relevant NAICS sector categories into carbon emissions associated with the extraction, production and transport of purchased goods and services acquired or purchased by Ecolab in the reported year. We have evaluated 100% of the spend in our three most material supplier categories: Raw Material Chemical suppliers, Packaging suppliers and Equipment suppliers. For each, we have incorporated 100% of the global spend data for 2018 and years prior to enable year-on-year comparison). In total, this represents more than 50% of our total global supplier spend and corresponding Purchased Goods and Services related emissions.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Through this analysis we estimate that this component of our supply chain has a carbon footprint that is 10 times the size of our own scope 1 & 2 combined footprint. We will continue to expand the number and scope of suppliers that we evaluate, report and

engage with to enhance their performance and identify opportunities to mitigate and reduce their environmental impacts.

Capital goods

Evaluation status

Relevant, not yet calculated

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

141,783

Emissions calculation methodology

Upstream emissions from purchased fuels, electricity, steam and hot and chilled water, include generation and T&D emissions and any other losses in this category. Data quality is considered to be consistent with inputs from our global database on sustainability metrics. Upstream emissions of purchased electricity are calculated for the US and other countries by multiplying electricity activity data by country or region specific emission factors from UK Defra 2017 Guidelines for GHG Reporting. Upstream emissions from purchased fuels, steam, hot and chilled water are calculated using emissions factors from UK Defra 2017 Guidelines for GHG Reporting. Emissions associated with losses were calculated for the US and other countries by multiplying the energy use by type by emission factors from UK Defra 2017 Guidelines for GHG Reporting. All GWPs are from the IPCC Second Assessment Report in line with the Kyoto Protocol.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Explanation

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

39,376

Emissions calculation methodology

This waste figure represents global waste emissions from waste disposed via landfilling, incineration, recycled or composted. Data quality is considered to be consistent with inputs from our global database on sustainability metrics. Data on waste quantity are obtained and reported from US and International sites. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM), version 14, March 2016. GWPs are from the IPCC (2007) Fourth Assessment Report. All waste management practice emissions factors are used directly from WARM ("Gross emissions" to remove 'avoided emissions' credits and align with the GHGP). Landfill emissions include the decomposition of waste in a landfill and upstream collection and transport. Incineration emissions include transport to the incinerator and processing of materials prior to incineration. Recycled, Composted and Anaerobic Digestion (AD) emissions include collection and transport of waste to the processing site.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

43,676

Emissions calculation methodology

The scope of business travel emissions is travel by North America–based and European-based employees only. Data availability for European business travel varies by country. It is estimated that 70 percent of all business travel emissions are represented. Defra 2018 emissions factors were used to calculate Scope 3 business-travel GHG emissions.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Employee commuting

Evaluation status

Relevant, not yet calculated

Explanation

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Ecolab's upstream leased assets are already included in the CY18 Scope 1 and 2 GHG inventory.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Explanation

Processing of sold products

Evaluation status

Relevant, not yet calculated

Explanation

Use of sold products

Evaluation status

Relevant, not yet calculated

Explanation

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Explanation

Downstream leased assets

Evaluation status

Relevant, not yet calculated

Explanation

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

Ecolab does not have any franchises.

Investments

Evaluation status

Not relevant, explanation provided

Explanation

Ecolab is not aware of any investments that could be estimated with a carbon emissions impact.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Explanation

No other categories or types of Scope 3 emissions that Ecolab is aware of are relevant.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Explanation

No other categories or types of Scope 3 emissions that Ecolab is aware of are relevant.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.

Row 1

Emissions from biologically sequestered carbon (metric tons CO2)

118

Comment

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

46.4

Metric numerator (Gross global combined Scope 1 and 2 emissions)

665,642

Metric denominator

unit total revenue

Metric denominator: Unit total

14,335,000,000

Scope 2 figure used

Market-based

% change from previous year

2.3

Direction of change

Decreased

Reason for change

We track gross global combined Scope 1 and 2 emissions per million dollar revenue. Our absolute emissions were relatively flat from 2017 to 2018, but our sales increased. The main driver of reductions in emissions was due to emissions from electricity, which has decreased each year since 2012. This is partly due to the purchase of renewable electricity in North America and Europe.

