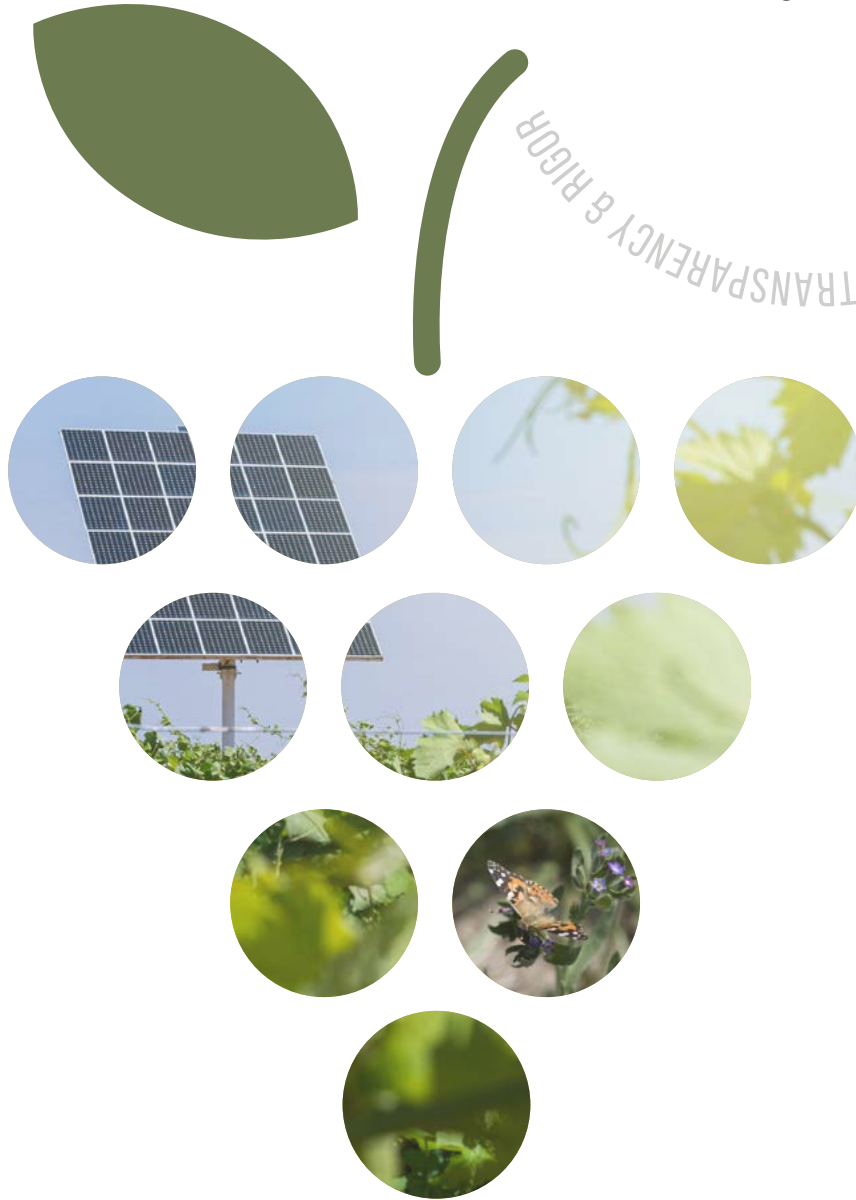


5 YEARS OF TRANSPARENCY & RIGOR · 5 YEARS OF TRANSPARENCY & RIGOR · 5 YEARS OF TRANSPARENCY & RIGOR

2024

4TH ANNUAL REPORT



Leading the transition to a

Net Zero Emissions

global wine sector

Contents

4

FOREWORD

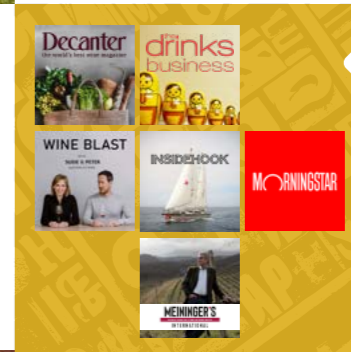
Reflections on an 'outstanding' 2024 for IWCA



6

AROUND THE WORLD

Our movement continues to expand across the globe



8+37

IWCA IN THE MEDIA

Spreading the word and hitting the headlines

9

FROM THE PRESIDENT & VICE PRESIDENT

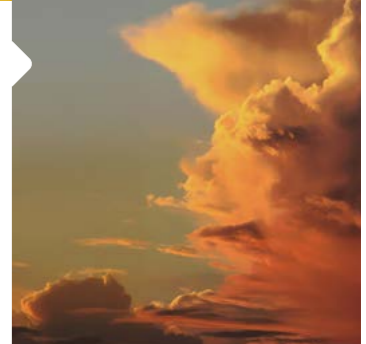
Messages from co-founders Katie Jackson & Miguel A Torres



12

YEAR IN REVIEW

As reality bites, the work of IWCA is more vital than ever



16

KEY THEMES

From wildfires to Scope 3, five crucial sustainability topics



22

IWCA EVENTS

A record-breaking year of shows and tastings



26 MEMBERSHIP REQUIREMENTS

IWCA has three progressive membership levels

27 GOLD MEMBERS

Highlights from our Gold Members



56 APPLICANT MEMBERS

A roll call of the newest members of the IWCA family



38 FROM THE IWCA BOARD

Messages from our industry leaders and climate champions

40 SILVER MEMBERS

Highlights from our Silver Members



60 HOW TO JOIN IWCA

Five steps to become an Applicant, Silver or Gold Member

Foreword

by the IWCA Board of Directors



► **Adrian Chitty**
Sustainability
A TO Z WINWORKS, STE. MICHELLE WINE ESTATES



► **Julien Gervreau**
Director, ESG & Sustainability Services
SENSIBA LLP



► **Mafalda Guedes**
Head of Corporate
Communications & Sustainability
SOGRAPE



► **Andree Piddington**
Sustainability Manager
YEALANDS WINE GROUP



► **Josep María Ribas**
Climate Change
& Sustainability Director
FAMILIA TORRES



► **Louisa Rose**
Winemaker & Head of Sustainability
HILL-SMITH FAMILY ESTATES



► **Aaron Stainthorp**
Director of Sustainability
JACKSON FAMILY WINES



► **Katie Jackson**
President & Co-Founder
Second Generation Proprietor
& Senior Vice President CSR
JACKSON FAMILY WINES



► **Miguel A. Torres**
Vice President & Co-Founder
Fourth Generation & President
FAMILIA TORRES

Since the last IWCA Annual Report was published 12 months ago, our collective of pioneering wineries has grown in number and in reach. We have celebrated our fifth anniversary this year and welcomed new members from Greece and Lebanon.

2024 has been an exciting one, with the launch of a comprehensive communications campaign, attendance at our first international wine trade fairs (Barcelona Wine Week and ProWein) and two very successful press and trade tastings to coincide with the London and New York City Climate Weeks, in June and September.

RACE TO ZERO

“As the only Official Partner of the UN’s Race to Zero in the wine sector, IWCA is committed to promoting reaching Net Zero by 2050 and is proud to have the support of that organization’s High Level Climate Champions to further our cause”

5 years

Courtesy: Yealands

IWCA has continued to establish itself as the global benchmark for carbon emission calculation and reduction in the wine sector. Our members advocate for change across five continents and are recognized in setting the standard for rigor and transparency when it comes to calculating and reporting their work in reducing GHG emissions.

Our members now represent 3.5% of global wine production; this means that 3.5% of all wine production is achieved using methods which measure and reduce carbon emissions across Scopes 1, 2 and 3. By engaging with their suppliers, our members advocate and encourage carbon emission reductions specifically in Scope 3, which typically represents 75%-plus of all emissions in the winemaking process.

As the only Official Partner of the United Nation’s Race to Zero in the wine sector, IWCA is committed to promoting reaching Net Zero by 2050 and is proud to have the support of that organization’s High Level Climate Champions to further our cause.

The year 2024 has been an outstanding one for our 50 winery members; 2025 will be a year of further growth, education and advocacy to reduce the wine sector’s impact on climatic conditions that increasingly challenge our sector.

IWCA Global reach 2024

GOLD MEMBERS

- 1. ALMA CARRAOVEJAS
- 2. COMPAÑÍA VINÍCOLA DEL NORTE DE ESPAÑA (CVNE)
- 3. FAMILIA TORRES
- 4. JACKSON FAMILY WINES
- 5. SPOTTSWOOD ESTATE VINEYARD & WINERY
- 6. SULA VINEYARDS
- 7. VIÑA UNDURRAGA
- 8. VIÑAS FAMILIA GIL
- 9. VSPT WINE GROUP
- 10. YEALANDS WINE GROUP LIMITED



SILVER MEMBERS

- 11. A TO Z WINeworks
- 12. ABADIA RETUERTA
- 13. CAKEBREAD CELLARS
- 14. CHAMPAGNE LANSON
- 15. CHÂTEAU TROPLONG MONDOT
- 16. CONSTELLATION BRANDS FINE WINES
- 17. CRIMSON WINE GROUP
- 18. DOMAINE BOUSQUET
- 19. DOMAINE LAFAGE
- 20. EMINA RIBERA
- 21. FAMILLE PERRIN
- 22. FELTON ROAD WINES
- 23. HERDADE DOS GROSS
- 24. HERÈNCIA ALTÉS
- 25. HILL-SMITH FAMILY ESTATES
- 26. KIR-YIANNI
- 27. MEDLOCK AMES
- 28. MIGUEL TORRES CHILE
- 29. OKANAGAN CRUSH PAD
- 30. OPUS ONE WINERY
- 31. PIPER-HEIDSIECK, CHARLES HEIDSIECK & RARE
- 32. RIDGE VINEYARDS
- 33. SILVER OAK & TWOMEY CELLARS
- 34. SOGRAPE
- 35. ST SUPÉRY ESTATE VINEYARDS AND WINERY
- 36. STE. MICHELLE WINE ESTATES
- 37. SYMINGTON FAMILY ESTATES
- 38. TIKVEŠ
- 39. VOYAGER ESTATE



APPLICANTS

- 40: ALTOLANDON
- 41: CEDARCREEK ESTATE WINERY
- 42: CHATEAU KSARA
- 43: CHÂTEAU TOUR DES TERMES
- 44: ESPORÃO
- 45: FROG'S LEAP WINERY
- 46: HENSCHKE
- 47: HUNT COUNTRY VINEYARDS
- 48: NELEMAN
- 49: RAMÓN BILBAO
- 50: VIÑA CONCHA Y TORO





THE ETHICAL DRINKER
OCTOBER, 2024

In recent years, the wine industry has seen tangible growth in knowledge sharing and collective action around the topic of sustainability. Demonstrated through organizations such as International Wineries for Climate Action (IWCA), The Porto Protocol and Sustainable Wine Roundtable, this includes the sharing of resources, experiences, problems, solutions, research and practical tools through talks, workshops and online platforms.

Read: [The ethical drinker](#)

IWCA in the Media



OFFER TO MICRO-WINERIES
JUNE, 2024

When International Wineries for Climate Action (IWCA) was established in 2019 it had just two founding members: Spain's Familia Torres and California's Jackson Family Wines. This year, IWCA celebrates its fifth birthday, by which point it has welcomed 48 wine producers from 12 different countries into its fold, becoming a powerful force of (and for) nature.

Its membership numbers are no small feat given the administratively gruelling process, and ongoing improvement to a business that IWCA certification requires. So it's perhaps no surprise that member companies tend to be on the larger side – the likes of Chile's VSPT, for example, India's Sula Vineyards and Yealands Wine Group in New Zealand. Constellation Brands and Sogrape are also on the books, as are Washington's Ste. Michelle and Port powerhouse Symington Family Estates.

Read: [IWCA extends offer to 'micro-wineries'](#)



WINES TO COMBAT CLIMATE CHANGE
AUGUST, 2024

Climate change is a worry. We get it. But how to do something positive about it, especially as a wine lover? After all, it's not easy knowing which wines to buy to support producers doing the right thing...

Which is where the IWCA comes in handy – International Wineries for Climate Action. This is a bunch of conscientious wine producers who have signed up to stringent, science-based carbon emission audits and committed to reaching net zero by 2050. As well as sharing info and generally being responsible about the environment.

It's ground-breaking stuff and in this episode we get the low-down on the IWCA and hear about ingenious schemes to combat climate change from Familia Torres president and IWCA co-founder Miguel A Torres (the legend!), Sogrape fourth generation member Mafalda Guedes and Ramuntxo Andonegui of Domaine Lafage in Roussillon. We also recommend our favourites from a recent IWCA 'low emission wine' tasting in London.

Listen: [Action stations - wines to combat climate change](#)

A word from the IWCA President & Vice-President



► **Katie Jackson**
President & Co-Founder
IWCA

THE YEAR 2024 HAS BEEN ONE OF CELEBRATION FOR INTERNATIONAL WINERIES FOR CLIMATE ACTION, THE ORGANIZATION WE CO-FOUNDED FIVE YEARS AGO WITH OUR COLLEAGUES AND FRIENDS, THE TORRES FAMILY.

I'm proud of the many accomplishments that IWCA and our members have achieved in such a short time, including building a strong coalition of wine companies representing 177 individual wine brands across 13 countries and five continents. These members represent approximately 3.5% of global wine production but, more importantly, they are a steadfast, collaborative group of global wine industry leaders committed to decarbonizing their wine businesses and ensuring our sector does its part to minimize our impact on the environment.

THE CLIMATE EMERGENCY REQUIRES BOLD COMMITMENT FROM COMPANIES AROUND THE WORLD, BASED ON CONSISTENCY, DETERMINATION AND PERSEVERANCE.



