



Forward, Faster, Together

2023 Growth & Impact Overview

Learn more about our growth and impact
at [Ecolab.com/GrowthAndImpact](https://www.ecolab.com/GrowthAndImpact)

Moving forward, faster, together to build a positive future



Throughout Ecolab's history, we've leveraged innovative technologies to deliver sustainable outcomes that drive profitable growth for our customers and maximize our positive impact on the world. We've worked tirelessly to improve business performance, protect the world's most vital resources and help build a positive future for our customers, employees, communities and the planet.

Our results in 2023 highlight once again how sustainability is good for business. Our solid business growth and continued progress toward our vision of creating 2030 Positive Impact demonstrates that "doing well by doing good" works.

By 2030 we aim to:



Help customers save **300 billion gallons** of water, equivalent to the drinking water needs of **1 billion people**



Help customers avoid the generation of **6 million metric tons** of greenhouse gas emissions, preventing nearly **10 million pollution-related illnesses**

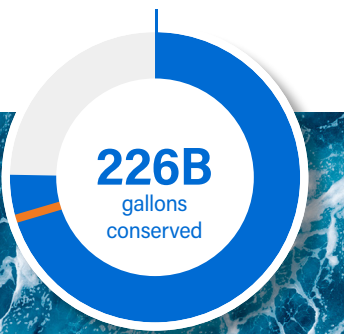


Help customers provide enough high-quality and safe food to feed **2 billion people** and prevent **11 million foodborne illnesses**



Help clean **90 billion hands** and provide safe medical care for **116 million people** each year, reducing more than **1.7 million infections**

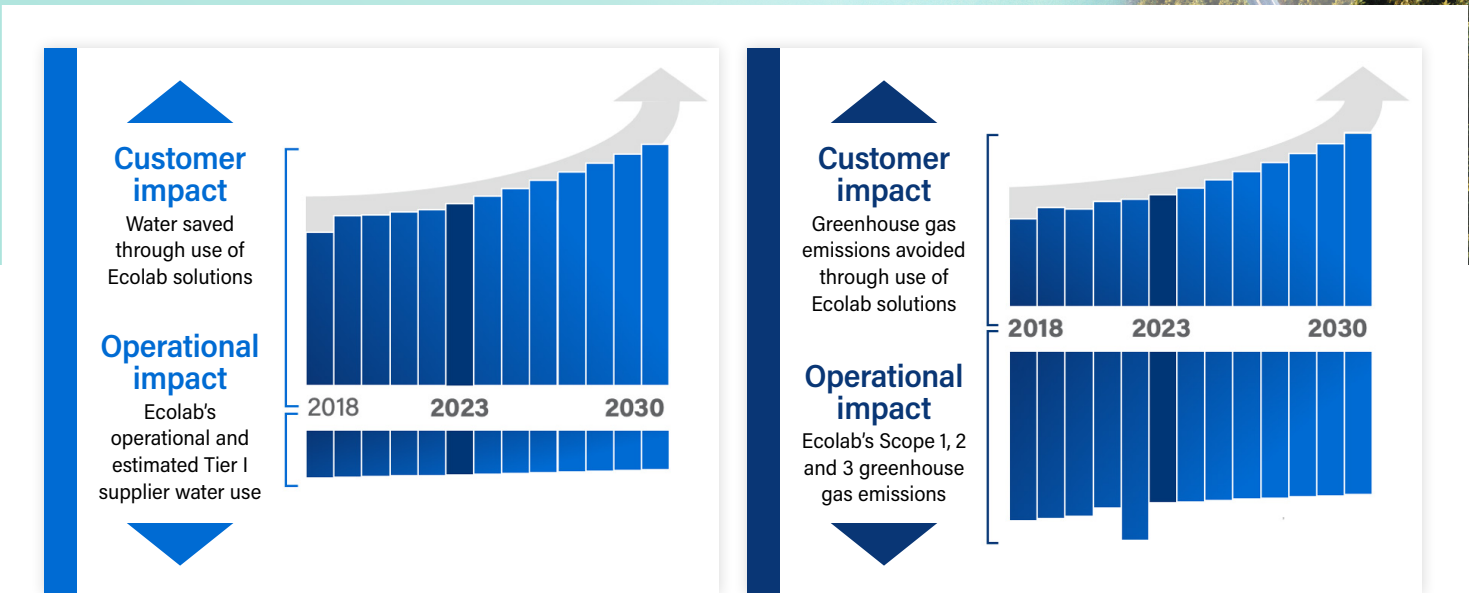
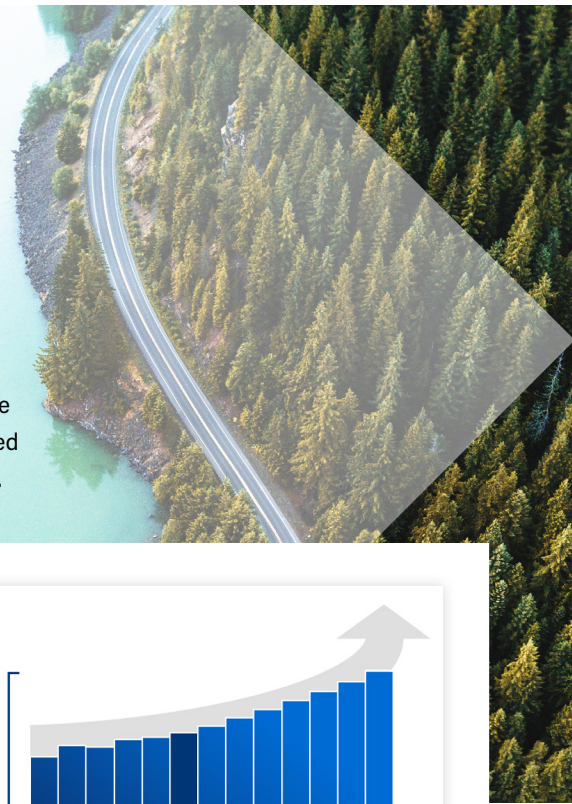
Here's how we partnered with customers in 2023 to grow our positive impact:



2023 Targets

Partnering for a net positive future

Together with our customers and supply partners, we're focused on creating lasting positive impact while driving business growth. By 2030, the culmination of advancements across our value chain is expected to result in a net positive water and climate impact, meaning outcomes delivered through use of Ecolab solutions and services outweigh our business's own resource dependency.



Delivering on our purpose

In our continued effort to create 2030 Positive Impact, we made significant progress in our operations and communities to help improve the health of people, the planet and businesses around the world.

2023 highlights include:

- Achieved [100% renewable electricity in our European operations](#), bringing us 80% of the way toward our goal of 100% renewable electricity globally by 2030.
- Achieved [Alliance for Water Stewardship \(AWS\)](#) certifications at Ecolab facilities in [Monterrey, Mexico](#), and Nanjing, China, bringing our total AWS-certified facility count to 10.
- Enabled water conservation, accessibility and equity in the Southwest United States and in other regions around the globe through the Ecolab Foundation and [our partnerships](#) with World Emergency Relief, the Pacific Institute, The Nature Conservancy and the Bonneville Environmental Foundation.
- Accelerated efforts to [convert our sales and service fleet in North America to electric vehicles](#) by 2030.
- Continued our work as a founding member of the [Water Resilience Coalition](#), which has grown to 37 companies with a market capitalization of \$4.8 trillion.
- Continued to implement [circular economy principles](#) by avoiding 14.5 million pounds of virgin plastic packaging.
- Launched the [California Water Resilience Initiative](#), an ambitious collaborative effort to scale reduce, reuse and replenish projects in water-stressed California.
- Released the first-ever [Ecolab Watermark™ Study](#), which found access to clean and safe water to be a leading environmental concern for consumers across the globe.
- Donated [\\$18.5 million to global communities](#) in the form of product donations, cash grants and associate volunteerism.