Intensity figure

0.169

Metric numerator (Gross global combined Scope 1 and 2 emissions)

665,642

Metric denominator

metric ton of product

Metric denominator: Unit total

3,896,970

Scope 2 figure used

Market-based

% change from previous year

1.6

Direction of change

Decreased

Reason for change

Absolute emissions and production were both relatively flat from 2017 to 2018. Our production volume slightly increased while our emissions slightly decreased, leading to a 1.6% decrease in emissions per metric ton of product.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	393,529	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	509	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	1,356	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	13,779	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Africa and Middle East	7,497
Asia Pacific (or JAPA)	20,027
Latin America (LATAM)	10,751

Europe	50,542
North America	320,355

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Mobile Combustion	198,197
Refrigerant & Fugitive	8,053
Refrigerant & Fugitive - Fleet	5,727
Stationary Combustion	197,197

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Asia Pacific (or JAPA)	47,148	47,148	115,742	0
Europe	21,960	20,515	77,059	15,592
Latin America (LATAM)	18,543	18,543	42,637	0
Africa and Middle East	10,483	10,483	16,993	0
North America	158,335	158,078	338,556	4,768

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Electricity	224,408	226,110
Purchased Heating and Cooling	30,359	30,359

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	6,294	Increased	1	Ecolab increased its purchase of Renewable Energy Certificates (RECs) & Guarantees of Origin (GOs) by 12,222 MWh, bringing our total to 20,720 MWh of renewable electricity purchased at nine Ecolab offices. Ecolab has also shifted its scope 2 GHG accounting from location-based to market-based to account for this increase in renewable electricity.
Other emissions reduction activities	1,897	Decreased	0.3	1,897 MTCO2e emissions reductions were due primarily to energy efficiency projects at US and international plants. This percent change reflects the percent decrease in emissions from emission reduction activities compared against the previous year's adjusted inventory. 2017 adjusted Scope 1+Scope 2 GHG emissions are 666,958; and in 2018 we reduced our emissions by 1,897 MTCO2e associated with emissions

				reduction activities, therefore resulting in a 0.3% emissions reduction (1897/ 666,958)*100= 0.3%
Divestment			0	
Acquisitions			0	
Mergers			0	
Change in output	4,386	Increased	0.7	Ecolab increased its production volume and sales from 2017 to 2018 by 0.7% and 6% respectively. While this correlates to an increased fleet transportation footprint we were able to realize emissions reductions at our plants to offset this increase by 2.3%.
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified	2,437	Decreased	0.4	Ecolab is unable to identify the cause for a remaining 0.4% change in emissions from its 2017 to 2018 scope 1+2 emissions. Given the percent this figure represents against our total inventory figure and rules of accounting, we consider it to be insignificant.
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	1,889,480	1,889,480
Consumption of purchased or acquired electricity		20,720	479,571	500,291
Consumption of purchased or acquired heat		0	47,253	47,253
Consumption of purchased or acquired steam		0	80,974	80,974
Consumption of purchased or acquired cooling		0	3,198	3,198
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		20,720	2,500,477	

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Biodiesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

29.5

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Mobile combustion

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

242,015

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Mobile combustion

Fuels (excluding feedstocks)

Distillate Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

11,689

MWh fuel consumed for self-generation of heat

11,689

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Fuels (excluding feedstocks)

Bioethanol

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

597

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Mobile combustion

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
565,661

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
10,685

MWh fuel consumed for self-generation of heat
10,670

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
1,058,042

MWh fuel consumed for self-generation of heat

957,842

MWh fuel consumed for self-cogeneration or self-trigeneration

100,200

Comment

Fuels (excluding feedstocks)

Residual Fuel Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

760

MWh fuel consumed for self-generation of heat

760

MWh fuel consumed for self-cogeneration or self-trigeneration

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Biodiesel

Emission factor

0.00017

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Bioethanol

Emission factor

0.05

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Diesel

Emission factor

0.256

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Distillate Oil

Emission factor

0.253

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Liquefied Petroleum Gas (LPG)