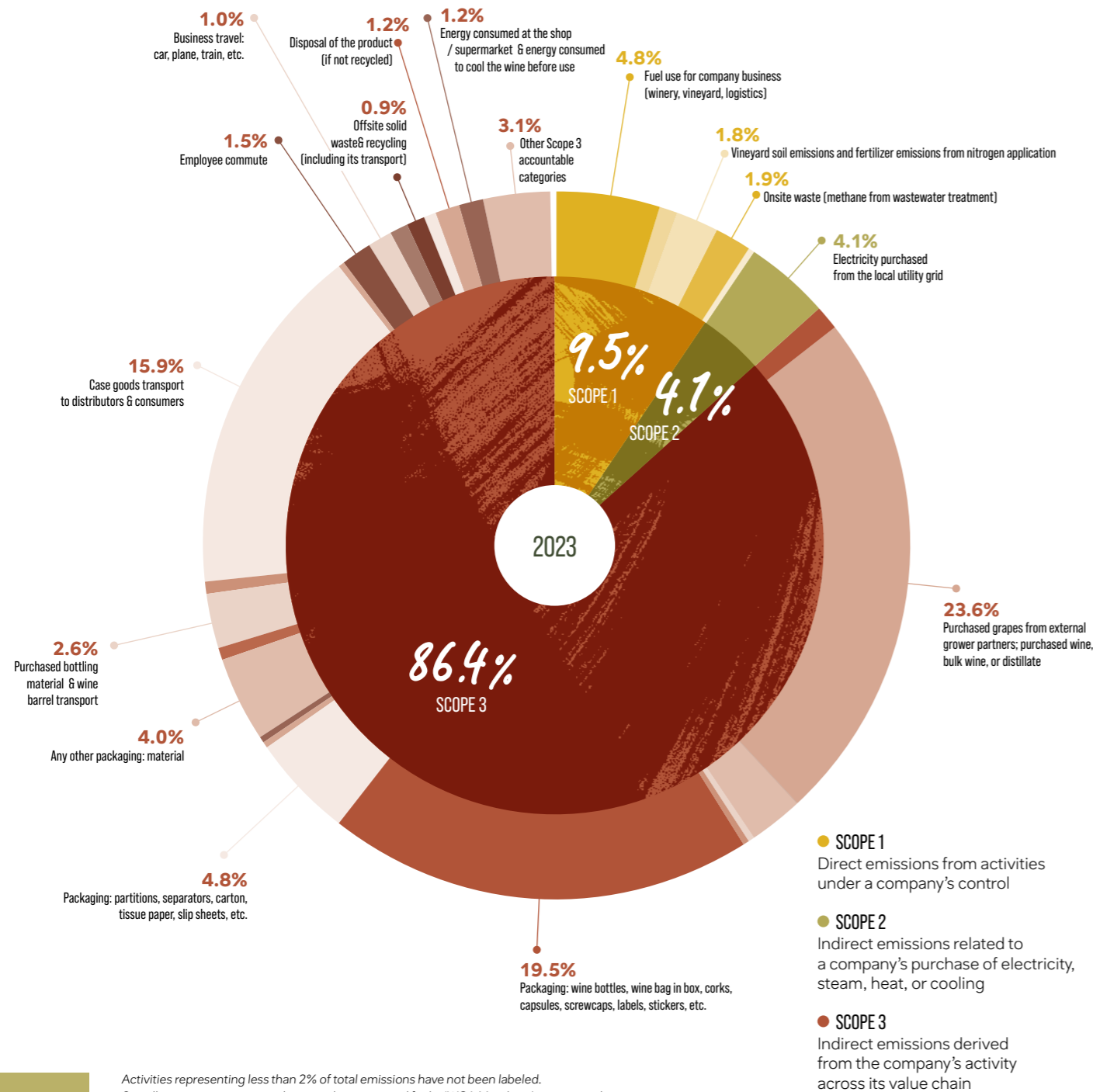
► **Miguel Torres**
Vice-President & Co-Founder
IWCA

The aim is to drastically reduce our carbon footprint, and renewable energies, particularly photovoltaics, play here a key role. ***IWCA's five-year journey shows progress, with 50 companies from 13 countries advocating for climate leadership in the wine industry.*** There's a lot more to do, but together we can shape a sustainable future for winemaking.

IWCA Average Winery Emissions 2023

We crunched the SCOPE 1, 2 and 3 numbers across the IWCA membership to understand the sources of emissions from throughout the entire wine value chain.

The averages displayed here are calculated from 39 IWCA member wineries' baseline GHG inventory data, third-party audited and adhering to ISO-14064 standards.



IWCA wineries account for

3.5% of global wine production

including

50 members

consisting of

179 wineries

across

5 continents

and

13 countries!

Number of hectares are self-reported by IWCA's member wine companies (50 respondents).

Liters of wine produced are self-reported by Applicant Members and collected from Silver and Gold Members in their audited GHG inventories. Total liters of global wine production as reported by OIV's State of the World Vine and Wine Sector 2023.

A year in review

CLIMATE CHANGE OR CLIMATE REALITY?

The year 2024 has been one where extreme weather conditions have been a daily concern for wine producers around the world.

Drought, severe cold weather, wildfires, flooding... as an agricultural business, the wine sector's future depends on the balance between climate and geography, too much or too little water, high temperatures or deep frosts.

If we do not do all we can to reduce temperatures as fast as we can, centuries-old wine-producing regions will be in jeopardy.

"In the face of sobering events at a geopolitical level, we remain committed to reducing the effect of global climate change via carbon emission reduction"



► Charlotte Hey
Executive Director
IWCA

International Wineries for Climate Action celebrated its fifth anniversary this year.

Thanks to the foresight and vision of our founding partners*, our members are now responsible for 3.5% Sources: Total liters of global wine production as reported by OIV's State of the World Vine and Wine Sector 2023.

Our 50 members have made a commitment to reach Net Zero by 2050, in accordance with the United Nations' Race to Zero initiative. Each company has set ambitious, science-based targets to calculate, account for and follow their path to reducing their carbon emissions at every stage of the winemaking process, every day. Our 4th Annual Report gives an insight into the work being done by our climate champions, who are setting the standard in the wine sector in line with IWCA's rigorous standards of transparency and accountability – inspiring their teams, suppliers and communities to do the same, by example.

A tremendous amount of work remains to be done in the face of greenwashing and denial. Constant advocacy and education about carbon emission reduction needs to be carried out across the wine business internationally. IWCA and its members are committed to pushing the agenda, not only as official partners of Race to Zero, but also because we believe we are duty-bound to ensure that our business peers and colleagues are aware of the vital role that wine brands and winery owners play in spreading this important message.

At COP29 this year, IWCA urges the Conference of the Parties to agree to an end date for the use of fossil fuels because it is now widely believed that the 1.5°C goal will be exceeded and this implies that our long-term business sector is at risk. As a result we will be forced to face significant impacts due to increasingly harmful climate change.

IWCA members are determined to continue to develop our movement over the next 12 months. In the face of sobering events at a geopolitical level, we remain committed to reducing the effect of global climate change via carbon emission reduction, thanks to the ongoing efforts of our members and those who support them.

Thank you to all of our friends, industry partners and member wineries for your support and hard work over the past year. Together we are all making the difference – and we look forward to continuing to do so in the future. ■

*Familia Torres and Jackson Family Wines created IWCA in 2019.

Friends of IWCA

IWCA supporters and friends have grown in number in 2024 to include more international partners, and we are working hard to engage further with retailers, press and service industries to work collaboratively to advocate for GHG emission reduction in the wine sector.



We are delighted to be working with North Star Carbon Management to promote the effective management and advocacy of carbon accounting in the wine sector.

North Star Carbon's team are purpose-driven carbon management experts and corporate leaders, forging innovative cloud-based solutions to streamline and simplify enterprise carbon accounting, management and reporting.

[View website](#)



IWCA and The Porto Protocol are proud to announce a strategic partnership to advance the wine industry's efforts to mitigate climate change and promote sustainability. This collaboration represents a significant step in bringing the wine sector together around shared goals of decarbonization and sustainable practices.

By collaborating, IWCA and the Porto Protocol are committed to leveraging their collective expertise and resources to drive decarbonization and meaningful action against climate change across the wine sector.

[View website](#)



The RVF works to inspire the transition towards regenerative viticulture through science, communication and support for growers. It brings together practitioners, researchers and leaders in regenerative agriculture and viticulture, working with experts in the fields of science, farming and communications to scientifically prove and practically demonstrate or document the environmental, qualitative and economic benefits of biodiversity in viticulture.

[View website](#)



IWCA continues its collaboration with the Association of Regenerative Viticulture (ARV), which began in 2023. The ARV brings about a paradigm shift in the way vineyards are managed around the globe. At the core of this shift is the carbon cycle and how it can be used to regenerate soils, prevent erosion, encourage biodiversity and combat climate change.

[View website](#)

Race to Zero Campaign

IWCA is proud to support the Race to Zero Campaign – the largest ever multi-sectoral alliance committed to achieving Net Zero carbon emissions by 2050 at the latest.

IWCA joined the campaign in 2021 – becoming the first Race to Zero Partner from the wine and agricultural industries. Since then, we have served as the leading Net Zero initiative that champions and aids wine producers on their journey to becoming climate-positive.

Through their IWCA membership, the majority of our wineries have also become Race to Zero members, joining more than 10,000 other private and public entities in the mission towards decarbonization.

IWCA's participating Gold and Silver Members publicly report on their progress towards Net Zero goals annually through this report.

“IWCA plays an important role in celebrating the natural environment we have in our vineyards and in reducing emissions across the winemaking process.

“As we move toward COP 30 it is the moment for food and agriculture. The moment for IWCA. The moment for each of us to show leadership and to be visible. To ask for more when it comes to regulation and legislation in each of our countries.”



► **Gonzalo Muñoz**
High Level Climate Champion
UNITED NATIONS RACE TO ZERO



Five Key themes

Climate change poses an existential threat to the global wine industry, and the journey to decarbonize the sector is as complex as it is challenging. As IWCA members continue on the road to net zero, we focus on five of the most significant issues they face – and the increasingly innovative steps they are taking to tackle them.



EXTREME WEATHER EVENTS

- Climate change is no longer an abstract notion. In the past few years, wildfires, frosts and drought have devastated vineyards from California to Catalonia – and IWCA member wineries have been at the forefront of meeting these challenges head-on.



SCOPE 3 EMISSIONS

- By far the largest proportion of winery emissions fall under Scope 3 – those that are not directly under companies’ control. Tackling this issue requires innovation and collaboration right across the value chain of the global wine industry.



WATER MANAGEMENT

- Our planet’s most precious resource is becoming more and more valuable by the day, thanks to the impact of climate change. As a result, wine producers are coming up with ever more ingenious ways to recycle, reclaim and recapture.



REGENERATIVE VITICULTURE

- Far from being merely a cleaner, greener way to manage a vineyard, regenerative viticulture builds in vine resilience, improves soil health and locks in carbon, although there is still much for wineries to learn about these practices.



ENERGY SELF-SUFFICIENCY

- Generating their own electricity on-site has quickly become a powerful weapon in the decarbonizing arsenal of wineries – but the installation of arrays of shiny photovoltaic panels is only the beginning of the story here.



EXTREME WEATHER EVENTS

In California’s Napa Valley, wildfires have become an ever-present danger in recent years, threatening the destruction of lives and livelihoods, with the potential to wipe out entire crops because of the effects of smoke taint.

But the fires are merely the most obvious manifestation of the area’s changing climate, with frequent heat spikes and drought conditions posing a long-term threat to the sustainability of grape-growing here.

“If we were to face successive extremes like we saw in 2022, I don’t know that we would have the tools to fully future-proof our vineyards,” says Aron Weinkauf, Spottswode Estate Vineyard & Winery vineyard manager and winemaker. “We still don’t have a great understanding of the plant’s ability to adapt, and we have already seen some pretty interesting adaptations. Historic practices will not offer all of the solutions.”

Practical measures at Spottswode include fire-proofing buildings (the winery works with private company Ember Defense to protect it from the next wildfire) and, less tangibly, building resilience into the vineyard – Spottswode has farmed organically since 1985, biodynamically since 2008, and added regenerative certification in 2022.

“We are planning for our present and future by planting and studying some new varieties of grapes so as to assess which can hold color and acid in our warmer, drier world,” explains Beth Weber Novak, Spottswode president and CEO. “We are also experimenting with managing our vines differently, having the fruiting wire higher away from the earth, where it is cooler (less reflective heat).”

The philosophy is that, by making the vineyards, and therefore the business, more resilient, Spottswode can cope with the uncertainties of the future, at a time when the changing climate appears to be running ahead of many forecasting models.

But still the challenges continue. “We also see that the climate extremes can affect yields, long-term vine health and pest populations,” says Weinkauf. “Overall, I feel like it requires a business to try to build in larger buffers in all areas of the business, and it requires constant attention so that we can react as nimbly and quickly as possible.” ■

“If we were to face successive extremes like we saw in 2022, I don't know that we would have the tools to fully future-proof our vineyards”



Courtesy: Spottswode



► **Mafalda Guedes**
Head of Corporate Communications
& Sustainability
Sogrape

"Wineries should start by collaborating closely with suppliers to understand their operations and identify areas for improvement"



SCOPE 3 EMISSIONS

"Tackling Scope 3 emissions can indeed be challenging for wineries, as these emissions occur across the entire value chain – from grape growing to production, distribution and even consumer use and disposal," says Mafalda Guedes, head of corporate communications and sustainability at Sogrape. "Since wineries have limited control over these, the key is to start with a targeted, phased approach."

Data collection and supplier engagement is a key part of the puzzle here. "Our main challenge is collaborating effectively with our diverse suppliers, who range from small local producers to large global companies," says Guedes. "Larger suppliers often have more resources to adapt, but all need support to improve their sustainability practices. Our goal is to maintain long-term partnerships and work together to lower emissions."

In dealing with grape and wine suppliers, Sogrape has obtained Portugal's National Reference for Sustainability Certification in the Wine Sector. The company has also developed supplier management platform Supply4Wine, and is creating a Supplier Code of Conduct, due for completion in 2025, to establish clear guidelines for sustainable and ethical practices.

In terms of measurable results, Guedes says initiatives with Sogrape's glass suppliers have led to a CO₂ reduction of 349 tons in 2023 versus 2022.

Optimizing transportation and distribution is another key Scope 3 topic – and here a collaborative approach is vital. "Prioritizing more efficient distribution routes, choosing lower-emission transportation options or exploring local sourcing of materials can make a difference," explains Guedes. "Encouraging retail and distribution partners to implement similar practices amplifies these benefits across the supply chain."

"In short, wineries should start by collaborating closely with suppliers to understand their operations and identify areas for improvement. Establishing clear sustainability standards, regular engagement and transparent communication can help suppliers adopt better practices, which in turn reduces the winery's Scope 3 emissions. Investing in tools for supplier management and monitoring progress is also crucial."

Put simply, collaboration is vital because shared goals benefit both parties, enabling them to cut emissions. But there is still plenty of work to be done, most notably in the area of glass production. "Since glass is essential for our bottles and the development of our product, we have significant work ahead," says Guedes. "We need to research and collaborate with our glass suppliers to identify the best solutions for reducing associated emissions." ■



► **Karan Vasani**
Chief Operating Officer,
Sula Vineyards

WATER MANAGEMENT

Water is one of the most sensitive sustainability issues facing today's global wine industry – and even more so in a country such as India, which is so dependent on the annual monsoon rains for this vital resource.

"We have made many significant steps on improving water use efficiency, recycling water and reducing consumption – particularly of fresh water," says Sula Vineyards chief operating officer Karan Vasani. "Unlike wineries in more developed countries, where only primary waste water treatment may be done by the winery itself, with final treatment done by the local council/authorities, for us here in India we do an end-to-end treatment of our own waste water."

OVER THE PAST FEW YEARS, SULA HAS MADE A NUMBER OF STRIDES IN THIS AREA, INCLUDING:

- **Treating all waste water through on-site effluent treatment plants (ETPs)** equipped with membrane bio reactor (MBR) technology, followed by reverse osmosis, leaving water that is pure enough to meet drinking water standards.
- **This water is used across all applications in the winery,** including sensitive operations such as sanitizing bottling lines and cleaning tanks, as well as floor cleaning, gardening, etc.
- **As a result, the only winery operations using fresh water are:** rinsing of glass bottles on the bottling line prior to filling; human consumption; and cleaning highly sensitive equipment such as cross flow filters and oak barrels.
- **As well as dramatically reducing fresh water usage,** Sula captures the methane gas generated during the effluent treatment process and uses it to generate electricity, rather than releasing it into the atmosphere.

What's next? "We own and operate five wineries in India, and all the above measures are in place at our largest facility, which accounts for about 65% of our total capacity," says Vasani.