Empowering our customers

✦ Improving performance, operational efficiency and sustainability impact

Through our proprietary eROI approach—which calculates the exponential return on our customers' investment in Ecolab products and services—we measure the positive impact and exponential value of our solutions. eROI helps customers credibly quantify their return through water, energy and comprehensive operating cost savings while enabling them to plan and track their progress across a range of business, operational and environmental performance goals.



eROI stands for exponential return on investment

eROI is how we demonstrate the results, by showing our customers' return on investment with measurable, meaningful outcomes.



WATER ENERGY WASTE PRODUCTIVITY BRAND



QUALITY SAFETY CAPACITY COMPLIANCE



TOTAL VALUE DELIVERED

Partnering with our customers to achieve business and sustainability goals

The eROI success stories featured in our 2023 Growth & Impact Overview demonstrate how Ecolab helps customers achieve ambitious goals. No matter the metric, we deliver value for our customers in every industry we serve. We know that real and lasting change is accelerated when economic and environmental benefits align, delivering improved performance, operational efficiency and sustainable impact.

In 2023, eROI programs and projects are estimated to have delivered more than \$1.3 billion globally in annualized savings for our customers.

By helping define and deliver value, Ecolab supports our customers, enhancing the value they create in the world. Our practices align with our customers' ambitions and drive exponential business results that enable healthy environments and communities.



Ecolab helps fuel 6.1 million gallons of water savings for ADM ethanol facility



Insights

ADM is a global leader in human and animal nutrition and the world's premier agricultural origination and processing company. The company is committed to good business practices, progressive solutions and mindful actions that make a positive impact.

Its Strive 35 enterprise goals aim to substantially reduce greenhouse gas emissions, energy intensity and water intensity by 2035. To that end, the company seeks solutions that will help advance its sustainability goals.

Actions

An ADM facility in Columbus, Nebraska, that produces ethanol, a plant-based biofuel, from fermented corn was looking for a better process for removing biofilm buildup. Biofilms that are not properly removed can negatively impact ethanol production and output.

ADM's longtime partner, Ecolab, assessed the situation to determine the root cause of the biofilm buildup. It then proposed a solution – the Ecolab Clean-in-Place (CIP) program, which is designed to decrease negative fermentation byproducts that impact ethanol yield and quality.

Along with the CIP program, the plant implemented Trimeta™ Shield, an innovative cleaner and final rinse combination that helps improve cleaning and restore equipment efficiency for ethanol producers, along with a low pH cleaning product. These solutions replaced sodium hydroxide, a caustic cleaning agent that the facility was using previously.

Outcomes

Ecolab's CIP technology and associated chemistries led to more consistent fermentation and enhanced system performance and reliability. Productivity was also increased through reductions in treatment chemistry.

Improved cleaning and biofilm removal also led to significant reductions in water, energy and greenhouse gas emissions – benefits that are helping ADM on its Strive 35 journey and its continuing commitment to achieve a stronger and better world.

Solutions

- [Ecolab Clean-in-Place \(CIP\) Solutions](#)
- [Trimeta™ Shield](#)

[Learn more about eROI](#)

The results in this case study are specific to this individual customer and may vary for other customers based on factors and circumstances in their operations.

eROISM
by Ecolab

Annual Savings



WATER
6.1 million gallons
(23,000 million m³)



ENERGY
60 billion BTU



GREENHOUSE GASES
5,700 metric tons
of CO₂e



PRODUCTIVITY
\$1.2 million
Due to chemistry reduction



ASSET PROTECTION
50-75% reduction of inorganic soil in fermentation equipment
(Varies based on equipment)

Total Value Delivered

\$1.6M



Advancing operational and sustainable success at Marriott Vacations Worldwide

MARRIOTT VACATIONS WORLDWIDE™

Insights

Marriott Vacations Worldwide (MVW) is a leading global vacation company that offers vacation ownership, exchange, rental, and resort and property management, along with related businesses, products and services.

MVW strives to uphold the highest standards of excellence in all aspects of its operations. This includes working to create a positive impact on the communities and resort locations in which the company operates, as well as the safety and productivity of their team members.