Emission factor

0.214

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Motor Gasoline

Emission factor

0.241

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Natural Gas

Emission factor

0.181

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

Residual Fuel Oil

Emission factor

0.257

Unit

kg CO2e per kWh

Emission factor source

USEPA factor set

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	100,200			0
Heat	0	0	0	0
Steam	0	0	0	0

Cooling	0	0	0	0

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

Energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Other low-carbon technology, please specify

Renewable Energy Certificates

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

20,720

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

Renewable Energy Certificates (RECs) & Guarantees of Origin (GOs) are purchased at nine Ecolab offices.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify

Water Consumption

Metric value

672

Metric numerator

9.64 million cubic meters

Metric denominator (intensity metric only)

14,335 million USD sales

% change from previous year

0.15

Direction of change

Decreased

Please explain

The scope of water consumption includes global manufacturing and headquarters/RD&E facilities. This decrease in intensity is driven primarily by an increase in sales relative to a slight increase in total water consumption year on year.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Ecolab 2018 GHG Verification Statement.pdf

Page/ section reference

1-3

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Ecolab 2018 GHG Verification Statement.pdf

Page/ section reference

1-3

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Ecolab 2018 GHG Verification Statement.pdf

Page/ section reference

1-3

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- at least one applicable category

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

Ecolab 2018 GHG Verification Statement.pdf

Page/section reference

1-3

Relevant standard

ISO14064-3

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C5. Emissions performance	Year on year change in emissions (Scope 1 and 2)	ISO14064-3	

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number

26

% total procurement spend (direct and indirect)

38

% Scope 3 emissions as reported in C6.5

93

Rationale for the coverage of your engagement

Our Raw Materials suppliers make up 26% of total suppliers by number, and 38% of our total procurement spend. These suppliers are specifically engaged on climate-related issues including reporting their risks, consumption and product development related information because they represent the core foundation for developing the products and services which we formulate and sell to customers and it is critical that they mitigate climate-related risks and maximize efficiency. They are selected for reporting through our procurement organization, and our top tier Raw Materials suppliers (seven suppliers) representing 19% of our Raw Materials spend are also engaged to participate in our Strategic Supplier Initiative. All Raw Materials suppliers are incentivized to participate in reporting because we co-innovate with them on projects, products, and services which reduce their operating costs and lower their environmental footprint. These benefits are realized through our direct engagement with suppliers in the contracting and procurement process where we identify raw material purchasing needs and explore their manufacturing processes to identify opportunities to increase efficiency and reduce energy and water consumption.

Impact of engagement, including measures of success

Our engagement with Raw Materials suppliers has resulted in the generation of new innovation and product launches which enable our sales growth significantly. For example, Ecolab engaged with key suppliers Dow and BASF to deploy its 3D TRASAR technology for cooling water which reduced the water footprint for our purchased goods from these two suppliers by 3 billion gallons, a 71% reduction, as well as energy consumption. These supplier engagements enable us to establish deep partnerships with key suppliers through our Strategic Supplier Initiative (suppliers participating in this initiative comprise 19% of our Raw Materials spend). To highlight the impact, more than 10% of our R&D pipeline comes from strategic supplier initiatives.

We request and collect data on our Raw Materials suppliers' product roadmap plans and their own operational needs to develop product innovation opportunities. These opportunities include initiatives to reduce energy and water impacts in suppliers' manufacturing operations, as well as use-phase energy and water impacts from their products (which we also use in our own operations).

We collect product performance attributes covering energy, water, GHG emissions and other key environmental criteria, as well as supplier operational impacts proportioned to the volume of product we purchase. This information is then used with our product R&D teams to inform targeted efficiency projects with suppliers at the product development level and/or supplier manufacturing operational level.