"At the other four smaller facilities, we only have some of the above systems in place and, over the next two years, we will be replicating some of these systems at the other smaller wineries – note, however, that all of the systems may not make sense at all of the wineries, given their smaller scale." ■

"We have made many significant steps on improving water use efficiency, recycling water and reducing consumption"

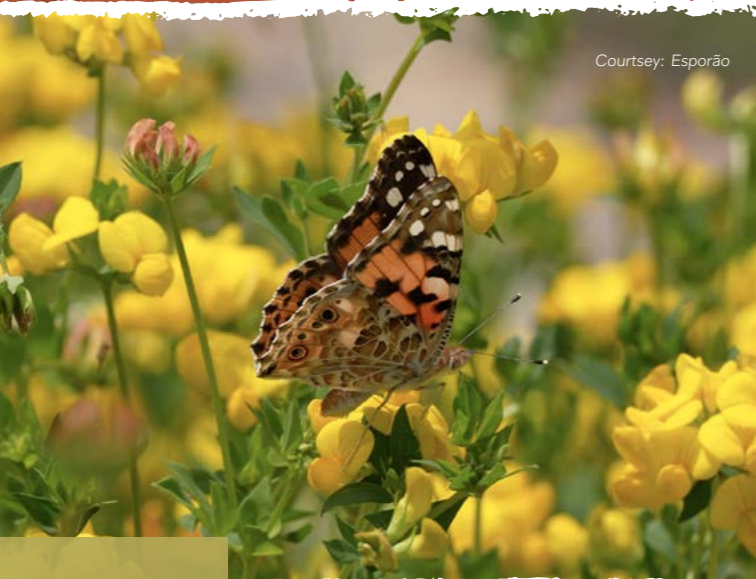


Courtesy: Sula Vineyards



Courtesy: Spottswoode Estate Vineyard & Winery

"Our vineyard is full of life: birds, insects, bees, owls - as much biodiversity as we can bring into a monoculture"



Courtesy: Esporão

REGENERATIVE VITICULTURE

4

Regenerative viticultural practices are increasingly taking root in vineyards around the world – but wineries still have much to learn about the philosophy, and how they need to adapt it to each location’s unique conditions and characteristics.

One of the pioneers of regenerative, Familia Torres has released its first wines with the international RVA (Regenerative Viticulture Alliance) certification: Clos Ancestral White, Forcada and Jean Leon Vinya Gigi Chardonnay, all from the 2023 vintage.

Meanwhile, Miguel Torres Chile is following suit, having earned RVA certification since 2023. The 2024 vintages from the Santa Digna and Huerta Maule vineyards were officially regenerative, and the winery’s Almado label will be its first to bear the classification.

The philosophy is also taking hold in California’s Napa Valley. Opus One has converted 60 acres of its vineyard to regenerative farming methods – discovering that the roots of the cover crops serve to improve soil structure, as well as facilitating the infiltration of water and nutrients. Grazing sheep release enzymes via their saliva that stimulate root growth, while their excrement helps to enrich the soil – minimizing the need for nitrogen fertilizer.

But regenerative is not an easy option. “It is very difficult,” explains Aron Weinkauff, vineyard manager and winemaker at another Napa producer, Spottswoode Estate Vineyard & Winery. “Combining/balancing the no-till and labor pay requirements with the requirements of our climate here in California – and with vintage variations – is not always easy.

“Current agricultural practices and education systems are not sufficient, and though we feel that ROC [Regenerative Organic Certified] should be the directive, it is still less tried and proven – and the reality is that we still have a lot to learn about ecosystem management.”

Challenging it may be, but the effects are undoubtedly positive. “Our vineyard is full of life,” says Spottswoode president and CEO Beth Weber Novak. “Birds, insects (we have many insectaries), bees, owls – as much biodiversity as we can bring into a monoculture, which any crop ultimately is.” Increased biodiversity also translates into greater vineyard resilience.

How would they advise wineries contemplating a move into regenerative? “Take your time, learn a lot, ask questions, gradually make changes, have a good plan,” says Weber Novak.

“That sums it up well,” adds Weinkauff. “And practitioners need to share openly and regularly. Eastern US, Midwest US and Western US have very different climates and needs – so hopefully some regionality with regional variants might come from it all.” ■

5



ENERGY SELF-SUFFICIENCY

To the outside observer, the generation of renewable energy on-site through the installation of arrays of photovoltaic panels might look – beyond the obvious financial cost – like an easy win. After all, vineyards tend to be located in places that enjoy more than their fair share of sunshine.



Rafael De Haan
Co-Owner
Herència Altés

But there’s a lot of devil lurking in the detailed science behind solar. Generating energy is one thing – but how do you store excess power, and how should you use and deplete that energy to best effect, minimizing the need for GHG-emitting alternatives?

When the Herència Altés winery was established in Catalonia’s Terra Alta DO, its location had no existing services, necessitating investment in autonomous solutions. “We decided to install solar panels on the roof, lead batteries to store the excess energy, and supplement this solution with a diesel-run generator,” explains winery co-owner Rafael De Haan.

Sounds simple enough. But... “The initial calculations relating to the use of energy, particularly during the harvest period, proved to be inaccurate, meaning we were not producing and storing enough solar energy, and were relying too heavily on the diesel-run generator,” he says.

“Not only were we spending a lot of money on diesel, but we were emitting more GHG than desired, as well as depreciating our generator more quickly than anticipated, which meant higher maintenance and an earlier cost of replacement”

In 2023, Herència Altés replaced the lead batteries with 100kw of lithium batteries – more efficient in terms of storage. The winery also reduced electricity consumption during the night, thus slowing the depletion of the batteries until the sun rose again.

“The main change has been switching off all pumps that had been on automatic mode during the night, avoiding charging the forklift trucks, and delaying the use of heavy, power-hungry equipment until 10am,” explains De Haan.

The impact is clear: in the first nine months of 2023, fossil fuel consumption was 26,000 liters; during the same period in 2024, it fell 35% to 17,200 liters. The winery plans to increase its battery capacity further in 2025.

These steps have also had a knock-on effect on total electricity consumption at the winery. In 2023, 59% of the electricity consumed was derived directly from the solar panels or from the batteries. In 2024 to date, that proportion has risen to 68% – although that figure will probably fall slightly as the hours of sunshine decline towards the end of the year. ■



Courtesy: Herència Altés

IWCA

Live events in 2024

The year 2024 has been a record-breaker for IWCA members at fairs and tastings.

In the past 12 months members have spoken about the IWCA mission and their wines in a low-emission context in Europe, the UK and the US, the aim being to spread the word about the importance of producing wines with a lower carbon emission footprint for our sector.

Here's a round up of what we have been up to in the last year.



BARCELONA WINE WEEK
FEBRUARY

Spanish and Portuguese IWCA members attended Barcelona Wine Week for the first time to push for carbon emission reduction in wine. The panel session on 5 February was chaired by leading journalist Sarah Jane Evans MW.

Ten leading IWCA member wine producers from Spain and Portugal met to pledge their commitment to continued carbon emission reduction across all areas of their businesses.

Abadía Retuerta, Alma Carraovejas, CVNE, Viñas Familia Gil, Heredade Dos Grous, Herència Altés, Ramón Bilbao, Sogrape, Symington Family Estates and Familia Torres signed a joint agreement to commit to universal carbon emission reduction across every aspect of their business.

THE 10 PRIMARY FOCUS AREAS ARE:

- 1. Curtail Greenhouse Gas Emissions** across the wine supply chain.
- 2. Effective measurement** to promote active GHG inventory and audit processes to refine each company's emissions accounting process.
- 3. Improve renewable energy** use with continued investment in renewable energy sources and their use to attain energy self-sufficiency.
- 4. Lighter-weight bottles:** promoting the ongoing implementation and use of lighter-weight bottles below 470g.
- 5. Increased vineyard biodiversity** improving soil care and health, regenerative viticulture practices and move towards organic farming.
- 6. Water recycling and reuse** in every aspect of wine production.
- 7. Reduce fuel emissions** used by owned or managed vehicles, industrial equipment, and agricultural machinery.

- 8. Improve waste management** to ensure that industrial waste is reused, recycled, or energy recovered to generate clean energy.
- 9. Promote and engage with the local industry** to encourage global GHG emission reduction in Spain and Portugal.
- 10. Achieve carbon neutrality by 2050** in line with the UN's Race to Zero parameters.

This signed commitment is an important move forward by such an influential group of top wineries in Portugal and Spain. It defines and highlights their commitment to taking action to reduce emissions and combat climate change.



PROWEIN 2024

For the first time, IWCA showed 32 low-emission wines, from 16 different producers, at ProWein in Düsseldorf.

The stand was constructed from totally reused, reusable and recycled equipment in line with our mission to raise awareness around GHG calculation and reduction.

While at the fair, IWCA organized its Annual Members' Meeting and a seminar on Carbon Emission Reduction, and worked with IWCA Friend the Regenerative Viticultural Foundation to hold a session on regenerative viticulture.

PARTICIPATING WINERIES WERE:

- | | | |
|-----------------------------|------------------------------|-----------------------|
| ▶ A TO Z WINERWORKS | ▶ STE. MICHELLE WINE ESTATES | ▶ YEALANDS WINE GROUP |
| ▶ DOMAINE BOUSQUET | ▶ HERÈNCIA ALTÉS | ▶ FAMILIA TORRES |
| ▶ HILL-SMITH FAMILY ESTATES | ▶ HERDADE DOS GROUS | ▶ MIGUEL TORRES CHILE |
| ▶ JACKSON FAMILY WINES | ▶ CRIMSON WINE GROUP | ▶ TIKVEŠ |
| ▶ RAMÓN BILBAO | ▶ RIDGE VINEYARDS | ▶ FELTON ROAD WINES |
| | ▶ VSPT WINE GROUP | |



IWCA 5TH ANNIVERSARY LONDON TASTING

JUNE

IWCA held its first ever press and trade tasting to mark the fifth anniversary since its founding.

Twenty IWCA member wineries participated, making this event possibly the largest tasting of low-emission wines ever in the UK.

The tasting took place in two sessions, with 10 wines each from 10.30-11.30am and from 11.45am-12.45pm.

PANELLISTS WERE:

Session 1: Rafael de Haan, Herència Altés; Mafalda Guedes, Sogrape; Paloma Moro, Emina Ribera

Session 2: Miguel A Torres, founder IWCA & President, Familia Torres; Ramuntxo Andonegui, Domaine Lafage; Mafalda Guedes, Sogrape

Over 120 people from the UK trade, influencers and press were invited to attend the tasting.

A tasting booklet and detailed dossier were collated and designed for all the attendees. The dossier was sent out during the week before the event to confirm attendance.

The speakers, on behalf of the IWCA members, covered a range of topics regarding the principal carbon emission reduction activities that members are working on, including:

- ▶ REGENERATIVE VITICULTURE
- ▶ RENEWABLE ENERGY
- ▶ WATER MANAGEMENT
- ▶ DISTRIBUTION AND LOGISTICS
- ▶ LABELLING AND PACKAGING

Read the article published in [The Drinks Business](#)
Tamlyn Currin also published a piece on [IWCA as a result of the tasting on jancisrobinson.com](#)



IWCA 5TH ANNIVERSARY, NEW YORK PRESS LUNCH

SEPTEMBER

To coincide with New York City Climate Week, IWCA organized its largest tasting of low-emission wines to leading wine press.

Twenty-nine IWCA members showed wines to journalists from The Wine Spectator, Wine Enthusiast, Punch, Food & Travel, Business of Wine, Bloomberg and The Wine Conversation, among many other leading US wine publications.

Katie Jackson, President IWCA gave the welcoming address to mark the celebration of the five-year anniversary since the foundation of IWCA.

She also explained why she and Miguel A Torres came together to form IWCA in 2019, and their vision to create an organization to encourage carbon emission reduction across the wine sector.

Gonzalo Muñoz, UN High Level Climate Champion, also attended to support and reinforce IWCA's strong links to Race to Zero and what the organization is doing globally.

The press also listened to presentations from **Julien Gervreau, IWCA Founding Board Member** & ESG and Sustainability Director, Sensiba, and **Aaron Fishleder, COO at IWCA Silver Member Cakebread Cellars**, on the importance of carbon emission calculation in order to future-proof wine businesses, and the everyday challenges that wineries face in their fight to reduce emissions.



IWCA ASSOCIATE AT SUSTAINABILITY IN DRINKS, LONDON

OCTOBER

IWCA was an associate at the inaugural SID event, held in London in October. This innovative event brought wineries and associations together from around the world and the UK to promote sustainability across the wine business.



IWCA IN CHILE

OCTOBER

To mark the fifth anniversary of IWCA, leading Chilean wineries presented our key aims and mission, thanks to the help of VSPT Wine Group and Miguel Torres Chile.

Eight Chilean wineries participated and learnt about the challenges around GHG emission reduction. Presentations were given by:

José Luis Huepe, Consulting Manager, **Proyectae**

Carolina Gotuzzo, Director of Corporate Affairs and Sustainability, **VSPT Wine Group**

Rodrigo Constandil, Sustainability Manager, **Miguel Torres Chile**

COUNTRY MEMBER MEETINGS

JANUARY - NOVEMBER

For the first time in 2024 IWCA organized member meetings in specific regions and countries, in addition to the two annual Member Meetings in May and November.

The Annual Member meetings are designed to highlight and share best practices, strategies and technologies amongst members and update the membership on its progress and activities in previous months.

Individual regional/country meetings were held in Argentina & Chile, Spain & Portugal, France, USA & Canada.



Courtesy: Sogrape

IWCA MEMBER EVENTS

Membership of IWCA gives winery owners and their teams access to a series of Knowledge Exchange Seminars to promote learning and the interchange of ideas among members around the world.

THE 2024 PROGRAM OF KNOWLEDGE EXCHANGE SEMINARS (JAN-NOV) INCLUDED:

► **Race to Zero Roundtable on how to complete Transition Plans**

IWCA hosted a roundtable discussion on **Race to Zero Transition Plans**.

This roundtable charted the path to effectively plan for emissions reductions; organizations need to compile and update a Transition Plan over time. These Plans detail the policies, actions and accountability measures that organizations will take to ensure Net Zero by 2050.

(Transition Plans are also a baseline requirement for membership of the UN Race to Zero and are strongly encouraged for all IWCA members.)

► **Auditor Knowledge Exchange Session**

This session was organized by the IWCA executive team to speak directly to auditors in five different countries about IWCA methods and standards. This activity is part of IWCA's work to build awareness around certification and effective auditing.

► **GHG Carbon Calculation Roundtable**

IWCA hosted a roundtable session about **"GHG Calculation and Audits: a mentor Session for New & Applicant Wineries"**.

The virtual event featured a presentation on carbon measurement and sustainability efforts in the wine industry. The discussion covered various aspects, including the process of becoming a member of the IWCA, challenges faced during carbon footprint calculation and reduction efforts, and the experiences of different wineries in this regard.

► **Knowledge Exchange Session: Distribution, Scope 3 and the challenges the wines sector faces**

The aim of this session was to discuss and identify the specific challenges faced by the wine industry in managing and reducing Scope 3 emissions throughout the distribution channel.

► **Knowledge Exchange Session: Charting a path to Net Zero with North Star Carbon**

A virtual event looking at the how the wine industry can chart its course to 2050 and Net Zero emissions.

Live events in 2024

Collaborative successes



► **Brazilian Sommeliers Association**

IWCA Executive Director Charlotte Hey presented at the Brazilian Sommeliers Association Climate Symposium on the subject of the role of the IWCA and its members.