Actions

To reduce its environmental impact, MVW is working with stakeholders to embed consistent environmental efficiency practices across its resorts. Key areas of focus are tracking and reducing water and energy consumption and waste.

Working with its longtime partner Ecolab, MVW implemented several technologies designed to help save water and energy, increase productivity and improve their bottom line. These include:

- **3D TRASAR™ Technology for Cooling Water** – protects cooling equipment assets and maximizes cooling water efficiency for water, energy and emissions savings.

- **Aquanomic™ Low Temp Laundry Program** – consistently delivers white linens and substantial water and energy savings versus traditional laundry programs.
- **SMARTPOWER™ Program** – provides exceptional dishware cleanliness along with helping advance sustainable foodservice operations through reducing rewash and the reduction of plastic packaging versus traditional solids.
- **Wash 'N Walk™ No Rinse Floor Cleaner** – this one-step floor cleaning and sanitizing process saves water and energy while enhancing productivity.

Outcomes

The partnership with Ecolab has led to increased performance without tradeoffs. MVW has achieved significant operational cost savings and reductions in water use, energy use and solid packaging waste while providing customers with the best experience possible.

Solutions

- [3D TRASAR™ Technology for Cooling Water](#)
- [SMARTPOWER™ Program](#)
- [Aquanomic™ Low Temp Laundry Program](#)
- [Oasis™ & Oasis Pro™ Concentrated Cleaners](#)
- [Wash 'N Walk™ No Rinse Floor Cleaner](#)

[Learn more about eROI](#)

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eROISM
by Ecolab

Annual Savings



WATER
23.4 million gallons
(88,500 m³)



ENERGY
12 billion BTU



GREENHOUSE GASES
1,400 metric tons
of CO₂e



WASTE
46,000 lbs
of reduced waste



LABOR PRODUCTIVITY
9,100 hours
of labor gained



ASSET PROTECTION
\$279,000
of repair and replacement savings



SAFETY
Enhanced safety via automated dispensing and closed packaging systems

Total Value Delivered

\$627,000



Helping to power a more sustainable future together with AES Andes



Insights

AES Andes is a producer and distributor of electricity based in Santiago, Chile. The company is one of the region's leading generators, with a diversified portfolio that includes hydroelectric, wind, solar, energy storage, biomass, gas and coal plants.

The company is committed to decarbonization, with sustainability goals that include eliminating coal from its portfolio by 2025, achieving net zero carbon emissions from electricity sales by 2040 and net zero carbon emissions for its entire portfolio by 2050.

AES Andes was looking for a partner to help it minimize chemistry use and optimize productivity at its Andes Ventanas thermo-electric power plant in Puchuncaví, Chile.

"Ecolab delivered the outputs that were promised. We feel supported by the Ecolab team. They are not just selling to us – it's a partnership."

-Norberto Corredor, Chief Operating Officer, AES Chile

Actions

The plant was experiencing problems with its boiler system cooling water, which was affecting reliability, water and energy use, and performance. The cause was acid

phosphate corrosion (APC), which had led to a forced shutdown in one of the plant's four generating units.

The corrosion was caused by cyclic loading conditions, or repeated fluctuations or stresses on structural components. This made it difficult to control pH and other chemistry variables in the cooling water. Working with Nalco Water, Ecolab's water and process management business, AES implemented 3D TRASAR™ Technology.

Through real-time monitoring and automated dispensing, 3D TRASAR improved chemistry management of the water-steam cycle to repair the system and help prevent future shutdowns.

Outcomes

As a result of these actions, the AES Andes Ventanas plant achieved substantial savings in energy, costs, maintenance and labor. 3D TRASAR Technology also led to significant reductions in CO₂ emissions as well as more efficient use of chemistry. The actions have proved to be a helpful step forward for AES Andes' business and sustainability goals.