Success is measured based on the following metrics: the number of projects we have in place per year, the cumulative savings of energy and water the new products will deliver from the base case (as reported through our eROI platform and calculator available on our website), and the cumulative savings of energy and water our suppliers conserve/reduce through efficiency projects that we co-deliver.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

100

% Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

Using our proprietary eROI approach, we measure the environmental impact of our products and services, including energy and emissions, and quantify customers' return on investment based on improved performance, operational efficiency and sustainable impact. 100% of our customer base is engaged on eROI reporting because our customers rely on Ecolab to deliver both cost savings and reductions in environmental impact. Education about the potential impacts of climate change and how our products and services are used to reduce customer impacts is a key component of our value proposition.

More information on how we quantify and report environmental savings using our eROI method can be found on our website: https://en-ca.ecolab.com/sustainability/customer-impact/exponential-value-eroi

Impact of engagement, including measures of success

To measure, document and communicate the quantified economic, operational and environmental impact of our products and services to customers, we developed our trademarked eROI program. eROI value is measured using 10 key performance indicators: 1) Safety; 2) Water (conserving freshwater or minimize/eliminate contamination); 3) Energy (reducing customers' energy use); 4) Air (including GHG emissions); 5) Waste; 6) Assets; 7) Costs; 8) Productivity; 9) Food Safety; and 10) Product Quality.

We annually report on customer success stories demonstrating sustainability value for customers, including in the areas of energy, water, waste and GHG emissions, as well

as total environmental savings across our entire portfolio of solutions. The impact of this climate-related engagement strategy is reported live via our eROI calculator. In 2018, we helped our customers save a total of 19 trillion BTUs of energy, 2.4 billion pounds of CO2 emissions, 54 million pounds of waste, and 188 billion gallons of water, equivalent to the annual drinking water needs of more than 650 million people.

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

95

% Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

Most of Ecolab's technology solutions have a component that impacts climate-related issues and emissions, and an estimated 95% of our customers are engaged on climate-related innovation through our solutions and services (the remaining 5% of our customers use solutions that do not significantly impact the climate). These customers rely on Ecolab to deliver both cost savings and reductions in environmental impact which we quantify and report using our proprietary eROI method. Engaging with our customers to innovate their operations and activities and reduce potential impacts of climate change is a key component of our value proposition and purpose.

Impact of engagement, including measures of success

We partner with all of our customers to increase their energy efficiency and reduce GHG emissions, improve their sustainability performance and enhance their business results. For example, in 2018 we partnered with our customer Colgate-Palmolive to help them reduce climate change impacts. Located in a water-stressed region, Colgate-Palmolive's Mission Hills plant in Guanajuato, Mexico, is a zero liquid discharge site. With Ecolab's partnership, the plant was able to use treated wastewater and improve the efficiency and sustainability of its cleaning and sanitizing process. As a result, the Colgate-Palmolive plant is saving 1.8 million gallons of water, 315,000 kWh of energy, and 472,500 pounds of CO2 emissions per year. These and other solutions help Colgate-Palmolive reach its 2020 goals to reduce the water intensity of its manufacturing operations by half, energy intensity by one-third and absolute GHG emissions by 25 percent compared to a 2002 baseline.

Measures of success: we annually report on customer success stories like the Colgate-Palmolive example above, as well as total environmental savings across our entire portfolio of solutions. In 2018, our technologies realized savings of 19 trillion BTUs of energy, 2.4 billion pounds of CO2 emissions, 54 million pounds of waste, and 188 billion

gallons of water, equivalent to the annual drinking water needs of more than 650 million people.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	We have been actively engaged and supportive of "The Energy Savings and Industrial Competitiveness (ESIC) Act," S. 385 & HR 1443 in the U.S. Congress and have provided input on the water performance program for federal building that includes a specific reduction target, expands the current Federal Energy Management Program (FEMP) to include water conservation and include water savings in the current life cycle cost method for energy reduction calculations. These changes will promote both energy and water efficiency since reducing water use unlocks energy efficiency improvements.	The Energy Savings and Industrial Competitiveness Act passed the Senate in 2017 with 82 votes and would advance energy efficiency measures and incentives. For Ecolab and our Nalco Water team, we see a pathway to include water efficiency technology as part of the energy efficiency definition. We will support this proposal once again as it gets re-introduced in the 116th Congress and will encourage both the Senate and the House to address industrial energy efficiency and related water efficiency.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

American Cleaning Institute

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Supportive of industry outlook on key energy and sustainability issues.