► **Ontario Wine Conference**

IWCA was represented via a virtual presentation to the Canadian wine industry about GHG calculation and reduction in the context of the vine being at risk of extinction.

IWCA Member Spotlights

Over the past 12 months, our members have worked tirelessly to take meaningful and practical steps to reduce their carbon emissions and to positively impact their surrounding environment.

From *regenerative* viticulture to *innovative* water management measures, from the harnessing of *renewable* energy sources to the continued exploration of *sustainable* packaging options, our Gold and Silver members are at the vanguard of the battle to *decarbonize* the global wine industry.

Their unwavering commitment is illustrated by the months of painstaking work undertaken to assess, measure and reduce their greenhouse gas (GHG) emissions. The data on the following pages covers members' emissions across SCOPES 1, 2 and 3, comparing their most recent reporting period with their baseline year.

Membership Requirements

IWCA has three progressive membership levels: **Applicant**, **Silver** and **Gold**.



APPLICANT MEMBERS must:

- ▶ Have completed a baseline GHG emissions inventory (inclusive of at least Scopes 1 and 2), and/or have a verifiable plan to complete a baseline Scopes 1-2-3 inventory.
- ▶ Provide IWCA with a written commitment to complete and third-party audit a baseline Scopes 1-2-3 inventory within one year.



SILVER MEMBERS must:

- ▶ Complete a baseline, third-party verified GHG inventory across Scopes 1, 2 and 3. This inventory must:
 - Cover 90% of the organization's volume within the region where its main winery is located.
 - Follow the World Resources Institute Greenhouse Gas Protocol and the ISO-14064 process.
 - Be verified by an ISO-14064-3-accredited or CDP-accredited auditor.
 - Follow IWCA's GHG Inventory Guidance Document.
- ▶ Commit to becoming Net Zero by no later than 2050 across Scopes 1, 2 and 3; and meet intermediate targets by 2030.



GOLD MEMBERS must:

- ▶ Meet all of the Silver Member requirements.
- and...*
- ▶ Self-generate on-site renewable energy equivalent to at least 20% of all energy consumed by the winery.
- ▶ Demonstrate a consistent reduction of emissions (per liter of wine produced) over time...
 - As compared to their baseline year inventory.
 - With a target emissions reduction percentage proportional to the winery's Net Zero target for 2050.



ALMA CARRAOVEJAS

Location: Spain | No. Wineries: 6 | Member since: 2020

19% reduction in emissions intensity since 2019

23% powered by on-site renewable energy

► Packaging

We continue to collaborate with our suppliers to develop more *sustainable packaging*, following eco-design standards. In 2023, the average weight of 75cl bottles across Alma Carraovejas' wineries was 516g.

► Water management

We have achieved a *total water saving of 22%* over the past two years, thanks to monitoring our consumption and identifying measures to improve the efficiency of our water use.

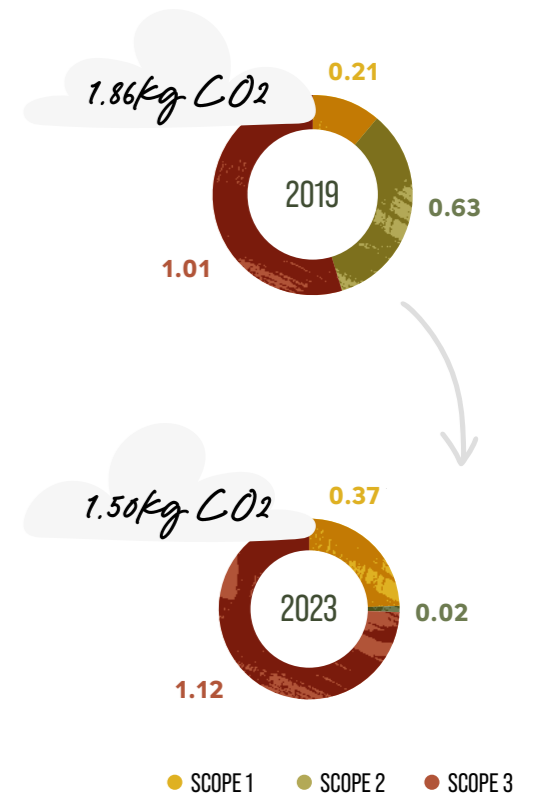
► Renewable energy

In 2023, *67%* of the energy consumed in our wineries came from *renewable energy sources*, thanks to the purchase of electricity with Guarantees of Origin (44%); and the use of energy generated in our own facilities from photovoltaic solar panels, biomass boilers and geothermal energy (23%).

► Vineyard management

We have launched GO MYCOWINE and ROTEND – R&D initiatives designed to help our vineyards to adapt to climate change.

Emissions Intensity (kg of CO₂e per liter produced)





COMPAÑÍA VINÍCOLA DEL NORTE DE ESPAÑA (CVNE)

Location: Spain | No. Wineries: 6 | Member since: 2022



12% reduction in emissions intensity since 2020

24% powered by on-site renewable energy

► **Vineyard management**

We are focusing on reducing the use of phytosanitary products, as well as planting cover crops to *promote biodiversity* and reduce tillage. We have also introduced sustainable fertilization processes.

► **Renewable energy**

In 2023, we installed a biomass boiler at our main winery, CVNE Haro. This has replaced the use of fossil fuels with forest residues, *reducing fossil fuel consumption by 37%*.

Thanks to photovoltaic solar panels, *24%* of the electrical energy consumed in all our wineries was self-generated in 2023. The group now has a total *energy output of 951kW, an increase of 57%* on 2022.

All of the electrical energy used in our wineries now comes from *100% renewable sources* with Renewable Guarantee of Origin certification. Thanks to this, we have achieved zero emissions in Scope 2.

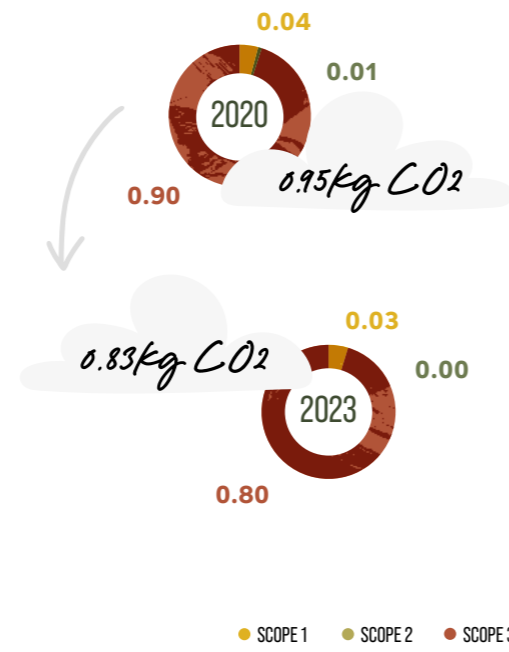
► **Packaging**

This is one of our key sustainability guidelines, including the use of *100% recycled cardboard*, lighter-weight grids and lighter bottles, as well as the employment of returnable pallets in many of our markets.

► **Logistics**

We have built a new logistics center in Viña Real, which has been *awarded the GREEN certification for building sustainability*. It has also developed the Building Management System (BMS) for the integral automation of the building with high technology.

Emissions Intensity
(kg of CO₂e per liter produced)



FAMILIA TORRES

Location: Spain | No. Wineries: 10 | Member since: 2019



38% reduction in emissions intensity since 2008

47% powered by on-site renewable energy

► **Renewable energy**

In 2023, Familia Torres installed *more than 600kWp of solar panels* at its wineries. By the end of 2024, the company's renewable sources (mainly photovoltaics and biomass) will have *generated more than 55%* of the total energy consumed by Familia Torres Penedès, its main winery.

► **Regenerative viticulture**

We released our first wines with the international RVA (Regenerative Viticulture Alliance) certification in 2023: Clos Ancestral White 2023, Forcada 2023 and Jean Leon Vinya Gigi Chardonnay 2023. These wines are sourced from regenerative vineyards, which contribute to mitigating the effects of global warming through their role as carbon sinks.

► **Water management**

During 2023, Familia Torres' main winery in Penedès *reused 45% of process water for irrigation, cleaning and cooling* – the highest figure since its water regeneration plant was established in 2016.

Thanks to measures to improve water use efficiency at the winery, Familia Torres has *reduced water consumption at its facilities by 18%* since 2016 – a figure it hopes to increase in the coming years.

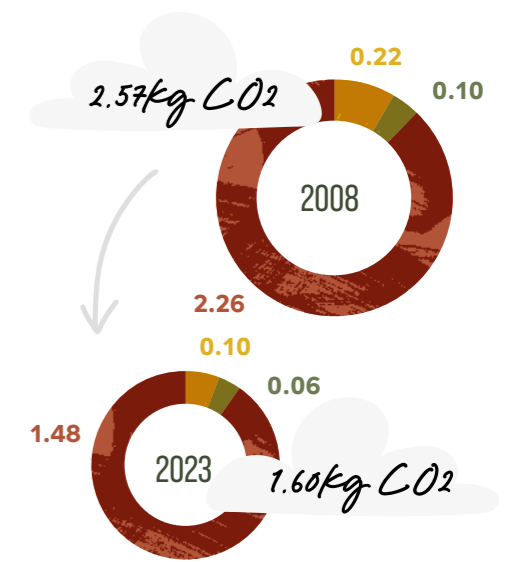
► **Agro-forestry**

Familia Torres, which owns more than *1,800 hectares of forest* in Catalonia, has introduced animal pastures in its forest farms, thanks to agreements with shepherds and associations to keep the forests clean and manage them using a holistic approach.

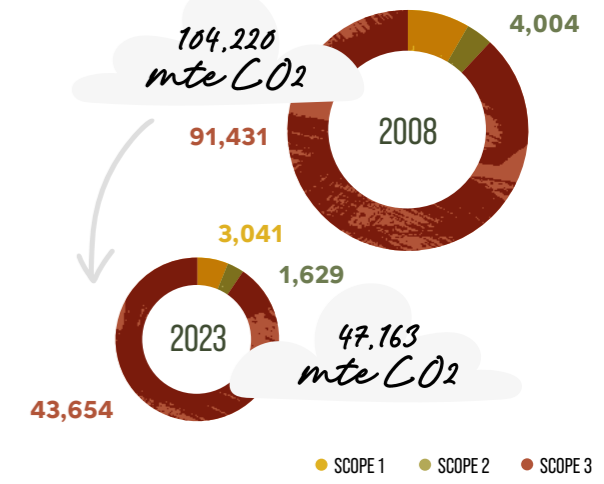
Since 2023, the family winery has been collaborating with an association dedicated to the restoration of forests through grazing with horses, which help to develop biodiversity while promoting a sustainable cleaning of the mountain. They also help prevent fires, opening up paths that act as natural firebreaks.



Emissions Intensity
(kg of CO₂e per liter produced)



Absolute GHG Emissions
(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

JACKSON FAMILY WINES

Location: USA | No. Wineries: 40 | Member since: 2019



20% reduction in emissions intensity since 2015

21% powered by on-site renewable energy

► **Renewable energy**

In 2023, we *expanded the existing solar array* at Cambria Winery to generate an additional 500,000kWh and signed contracts for eight more arrays to be installed at other company wineries operational in 2024.

► **Packaging**

We continue to pursue packaging innovations, including lightweighting our glass (*reducing glass emissions by 3%*), quality testing a 400g bottle and transitioning to recycled materials for secondary packaging and shippers. La Crema Sonoma Coast wines moved to a 468g bottle, representing a *10% weight reduction*.

► **Vineyard management**

In order to baseline our soil carbon, we partnered with *The Soil Inventory Project (TSIP)* to sample 3,000 acres within our estate vineyards. We also co-hosted a community field day with UC Davis at our La Crema Estate to share progress on our collaborative regenerative farming research. Finally, we certified *100% of our Napa Valley estate vineyards as organic* through CCOF – representing 480 planted acres across 15 estate vineyards.

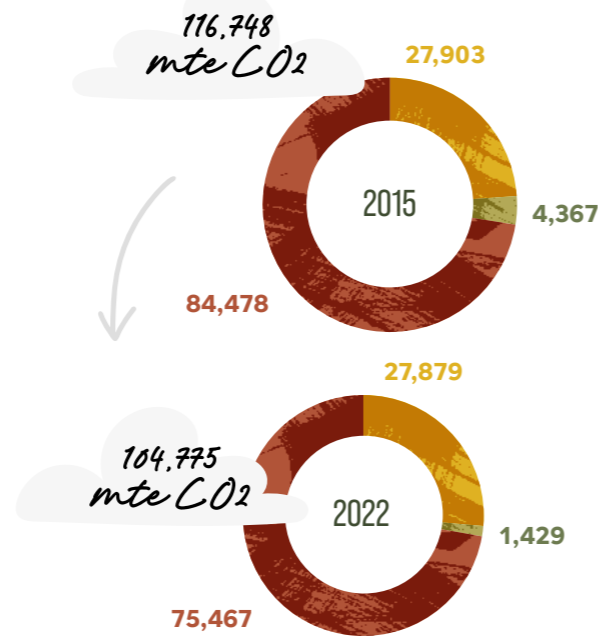
► **Water management**

We collected *500,000 gallons of water from our rainwater capture system* at four winery facilities. This prevented us from having to rely on groundwater or municipal water supplies.

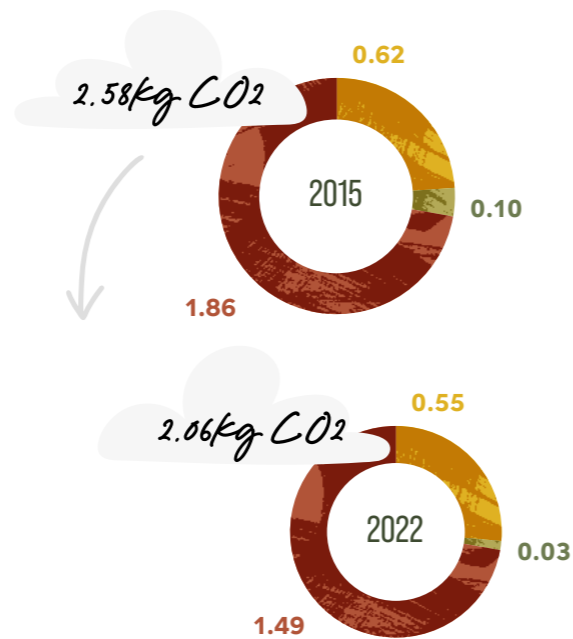
The company's portfolio includes Kendall-Jackson, La Crema, Cambria Winery, Cardinale, Freemark Abbey, Stonestreet, WillaKenzie and 40+ wineries across the globe.



Absolute GHG Emissions (MTE CO₂)



Emissions Intensity (kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



SPOTTSWOODE ESTATE VINEYARD & WINERY

Location: USA | No. Wineries: 1 | Member since: 2019

10% reduction in emissions intensity since 2019

70% powered by on-site renewable energy

► **Packaging**

We *reduced the glass weight* of our Estate Cabernet from 564g (2021 vintage, bottled in July 2023) to 465g (2022 vintage, bottled in July 2024). We also reduced the weight of our Lydenhurst Napa Valley Cabernet by the same amount.