Solutions

- [3D TRASAR™ Technology](#)
- [ECOLAB3D™](#)

[Learn more about eROI](#)

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eROISM by Ecolab Annual Savings



ENERGY
238 million BTU



GREENHOUSE GASES
22,000 metric tons
of CO₂e



PRODUCTIVITY
Increased output due to improved boiler system reliability



ASSET PROTECTION
\$19,200
High performance program maintains and protects critical equipment



SAFETY
Enhanced worker safety due to reduced maintenance

Total Value Delivered
\$1.4M



Helping Lotte Chemical Clear the Air to Achieve Its Environmental Impact Goals



Testing and a rigorous technical evaluation demonstrated that the Nalco Water solution

Insights

Lotte Chemical, based in Seoul, South Korea, is one of the world's largest chemical companies. It manufactures synthetic resins and other chemical products used in materials such as polystyrene, a versatile plastic commonly used in food packaging, appliances, toys and other goods.

To help ensure process integrity, safe transport and storage of the products it manufactures at its Daesan plant, Lotte Chemical was using a polymerization inhibitor (chemical compound that helps stabilize the manufacturing process) paired with DNBP, a chemistry that slows down chemical reactions.

DNBP is a highly toxic, hazardous chemical that produces nitrogen oxides (NOx) when incinerated, which contributes to air pollution. The use of DNBP has been restricted by many regulatory bodies, including the Ministry of Environment in Korea. As part of its efforts to create a better more sustainable future, Lotte Chemical wanted to replace DNBP with a safer, less toxic solution.

Actions

The company chose a more sustainable solution – the dual-component PRISM™ antifoulant program developed by Nalco Water, Ecolab's water and process management business.

performed as well as DNBP with a significant reduction in NOx. As a result, Lotte Chemical implemented the antifoulant program to help protect critical assets and increase the efficiency of its manufacturing process.

Outcomes

In addition to the environmental benefits that resulted from the switch to the Nalco Water program, Lotte Chemical avoided a large capital expenditure that would have been required to meet the stronger emission standards being set for DNBP use by the Korean Ministry of Environment. Additionally, it enhanced operational efficiency by substantially reducing the need for urea, a raw material used in chemistry manufacturing processes.

Ultimately, the new approach helped Lotte Chemical reduce costs, pursue a more sustainable solution, and enhance plant and operator safety.

Solutions

- [PRISM™ Antifoulant Program](#)

[Learn more about eROI](#)

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*Due to a change in production processes that substantially reduced the use of urea.

eROISM
by Ecolab
Annual Savings



PRODUCTIVITY
\$13.1 million*



COSTS
\$2.5 million
through avoidance of a significant capital expenditure



WASTE
\$200,000
500 metric tons
of DNBP disposal avoided



SAFETY
40% reduction
(228 ton/yr) in fine dust (NOx) generation

Total Value Delivered
\$15.8M

Recognized for our positive impact

We are proud to be recognized by many organizations for our innovation, service and commitment to operating responsibly and sustainably while meeting the needs of our customers.



Sustainability

- World's Most Sustainable Companies** (Barron's)
- Climate & Water Security (Double A)** (CDP)
- DJSI World and North America Indices** (S&P Global)
- Gold medal** (EcoVadis)



Global good

- America's Most Just Companies** (CNBC & JUST Capital)
- World's Most Ethical Companies** (Ethisphere)
- 50 Best Companies to Sell For** (Selling Power)



Corporate responsibility

- 100 Best Corporate Citizens** (3BL)
- FTSE4Good** (FTSE Russell)
- America's Most Responsible Companies** (Newsweek)



Diversity, equity and inclusion

- Best Place to Work for Disability Inclusion** (Disability:IN)
- Top 50 Companies for Diversity** (Diversity, Inc.)
- Gender Equality Index** (Bloomberg)
- Equality 100 Award** (Human Rights Council Foundation)

Learn more about how we can help you achieve exponential results through responsible operations: Ecolab.com/GrowthAndImpact



Contact your Ecolab sales representative to learn more about how we can help you achieve business performance while increasing efficiency, reducing water use, saving energy, avoiding greenhouse gas emissions, and more.

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Global Headquarters
1 Ecolab Place, St. Paul, MN 55102
www.ecolab.com | 1800 2 ECOLAB
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