How have you influenced, or are you attempting to influence their position?

No

Trade association

National Association of Manufacturers

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Supportive of industry outlook on key energy and sustainability issues.

How have you influenced, or are you attempting to influence their position?

No

Trade association

American Chemistry Council

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Supportive of industry outlook on key energy and sustainability issues.

How have you influenced, or are you attempting to influence their position?

No

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Engagement Process: Ecolab takes a holistic approach to sustainability, which includes economic, environmental, and social responsibility activities. Engaging with policymakers is one means of furthering our sustainability objectives. We communicate with policymakers in proactive policy discussions, bringing our market segment and scientific expertise to the table on energy, water, waste, food safety and customer health issues. Ecolab engages with federal and state legislative and regulatory bodies, industry and customer trade associations around the globe and non-government organizations that provide a forum for environmental policy discussion relevant to our industry. These include a diverse set of stakeholders which focus on key climate mitigation and adaptation issues such as product design for energy efficiency and material safety, energy management in business and manufacturing operations and industry collaboration to influence climate policy.

Actions Advocated: In the U.S., Ecolab's participation in the American Chemistry Council's Executive Taskforce on Leadership and Sustainability Policy demonstrates our commitment to advancing sustainability goals and reducing environmental impact. As a member, we have helped shaped forthcoming goals and commitments to drive improvements in energy and water efficiency among industry members. In Europe, we have worked with the International Association for Soaps, Detergents and Maintenance Products (AISE) to help develop industry-wide initiatives on sustainability and climate change. We have been an active driver in the development of the AISE Sustainability Charter, which will address product use - related impacts in addition to manufacturing impacts. Climate change, and specifically energy use, is a key focus for these industry-wide sustainability initiatives, in addition to product safety and chemical usage. Also in Europe, our Nalco Water business helped ensure that the energy-water nexus was recognized in the EU Directive on Energy Efficiency (EED). With our support, the EED now calls for exploring ways to drive energy savings through smart technologies and processes that reduce water use. We will continue to drive voluntary reporting, such as through the CDP, while also seeking out opportunities to engage with policy makers around climate change issues.

Ecolab continues its partnership with Trucost to enhance and maintain the Water Risk Monetizer, a tool that is reshaping global understanding of the full value of water, particularly in water-scarce regions. Through first-hand experience working alongside businesses across industries and geographies, we identified a major obstacle preventing decision makers from advancing more meaningful water strategies: Water is significantly undervalued in much of the world, making it difficult to make fully informed decisions regarding operation locations or to justify investment in water-reduction programs. The Water Risk Monetizer (www.WaterRiskMonetizer.com) is the first financial modelling tool available to the public that enables companies to determine a risk-adjusted price of water to their business. Available to all water users at no cost, the tool uses a scientific model developed by Trucost to factor the potential impact of water risks in financial terms, the same way other risks are considered in planning and capital allocation. The tool is helping change the way companies value and manage water to reduce global water use, enable business growth despite water scarcity and drive demand for transformational water-saving innovation. It is a game-changer for industry that aims to help businesses succeed and ensure that limited fresh water supplies are available for future generations.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Ecolab maintains a formalized process for all direct and indirect activities that relate to engaging with policy makers and related organizations. This process covers the scope and impact on the business of specific policy issues and is integrated into the annual business continuity and risk management assessment process so that any activities that influence policy are evaluated for their alignment with Ecolab's strategic corporate business strategy, including, but not limited to aspects of climate change. Our own business strategy around product and services development and market expansion is informed by policy discussions with the organizations and policy issues mentioned above.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