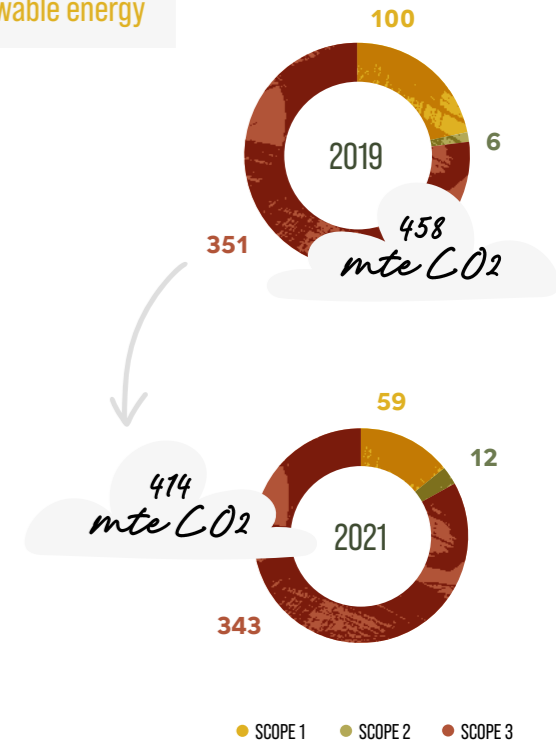
► **Vineyard management**

We have *increased our sheep herd to 65*, and added some guardian dogs to protect our flock. We continue to *farm organically, biodynamically and regeneratively*, receiving our Regenerative Organic Certification (ROC) in 2023.

► **General**

We were *recertified as a B Corp* with a score of 105 points, up from 80.2 points. We are very excited about continuing our commitment to our *emission reduction goals*, as well as keeping our eyes on holistic environmental initiatives that capture social and economic, as well as environmental, sustainability.

Absolute GHG Emissions (MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3





SULA VINEYARDS

Location: India | No. Wineries: 6 | Member since: 2021



15% reduction in emissions intensity since 2019

47% powered by on-site renewable energy

► Renewable energy
We have installed nearly *700kW* of solar panels across our facilities, enabling us to meet *59%* of our energy needs with solar power. In FY24, we also implemented a Battery Energy Storage System (BESS), with a capacity of 422kWh, to enhance the efficient storage of solar energy.

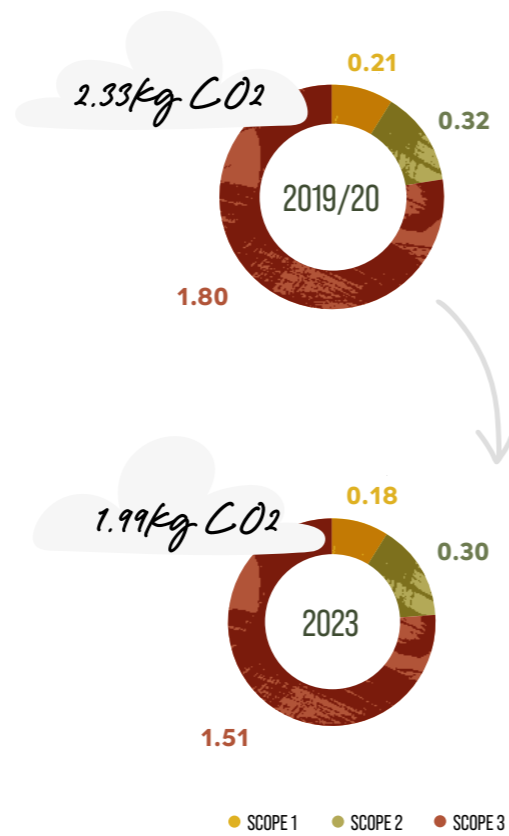
We increased our installed heat pump capacity to *966kW* in FY24, up from 661kW in FY23. We also installed a methane capture system at our effluent treatment plant, which captures methane and converts it into clean electricity.

► Water management
Effective water management practices have significantly reduced our freshwater usage while maximizing recycled water use. This has resulted in an *impressive 8%* reduction in water consumption per liter of wine produced.

► Transportation
Our commitment to cleaner transportation is reflected in our decision to ensure that *60%* of our new vehicle purchases are electric vehicles (EVs). This has raised the EV share of our total fleet to 40%.

► Packaging
In FY24, we introduced partition-free cartons and reduced bottle weights, which resulted in a *2%* decrease in emissions from our packaging materials.

Emissions Intensity
(kg of CO₂e per liter produced)



VIÑA UNDURRAGA

Location: Chile | No. Wineries: 3 | Member since: 2021

17% reduction in emissions intensity since 2022

41% powered by on-site renewable energy

► Packaging
There was a *29%* decrease in emissions related to wine bottles, bag-in-box packaging, corks, capsules (polyethylene and tin), screwcaps, labels, stickers, etc. This is explained by the fact that the emissions factor (EF) reported by Cristalerías was 0.91 in 2022, and 0.59 in 2023. For accessories such as bottlenecks, trims, etc, the *emissions reduction was 63%*. In 2022, both collars and muselets were included in the figure, but in 2023 only collars were considered, and muselets were moved to the 'other packaging materials' category.

► Bottling
We reported a *96%* decrease in wine bottled in third-party plants. In 2022, this item included all outsourcing, plus transport, export sales and shipping. In 2023, a more representative emissions factor was used, specifically for bag-in-box (BIB) cases.

Emissions Intensity
(kg of CO₂e per liter produced)



VIÑAS FAMILIA GIL

Location: Spain | No. Wineries: 1 | Member since: 2022



30% reduction in emissions intensity since 2018

39% powered by on-site renewable energy

► **Circular economy**

In order to reduce emissions, we are *reusing our own waste by converting winemaking by-products into organic compost* by using worms. While returning this valuable resource back to the vineyard, we are implementing a circular economy in both our winery and vineyard.

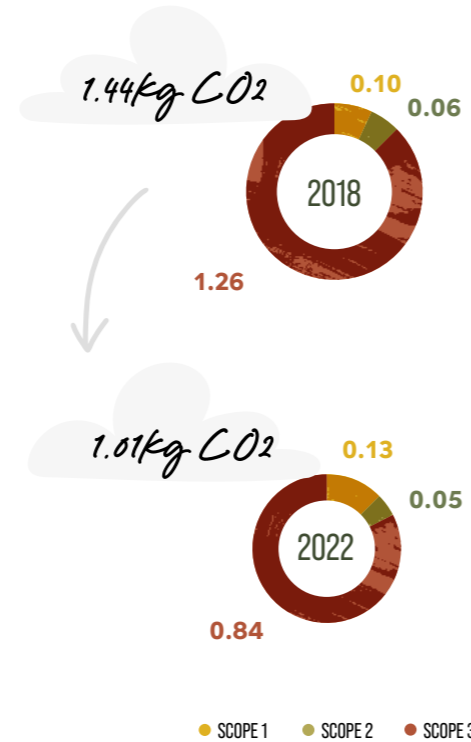
► **Renewable energy**

Over the past year, we have increased our installed *solar panel capacity to 1,175kW*. Furthermore, we have increased our energy storage from batteries to 4mWh.

Currently, *49% of our winery is powered by on-site renewable energy*, and there has been a 56% reduction in emissions intensity since 2018.



Emissions Intensity
(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



VSPT WINE GROUP

Location: Chile | No. Wineries: 6 | Member since: 2019



15% reduction in emissions intensity since 2019

42% powered by on-site renewable energy

► **Vineyard management**

During 2023, we continued incorporating more vegetative cover between vine rows and implementing preventative management in our vineyards. Together, these measures have allowed us to *reduce our use of agrochemicals by about 20%* over the past five years.

About *90% of our agricultural electricity consumption comes from irrigation systems*. Therefore, incorporating and integrating technology to measure soil moisture, water retention in the vineyard and climate data is crucial in order to reduce water usage and, as a result, lower electricity consumption.

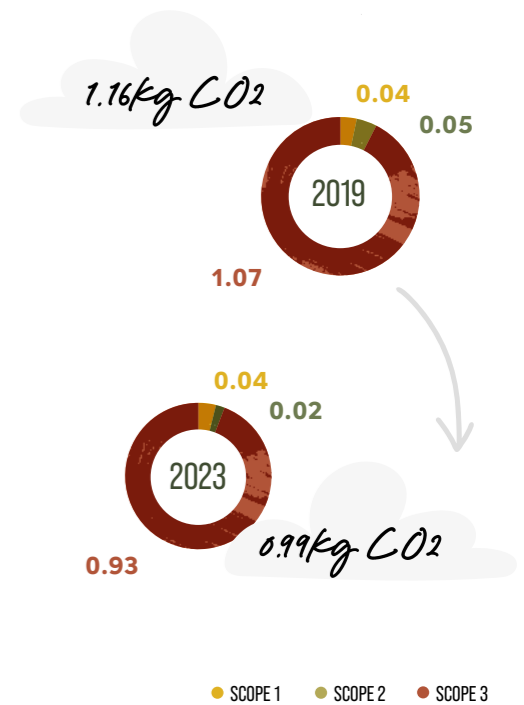
► **Renewable energy**

In 2023, *42% of our electricity consumption was self-generated*. In the next two years, we are planning another solar panel installation, adding to the 12 already in operation.

► **Packaging**

We have *updated our Circular Economy and Ecopackaging policy*, aligning with the commitment to maintain an average bottle weight of 400g. In 2023, we ended the year with an average bottle weight of 403g across our portfolio.

Emissions Intensity
(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



YEALANDS WINE GROUP

Location: New Zealand | No. Wineries: 1 | Member since: 2020



24% reduction in emissions intensity since 2019

13% powered by on-site renewable energy

► **Renewable energy**

We have commenced *development of a 4.5mw solar array* adjacent to the winery. This was scheduled for completion in October 2024.

► **Circular economy**

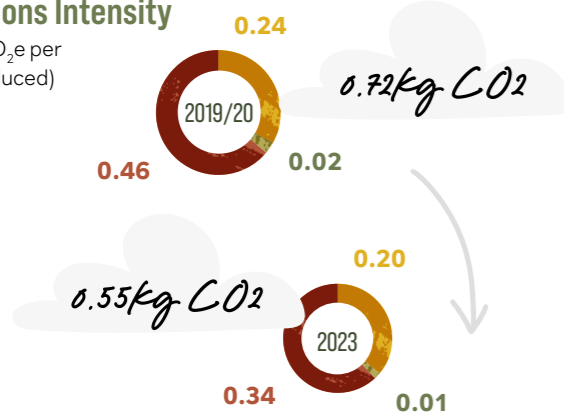
We have *initiated a biochar project, which involves making biochar out of grape marc and vine stumps*. This biochar will then be combined with compost and put back into the vineyard, closing the loop.

► **Packaging**

We have completed a packaging review, including the *lightweighting of all of our bottles and the reduction in the cardboard weight of our cases*. This is part of our continued focus on reducing Scope 3 emissions.

Emissions Intensity

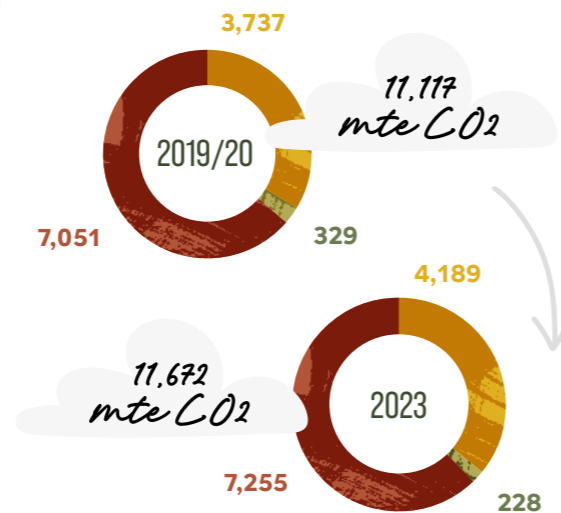
(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

Absolute GHG Emissions

(MTE CO₂)



INTERNATIONAL WINERIES FOR CLIMATE ACTION TECHNOLOGY PARTNERSHIP

NOVEMBER, 2024

International Wineries for Climate Action (IWCA) is pleased to announce a strategic partnership with North Star Carbon Management, selecting them as the preferred platform for IWCA member companies to quantify, track, report, and manage their carbon emissions. This collaboration represents a significant advancement in supporting IWCA member wineries on their path towards sustainability and climate action.

North Star Carbon Management, led by co-founder and CEO Josh Prigge, brings a unique perspective to this partnership. Josh has extensive experience in sustainability within the wine industry and was the consultant IWCA contracted to develop its first excel-based carbon calculator for use by its members.

[Read: International wineries for climate action technology partnership](#)



THE FIRST GREEK WINERY JOINS PRESTIGIOUS SUSTAINABILITY INITIATIVE

JULY, 2024

Kir-Yianni has become the first Greek winery to join the International Wineries for Climate Action (IWCA). Members of this organization aim to achieve CO₂ neutrality by 2050. Kir-Yianni also claims to be the first Greek winery to measure its own carbon footprint according to ISO-14064 standards, as announced by the producers of the Naoussa cult wine Ramnista. With Kir-Yianni's inclusion, IWCA now includes over 40 wine producers from 12 countries across five continents.

"We are proud to welcome Kir-Yianni to IWCA," says Katie Jackson, President of IWCA, "and we congratulate them on the speed with which they have progressed from applicant to Silver member."

[Read: The first Greek winery joins prestigious sustainability initiative](#)

Courtesy: Medlock Ames

IWCA in the Media



HOW THE WINE INDUSTRY IS UNIQUELY DEALING WITH ITS CARBON FOOTPRINT

AUGUST, 2024

When wine lovers want an eco-friendly wine, they typically reach for an organic or biodynamic bottle. While it's true that grapes farmed and produced without toxic chemicals are arguably healthier for the environment and your body, it doesn't mean they automatically have a lower carbon footprint. How that wine is shipped from the winery to your glass, as it turns out, almost invariably determines just how environmentally responsible it is.

"Packaging and transportation represents at least 40% of a wine bottle's carbon footprint," says Marta Mondonca, manager of the Porto Protocol Foundation, which recently issued a large-scale report that breaks down the impact of bottle weight and packaging on a wine's carbon footprint. "We look at several measurements, including data from the IWCA [International Wineries for Climate Action], California's Wine Institute and Wine Australia. There are 32 billion bottles of wine produced every year."

[Read: How the wine industry is dealing with its carbon footprint](#)

THE IWCA BOARD OF DIRECTORS PROVIDES STRATEGIC LEADERSHIP ACROSS OUR MEMBERSHIP-BUILDING, PARTNERSHIP, COMMUNICATIONS AND OTHER MISSION-DRIVEN EFFORTS.

Leaders in the wine sector and strong advocates for climate action, these individuals help to position and strengthen IWCA as the pre-eminent, most rigorous collective movement for climate action across the wine industry.



► **Mafalda Guedes,**
Board Member
IWCA

“As a member of the IWCA, **I am proud to witness our sector’s collective commitment to a sustainable future**, with wineries worldwide united in the urgent fight against climate change. IWCA’s role is pivotal – serving as both a catalyst and a guide, driving accountability and progress through shared standards and ambitious goals. Together, **we are demonstrating that climate action is not only possible but essential** for the long-term resilience of our industry and the ecosystems that support it.”



Courtesy: Yealands



► **Andree Piddington**
Board Member
IWCA

“The IWCA is essential in uniting innovative ideas and successful practices to drive down carbon emissions. As a board member, I’m deeply committed to streamlining processes, making it easier for our members to engage in sustainability efforts. **Together, we can foster a community that empowers one another to achieve meaningful reductions in emissions**, all rooted in science-based methodologies.”



► **Aaron Stainthorp**
Board Member
IWCA

“**Creating climate solutions is a team sport**, and IWCA is empowering wineries from around the world to turn our individual actions into collective leadership in pursuit of decarbonizing the wine sector. **IWCA creates resources that enable wineries of any shape or size to be part of the climate solution**, set meaningful emission reduction targets in line with global standards and turn those strategies into action.”



► **Julien Gervreau**
Founding Board Member
IWCA

“**Climate disclosures are rapidly moving from a ‘nice to have’ to a business necessity.** As an increasing number of publicly traded retailers are subject to sustainability reporting regulations that implicate their supply chains, they will undoubtedly be asking wineries to disclose their emissions data. **IWCA members are well ahead of this trend and will be positioned to be suppliers of choice in an economy that increasingly prioritizes the measurement and disclosure of climate impacts** and the attainment of tangible emission reductions.”



► **Louisa Rose**
Board Member
IWCA

“There is something inherently sustainable about generational family-owned businesses, but with the escalating challenges that we face with climate change, we need to be more and more proactive. IWCA embodies the same values of collaboration and sustainability that are at the core of our daily work. **Through IWCA, we’ve had the opportunity to learn from each other, tackle shared challenges and celebrate victories.** As we face the escalating impacts of climate change – like recent frosts, wildfires and drought – it’s clear that a united approach is essential.”

“IWCA brings a unique approach to the wine sector that has a tangible effect in accelerating climate ambition. **Based on rigorous, science-based standards and transparency, there is no space for greenwashing;** wineries lead climate action by sharing, learning and collaborating all together.”

► **Joep María Ribas**
Founding Board Member
IWCA



Courtesy: Ridge Vineyards, USA



► **Adrian Chitty**
Board Member & Treasurer
IWCA

“**The future of the wine industry depends on the actions we take today.** IWCA’s tools, standards, guidance and collaborative membership are leading the effort to tackle emissions in this sector.”

From
the IWCA Board

SILVER MEMBERS

APPLICANTS

HOW TO JOIN



A TO Z WINEWORKS

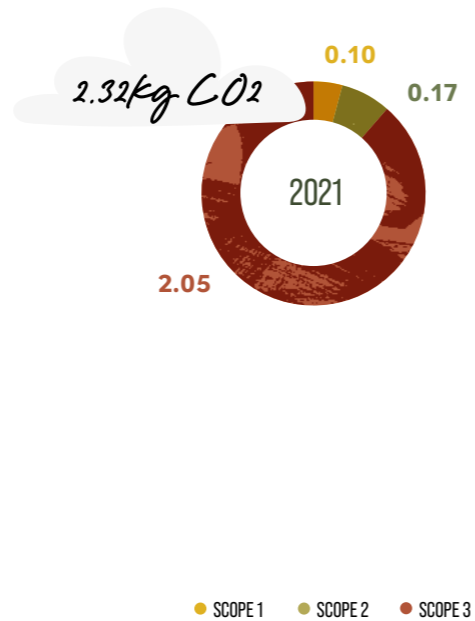
Location: USA | No. Wineries: 1 | Member since: 2021



- Energy efficiency**
 A program of efficiency projects across the whole company has resulted in electricity savings annualizing at over 6% for 2024. We project to realize carbon savings of 22 MTCO₂e or more. Measures include optimizing HVAC settings, lighting upgrades, appliance run time settings and staff education.
- Water management**
 Our drought-tolerant landscaping has matured and requires less irrigation. We expect to use 33% less water in 2024 versus 2023, with associated carbon savings of about 8 MTCO₂e.
- Recycling**
 We have upgraded our recycling stations throughout our production facility and educated staff on the importance of correct waste streaming.

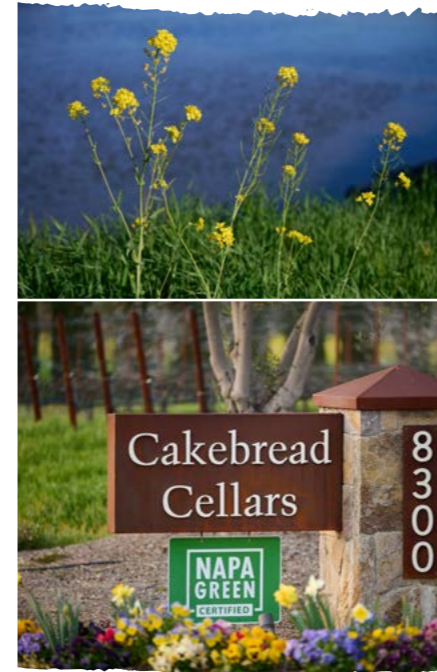
Emissions Intensity

(kg of CO₂e per liter produced)



CAKEBREAD CELLARS

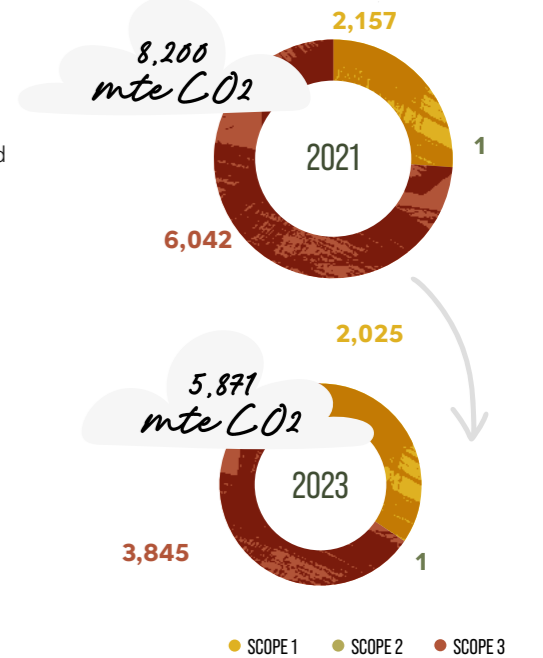
Location: USA | No. Wineries: 1 | Member since: 2021



- Energy efficiency**
 We have installed new, smaller and more efficient air compressors and a control system to allow for reduced plant pressure, which will result in a 22,000kWh annual saving. Additional insulation has been installed in the west- and south-facing external walls of our barrel cellar, reducing energy demand for cooling this area.
- Water management**
 Variable frequency drives have been fitted on our water system distribution pumps. This has reduced the energy required to provide the water needs of the winery.

Absolute GHG Emissions

(MTE CO₂)



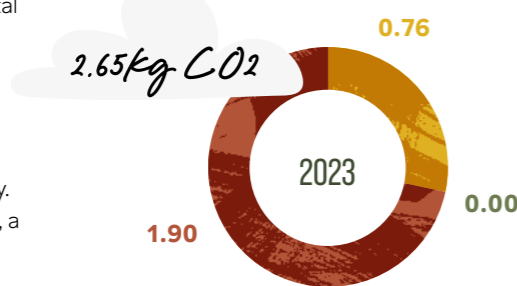
ABADÍA RETUERTA

Location: Spain | No. Wineries: 1 | Member since: 2023

- Renewable energy**
 We have installed 503 solar panels at 235kW, with annual self-consumption of 204mWh – 25% of the winery's total consumption.
- Carbon absorption**
 Over the past few years, we have developed a number of schemes to move towards a low-carbon economy. One highlight is our truffle plantation, a CO₂ absorption project.
- Oenotourism**
 Measures include experiences around nature, use of sustainable materials and reuse of cork. All wine tourism vehicles have been replaced with 100% electrical vehicles. We have collaborated with sustainable companies, and introduced recycling areas in the winery, along with eco-workshops, the Academia del Terruño, and storytelling around sustainability.

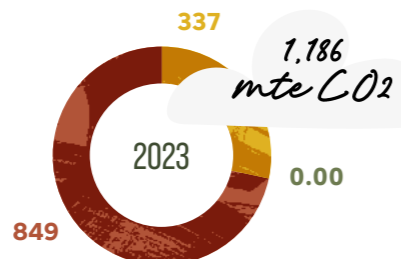
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



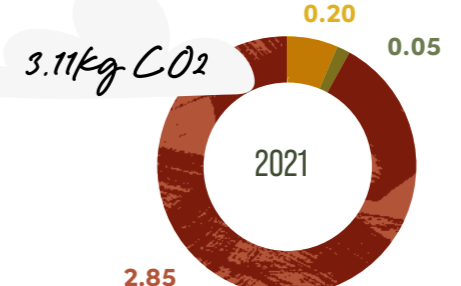
CHAMPAGNE LANSON

Location: France | No. Wineries: 1 | Member since: 2022

- Vineyard management**
 Maison Lanson vineyards cover 430 hectares, including 60 hectares of our own and 16 hectares of organic and biodynamic viticulture, with access to the best parcels from among a hundred or so Crus, half of which are Grand and Premier Crus.
- We also own a 16 Ha bio-dynamically farmed vineyard and we are committed to sustainable viticulture, for its own vineyard and for its suppliers, by supporting its partner-growers in their transition to certified viticulture under the VDC (Viticulture Durable en Champagne) and HVE (Haute Valeur Environnementale) labels which has its own collective structure.
- Since 2022, Lanson teams have overseen the certification of 94 wine farms (439ha, including 159ha for Lanson).

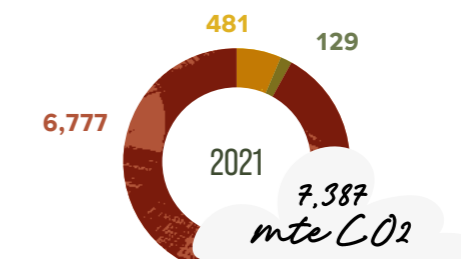
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

PRODUCTION
GOLD MEMBERS
SILVER MEMBERS
APPLICANTS
HOW TO JOIN

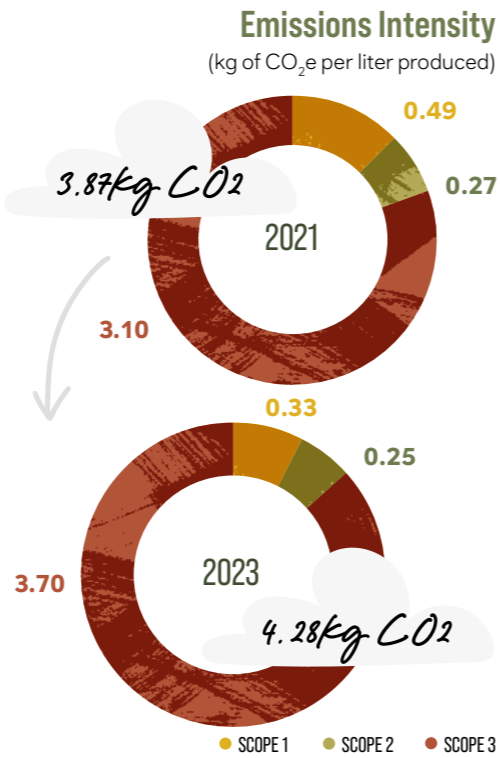


CHÂTEAU TROPLONG MONDOT

Location: France | No. Wineries: 1 | Member since: 2021



- Wine production**
 Our cellar team has worked to reduce the use of dry ice (solid carbon dioxide) in the winemaking process, in favor of nitrogen and CO₂ gas. We have reduced greenhouse gas emissions linked to wine protection by more than two-and-a-half times.
- Transportation**
 We have replaced two internal combustion vehicles in our car fleet with electric vehicles, enabling us to reduce GHG emissions from this source by 22%.
- Vineyard management**
 A large part of our land is plowed by animal traction. We have further increased this, helping to reduce our GNR consumption by 15.5%.

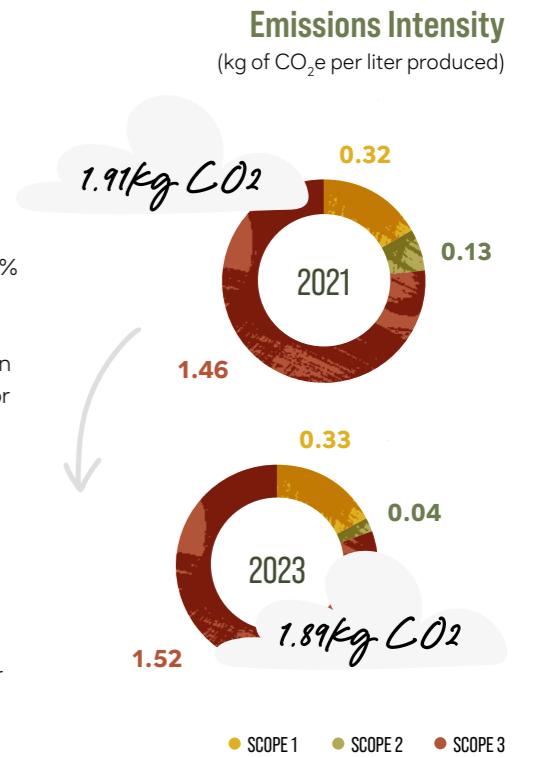


CRIMSON WINE GROUP

Location: USA | No. Wineries: 6 | Member since: 2021



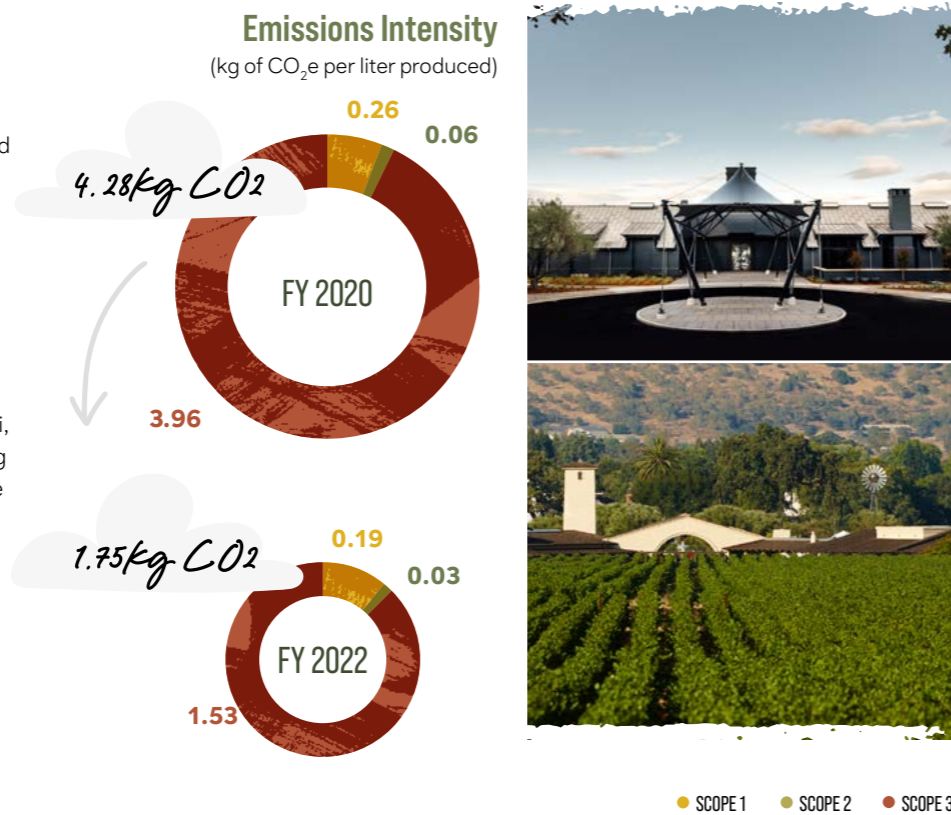
- Renewable energy**
 We have installed a new solar array at Pine Ridge Vineyards, producing 40%-plus of electricity needs.
- Packaging**
 We have lowered glass weights across the portfolio and moved more than 60% of total production into glass weighing less than 420g. We have placed a logo on our wine bottles that weigh less than 420g – and are encouraging distributor partners to show which wines on their books weigh less than 420g as well.
- Water management**
 We have expanded our water storage capacity and are working on reducing our water usage, with the objective of securing two years of water needs during dry times. This also reduces our need to draw on local water sources.