2018-annual-report-v1.pdf

Page/Section reference

Page 12

Content elements

Strategy
Risks & opportunities
Emission targets

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Ecolab 2018 Corporate Sustainability Report FINAL.pdf

Page/Section reference

All (pages 1-37)

Content elements

Strategy
Emissions figures
Emission targets
Other metrics
Other, please specify
Example initiatives and case studies

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Ecolab 2018 GRI FINAL.pdf

Page/Section reference

Pages 2, 28-30, 35-39, 41, 45-48, 51, 70-73

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chairman of the Board of Directors and Chief Executive Officer	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	14,335,000,000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

No

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

Arcos Dorados

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Sao Paulo/Barueri, Pilar, Greensboro, Cuautitlan

Emissions in metric tonnes of CO2e

74

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Arcos Dorados

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Sao Paulo/Barueri, Pilar, Greensboro, Cuautitlan

Emissions in metric tonnes of CO2e

65

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Braskem S/A

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Lerma, Suzano

Emissions in metric tonnes of CO2e

117

Uncertainty (±%)

5

Major sources of emissions
Fleet and Facilities

Verified
No

Allocation method
Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member
Braskem S/A

Scope of emissions
Scope 2

Allocation level
Facility

Allocation level detail
Emissions allocated from: Lerma, Suzano

Emissions in metric tonnes of CO2e
37

Uncertainty (±%)
5

Major sources of emissions
Offices and Facilities

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Caesars Entertainment

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Carson, Clearing, Ellwood City, Garyville, Port Alan, Sugar Land, Joliet, City of Industry, Garland, Martinsburg, McDonough

Emissions in metric tonnes of CO2e

108

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level

data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Caesars Entertainment

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Carson, Clearing, Ellwood City, Garyville, Port Alan, Sugar Land, Joliet, City of Industry, Garland, Martinsburg, McDonough

Emissions in metric tonnes of CO2e

36

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product

purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Fiat Chrysler Automobiles NV

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Suzano, Biebesheim, Cisterna, Lerma, Monterrey, Clearing, Ellwood City, Montgomery, Garyville, Sugar Land

Emissions in metric tonnes of CO2e

208

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Fiat Chrysler Automobiles NV

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Suzano, Biebesheim, Cisterna, Lerma, Monterrey, Clearing, Ellwood City, Montgomery, Garyville, Sugar Land

Emissions in metric tonnes of CO2e

78

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Givaudan SA

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Cheltenham, Cikarang, Gul Lane, Tai Cang, Rozzano, Chalon, Tessenderlo, Maribor, Nieuwegein, Eagan, Joliet, Martinsburg, McDonough, Weavergate, Barueri, Pilar, Cuautitlan

Emissions in metric tonnes of CO2e

323

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Givaudan SA

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Cheltenham, Cikarang, Gul Lane, Tai Cang, Rozzano, Chalon, Tessenderlo, Maribor, Nieuwegein, Eagan, Joliet, Martinsburg, McDonough, Weavergate, Barueri, Pilar, Cuautitlan

Emissions in metric tonnes of CO2e

358

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Kellogg Company

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Tessenderlo, Celra, Weavergate, Maribor, Chalon, Rozzano, Toronto, Joliet, McDonough, Martinsburg, Garland, COI, Eagan, Huntington, Alexandria, Istanbul, Johannesburg, Barueri, Costa Rica, Cuautitlan

Emissions in metric tonnes of CO2e

167

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

Yes

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Kellogg Company

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Emissions allocated from: Tessenderlo, Celra, Weavergate, Maribor, Chalon, Rozzano, Toronto, Joliet, McDonough, Martinsburg, Garland, COI, Eagan, Huntington, Alexandria, Istanbul, Johannesburg, Barueri, Costa Rica, Cuautitlan

Emissions in metric tonnes of CO2e

91

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

L'Oréal

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Chalons, Garland, Huntington, Joliet, Martinsburg, McDonough, Toronto, Montgomery

Emissions in metric tonnes of CO2e

64

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level

data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

L'Oréal

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Chalons, Garland, Huntington, Joliet, Martinsburg, McDonough, Toronto, Montgomery