CONSTELLATION BRANDS FINE WINES

Location: USA | No. Wineries: 6 | Member since: 2021

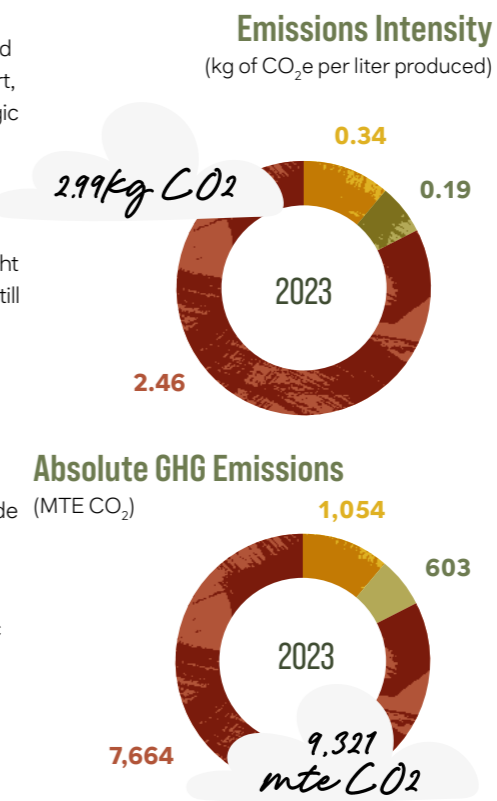
- Renewable energy**
 In the past year, The Prisoner Wine Company has installed rooftop and ground-mounted solar panels. Since January 2024, the system has produced approximately 1MW of electricity, significantly reducing the winery's reliance on grid electricity.
- Transportation**
 Since 2023, we have been using a fleet of six Monarch MK-V electric tractors in our To Kalon vineyard in the Napa Valley. During the first year, WingspanAi, Monarch's platform, estimates 8,000kg of CO₂ emissions savings, based on the MK-V's 1,700 hours of usage.



DOMAINE BOUSQUET

Location: Argentina | No. Wineries: 1 | Member since: 2023

- General**
 In April 2024, we released our first GRI and CSRD aligned Sustainability Impact Report, outlining short to long-term goals, strategic plans and evaluation metrics, and a KPI dashboard to monitor key material topics.
- Packaging**
 In 2023, 74% of our bottles were lightweight (420g or less). By early 2024, 95% of our still wines used lightweight bottles.
- Carbon sequestration**
 Our Composting Excellence program composted 910,000kg of organic and biodynamic waste in 2024, up 308% on 2023. We aim to extend this to include other fruit producers.
- Vineyard management**
 We have Argentina's largest biodynamic vineyard (162ha) and use regenerative practices like minimal tillage, cover cropping, and animal interaction. This year, we began creating biological corridors to enhance biodiversity.



HOW TO JOIN | APPLICANTS | SILVER MEMBERS | GOLD MEMBERS | PRODUCTION



DOMAINE LAFAGE

Location: France | No. Wineries: 2 | Member since: 2022



► Packaging

Over the past few years, we have transitioned to lighter bottles, expanding from 18% of our range in 2022 to 35% this year, saving the equivalent of 169 tons of CO₂.

► Carbon capture

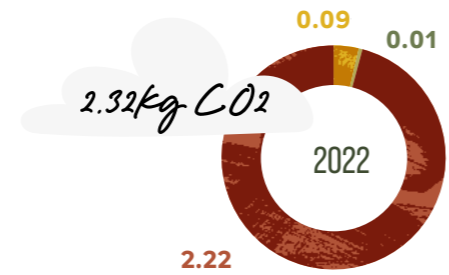
This year, we have intensified our biochar application, incorporating compost from across more than 2.5 times the vineyard area versus last year. This conserves water and nutrients in the soil, capturing the equivalent of 40 tons of CO₂ per hectare.

► Renewable energy

In 2023, all of the electricity used at Domaine Lafage came from renewable sources.

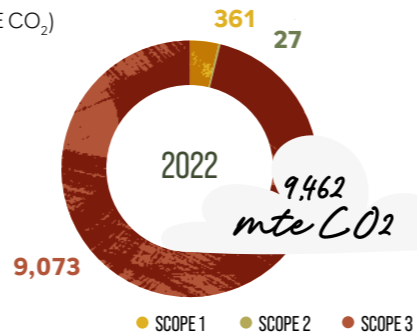
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



FAMILLE PERRIN

Location: France | No. Wineries: 1 | Member since: 2021



► Packaging

We continue to reduce the weight of our bottles (190 tons of glass saved in 2023 by changing bottles for certain ranges).

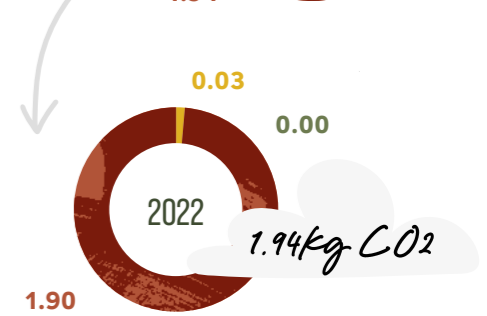
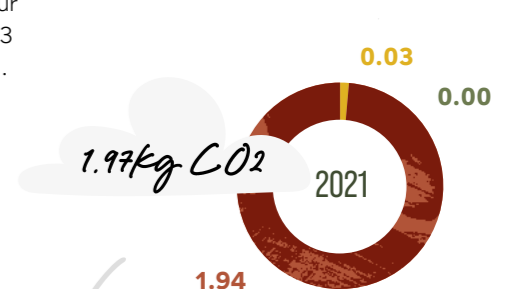
We have deleted dividers from our cartons (13 tons of carbon saved in 2023), and we are also reducing the weight of our wooden boxes by 25%.

► Renewable energy

We are installing solar panels on our sites to produce and use our own energy.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



EMINA RIBERA

Location: Spain | No. Wineries: 1 | Member since: 2020

► Biodiversity

We have installed an insect hotel in the winery's variety garden to help to protect species, facilitate pollination and aid pest control.

► Renewable energy

We installed photovoltaic panels in the vineyard for irrigation, thus stopping the consumption of agrodiesel and reducing Scope 1 emissions.

► Circular economy

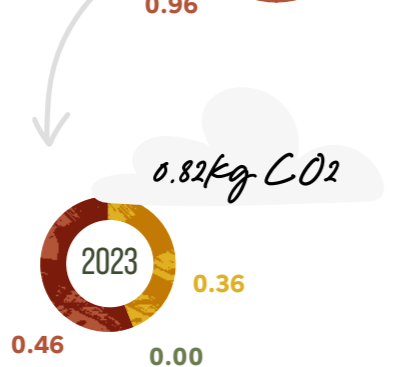
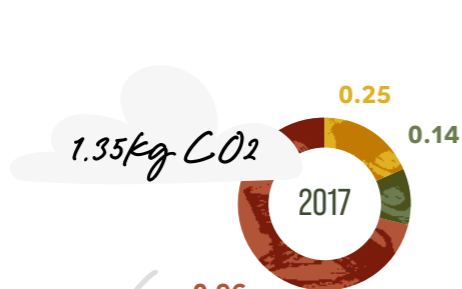
We are participating in Vinebox, a project to convert vine pruning waste into paper rolls instead of burning it and releasing CO₂ into the atmosphere.

► Vineyard management

We have implemented environmentally sustainable agricultural practices in all of our vineyards, reducing emissions linked to the use of chemical fertilizers and phytosanitary products. We are also using foliar fertilizers, which are certified to reduce emissions.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



FELTON ROAD WINES

Location: New Zealand | No. Wineries: 1 | Member since: 2022

► Transportation

All company vehicles but one have moved to electric, and the remaining vehicle has changed to hybrid. We offer all staff free recharges from five charging points, using winery electricity which is 100% certified renewable.

► Vineyard management

We are now using autonomous drones to replace tractors for spraying. Currently we use a contractor, but have ordered our own drone and are training staff in its use.

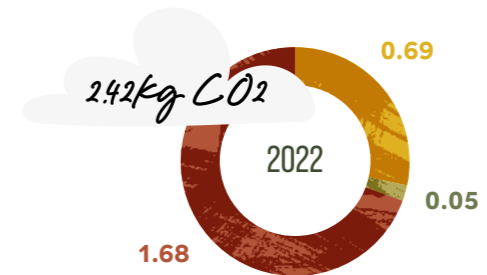
We have started using spore traps with DNA PCR analysis to create spore maps for powdery mildew. By moving from routine preventative spraying to actual threat spraying, we believe we will radically cut our spray program.

► Packaging

We are working on trials with our bottle producer to move to a 390g bottle from the current 417g.

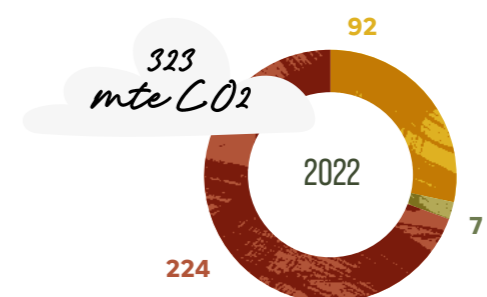
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



PRODUCTION
GOLD MEMBERS
SILVER MEMBERS
APPLICANTS
HOW TO JOIN



HERDADE DOS GROUS

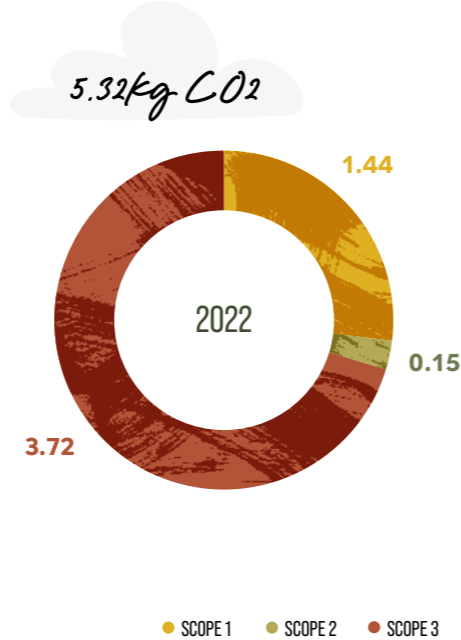
Location: Portugal | No. Wineries: 1 | Member since: 2022



- Packaging**
 We have achieved a reduction of 130 tons of CO₂e by reducing the weight of bottles on some of our lines. Eighty-five percent of our corks, cartons and wooden boxes are made using materials sourced from certified Forests with Sustainable Management.
- Renewable energy**
 More than 36% of our energy needs are met via renewable sources. Installed solar panels allow us to avoid more than 106 tons of CO₂e, up 29% on our baseline year.
- Vineyard management**
 We showcase a sustainable approach in 5.7ha of our vineyard by incorporating Keyline design principles and Nature-Based Solutions. Indigenous grape varieties – more resistant to extreme weather – are planted in 95% of our new vineyards, planted east-west to avoid sunburn.

Emissions Intensity

(kg of CO₂e per liter produced)



HILL-SMITH FAMILY ESTATES

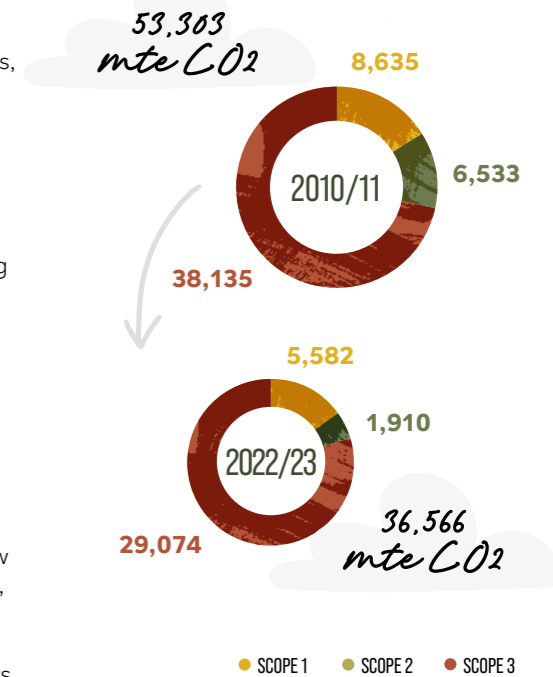
Location: Australia | No. Wineries: 4 | Member since: 2021



- Carbon capture**
 We continued our work with the Australian Wine Research Institute on carbon capture and reuse solutions, in preparation for our first trial during the 2024 vintage.
- Packaging**
 60% of our total glass for standard owned products was lightweight, and we identified additional lightweighting opportunities for the next 12 months.
- Renewable energy**
 We submitted plans for our next 155kw solar system with estimated annual generation of 213MWh, for installation 2024/25.
- General**
 Louisa Rose was appointed to the new role of Head of Sustainability at HSFE, leading innovation and emissions reduction strategies that will enable us to meet our 2030 and 2050 targets.

Absolute GHG Emissions

(MTE CO₂)



HERÈNCIA ALTÉS

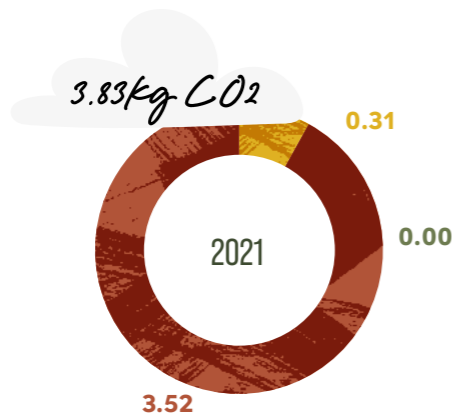
Location: Spain | No. Wineries: 1 | Member since: 2021



- Packaging**
 During 2023 and 2024 we can see the impact of reducing the average weight of the bottles used for our wines from 0,56 kgs to 0,51kgs, which led to a total reduction of 15% in GHG emissions per bottle in 2023 compared to 2021.
- Renewable energy**
 Energy efficiency has allowed us to save on the amount of fossil fuel burned to power the winery when solar energy stored in the batteries is depleted. By reducing cooling and turning nearly all the pumps off during the night we have reduced diesel consumption from 26,000 litres in 2023 to 17,200 litres in 2024 (Jan 1 to Sep 31), a reduction of 35%.
 So far, in 2024, 68% of the electricity consumed in the winery is from the solar panels, this compares to 59% in 2023. The 2023 carbon footprint has revealed an output of 2,28 kg CO₂e/L of wine produced.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



KIR-YIANNI

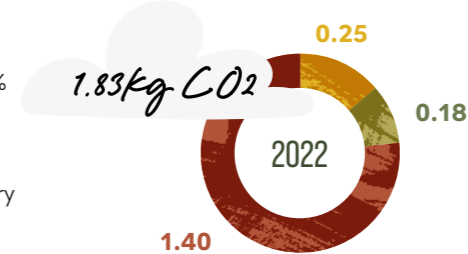
Location: Greece | No. Wineries: 2 | Member since: 2024



- Emissions reduction**
 We have installed more rooftop solar panels at our Naoussa and Amyndeon wineries, increasing our total photovoltaic panel capacity 2022: 50KW 2023: 350 KW. Our self-efficiency share: 2022: 9% 2023: 23%
- Water management**
 The upgrade of the biological water treatment installation at our Naoussa winery was completed in 2023, with similar plans submitted for our winery in Amyndeon.
- Vineyard management**
 We have been working on new protocols for precision fertilization, and CO₂ emissions assessment was introduced as a critical factor for purchases (e.g. vine stakes) from 2023.
- Packaging**
 In 2023 we saved 50 tons of glass by transitioning to lighter weight bottles.
- Emissions reduction**
 We have replaced low efficiency electric motors with high efficiency frequency converter electric motors, reducing further our electric power usage.