Emissions in metric tonnes of CO2e

26

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product

purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Restaurant Brands International

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Toronto

Emissions in metric tonnes of CO2e

25

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Restaurant Brands International

Scope of emissions
Scope 2

Allocation level
Facility

Allocation level detail
Toronto

Emissions in metric tonnes of CO2e
6

Uncertainty (±%)
5

Major sources of emissions
Offices and Facilities

Verified
No

Allocation method
Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member
Tesco

Scope of emissions
Scope 1

Allocation level
Facility

Allocation level detail

Emissions allocated from: Tessenderlo, Guangzhou, Taicang, Chalon, Rovigo, Nieuwegein, Maribor, Leeds, Weavergate, Greensboro, Joliet, Navankorn

Emissions in metric tonnes of CO2e

118

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Tesco

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Tessenderlo, Guangzhou, Taicang, Chalon, Rovigo, Nieuwegein, Maribor, Leeds, Weavergate, Greensboro, Joliet, Navankorn

Emissions in metric tonnes of CO2e

41

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Walmart, Inc.

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions allocated from: Greensboro, Carrolton, COI

Emissions in metric tonnes of CO2e

1,822

Uncertainty (±%)

5

Major sources of emissions

Fleet and Facilities

Verified

No

Allocation method

Allocation based on mass of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 1 emissions include our global sales & service fleet, manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global sales and service fleet and offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

Requesting member

Walmart, Inc.

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions allocated from: Greensboro, Carrolton, COI

Emissions in metric tonnes of CO2e

1,797

Uncertainty (±%)

5

Major sources of emissions

Offices and Facilities

Verified

No

Allocation method

Allocation based on the market value of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

The GHG sources for Scope 2 emissions include our global manufacturing and office facilities. Allocations were generated to quantify customer level emissions using two methods based on the GHG source and available customer level data: production mass by manufacturing plant and the market value of the products and services delivered to that customer. For our global manufacturing facilities, customer emissions were allocated based on the purchased mass of product manufactured at a specific facility vs. the total mass of product manufactured by that specific facility. For our global offices, customer emissions were allocated based on the sales dollar amount of product purchased from that customer by Ecolab division and region vs. the total sales of all products sold by Ecolab.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

No published information has been used to complete SC1.1 beyond what is publicly reported in our CDP Climate response and in our GRI Index reports - including our corporate scope 1 and 2 emissions, and annual revenues.

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	Customer level emissions tracking remains a challenge and has been difficult to achieve without deploying significant resources and expense. Ecolab serves a diverse global customer base providing a diverse set of products and services, the combination of which makes it difficult and cost-prohibitive to effectively track and quantify customer level GHG emissions. Improved data management tools aligned with our existing systems may help to defray the cost to better track and quantify this impact. Additionally, being able to differentiate and quantify the impact of our services delivered versus products sold by volume to customers would enhance the granularity of the emissions impact and performance we have with our customers. In the interim, we have developed an enhanced methodology to estimate and allocated customer level emissions, as described in SC 1.1 and SC 1.4a.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Ecolab continues to explore ways to further engage with its value chain to track and manage the impact we have in helping to reduce GHG emissions. We currently are not planning to develop additional capabilities or public reporting that allocates our emissions to our customers in the near term, but rather, are focused on working with our customers to reduce their energy and GHG emissions, water and waste footprints through the use of our products and services.

Specifically, we partner with our customers to increase their efficiency, improve their sustainability performance and enhance their business results at more than three million locations globally. Through helping our customers we play an important role in meeting the changing needs of our evolving world, and we strategically work with our customers to reduce their energy demands and GHG emissions. From the oil and gas industry to hospitality, our people are using their expertise and our innovative technologies to help a variety of industries operate more efficiently.

Our innovation leads to documenting and communicating quantified environmental and financial results we call eROI. Built upon a system of people, processes and tools, our eROI program provides a uniform approach that ensures the value we deliver is aligned with the needs and available natural resources of each customer we serve.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	

Please confirm below