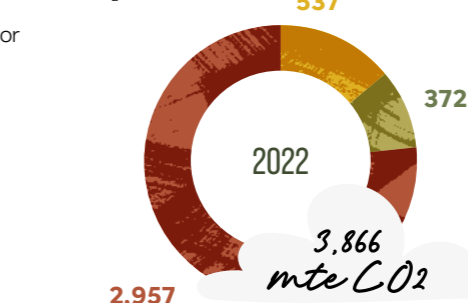
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

PRODUCTION
GOLD MEMBERS
SILVER MEMBERS
APPLICANTS
HOW TO JOIN



MEDLOCK AMES

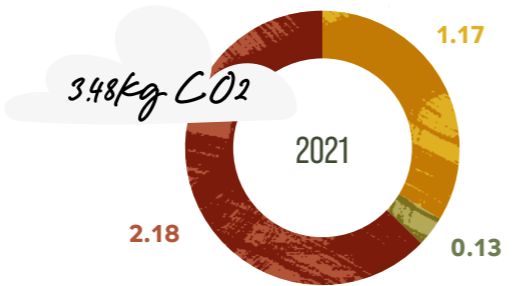
Location: USA | No. Wineries: 1 | Member since: 2021



- Packaging**
 We created a new wine offering bottled in reused glass, which can reduce emissions by 85% compared to traditional single-use glass.
- Transportation**
 We reduced emissions related to employee commuting by 9%, by encouraging carpooling and switching to electric vehicles.
- Emissions reduction**
 We eliminated the need for R22 refrigerant, reducing refrigerant-based emissions by 74% as a result.

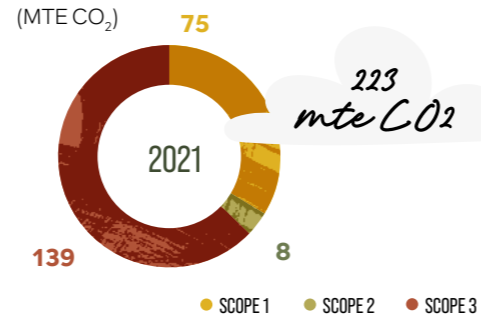
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



OKANAGAN CRUSH PAD

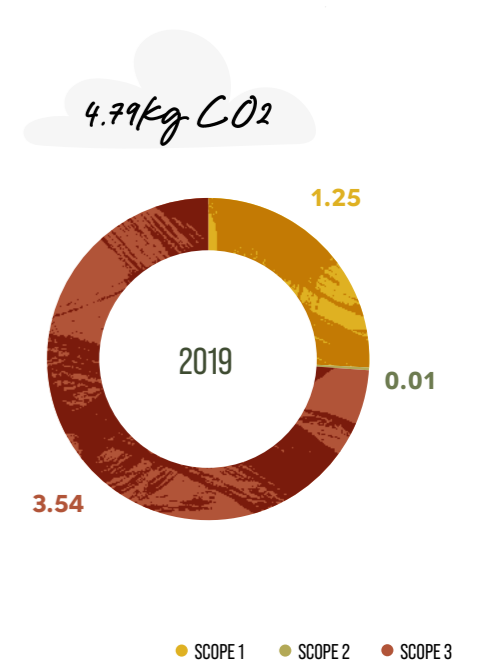
Location: Canada | No. Wineries: 2 | Member since: 2022



- Packaging**
 One of our most significant initiatives has been the lightweighting of our Narrative XC sparkling wine, which we achieved by slightly reducing the pressure. We will produce 3,000 cases of this product in 2024, saving approximately 10 tons of glass in the process. This reduces our GHG footprint by cutting the amount of fuel required to ship from the factory and to the final consumer, as well as reducing glass waste and our costs: a win/win.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



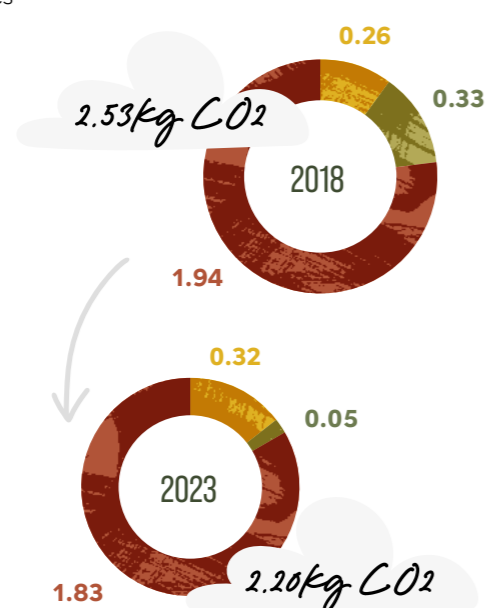
MIGUEL TORRES CHILE

Location: Chile | No. Wineries: 1 | Member since: 2022

- Regenerative viticulture**
 Since 2023, we have been certified by the Regenerative Viticulture Alliance (RVA). Thanks to this, the 2024 vintages from two of our vineyards, Santa Digna and Huerta Maule, will be certified as regenerative agriculture – and Almado will be the first wine to have this classification.
- Renewable energy**
 At Miguel Torres Chile, 100% of the energy consumed comes from renewable sources.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



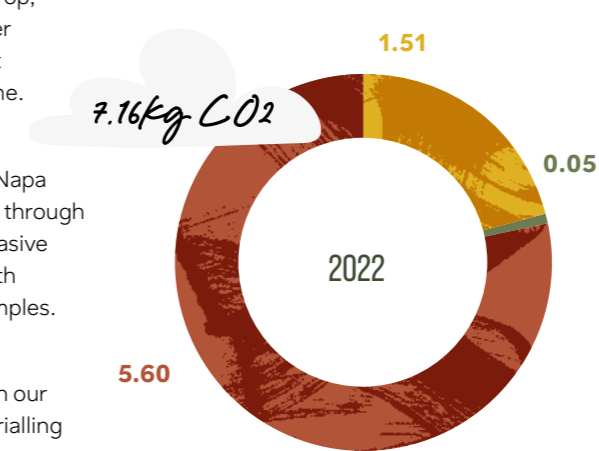
OPUS ONE WINERY

Location: USA | No. Wineries: 1 | Member since: 2023

- Regenerative viticulture**
 We converted 60 acres of our vineyards to regenerative farming methods, including permanent cover crop, grazing and no/low till in order to rebuild soil health and limit disturbance of the microbiome.
- Biodiversity**
 We restored a portion of the Napa River and two creeks running through our property by removing invasive plants and replacing them with native/drought-tolerant examples.
- Water management**
 We have reduced irrigation on our berms by over 60% and are trialling drought-tolerant pollinator plants on our southern berm to ensure viability. Our goal is to replace the grass with a drought-tolerant landscape consistent with the natural flora of the Napa Valley.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

PIPER-HEIDSIECK, CHARLES HEIDSIECK & RARE CHAMPAGNE

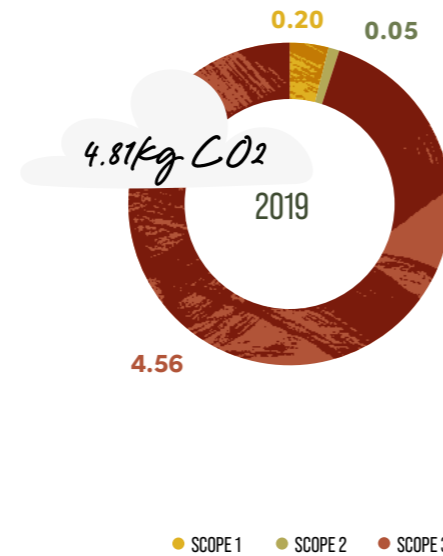
Location: France | No. Wineries: 1 | Member since: 2022



- **Packaging**
We use the lightest Champagne bottle on the market and work with suppliers to reduce the weight of special formats.
- **Vineyard management**
In our vineyards, we apply the triple zero policy: no herbicides, no pesticides, no CMR chemicals. We sow cover crops to enrich and decompact the soil, and to limit erosion. All of our vineyards are VDC-certified and we support our grower partners in their transition.
- **Transportation**
During harvest, 80% of our musts were transported in tankers running on biofuels, reducing our transport emissions by 11% compared to last year.



Emissions Intensity (kg of CO₂e per liter produced)



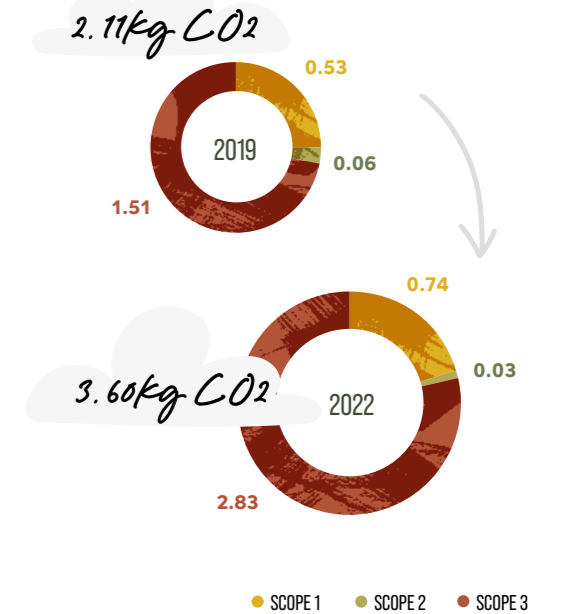
SILVER OAK & TWOMEY CELLARS

Location: USA | No. Wineries: 7 | Member since: 2020



- **Emissions reduction**
We purchased electric-powered equipment for our landscaping team.
- **Renewable energy**
We installed a new solar array at our vineyard shop.
- **Packaging**
We have partnered with a local non-profit organization to recycle capsules from some of our tasting rooms.

Emissions Intensity (kg of CO₂e per liter produced)

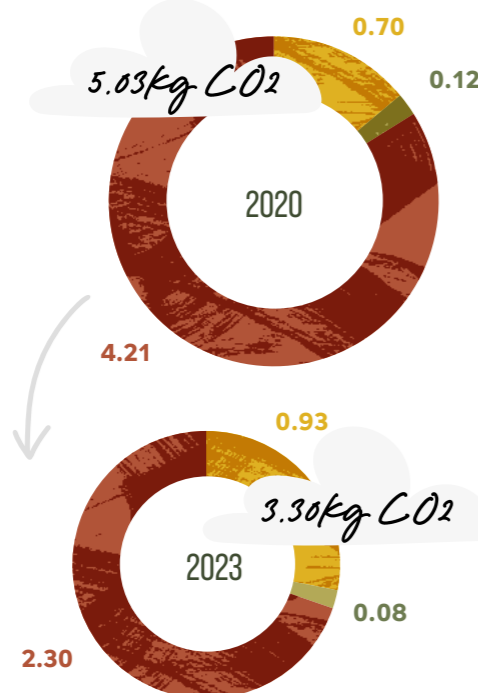


RIDGE VINEYARDS

Location: USA | No. Wineries: 2 | Member since: 2021

- **Packaging**
In 2023, we began kegging a portion of our Three Valleys wine, saving over 10,500 bottles in the first year of the program.
- **Vineyard management**
As of 2023, all of our estate vineyards, including Monte Bello, Lytton Springs, Geyserville and East Bench, are certified organic.
- **Water management**
All the water used in our vineyards and wineries comes from our own sources – deep wells and water recycling systems. We have treatment plants, reverse well systems and filtration systems, recycling 85% of winery water, saving approximately 500,000 gallons a year.

Emissions Intensity (kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

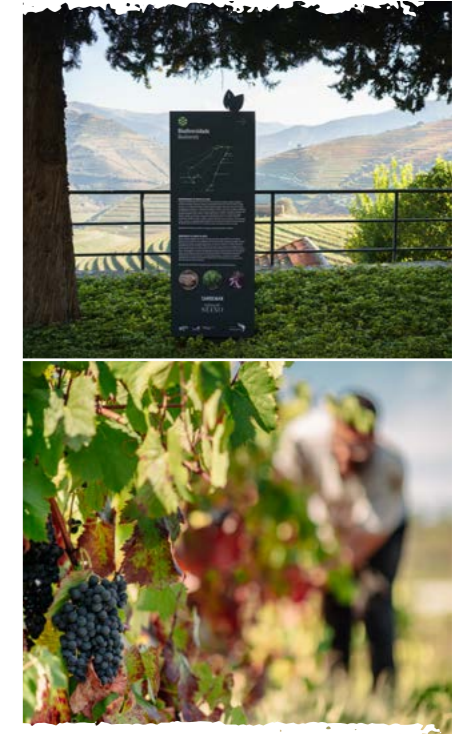
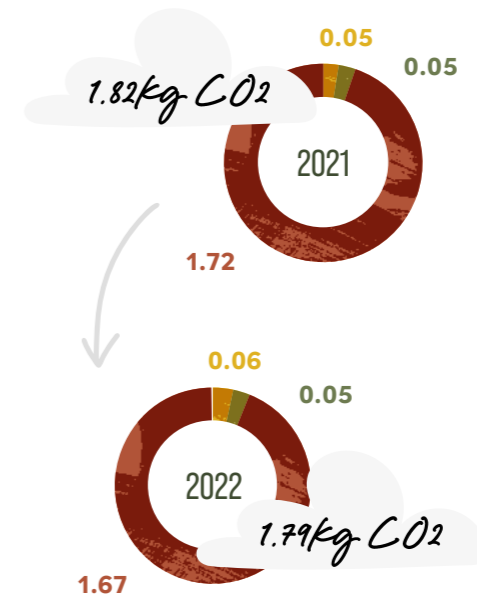


SOGRAPE

Location: Portugal | No. Wineries: 18 | Member since: 2022

- **Transportation**
We are increasing the ratio of hybrid and electric vehicles in our fleet, reaching 14% in 2022 and 20% in 2023.
- **Palletization**
We have improved the palletization of some products, optimizing the space available and improving the capacity sent per pallet by 7.9%. We have also joined the Pallet Pool System, sharing pallets between different companies to reduce wood consumption and the emissions associated with pallet manufacture.
- **Distribution**
By analyzing our distribution routes and working closely with clients and hauliers, we restructured our supply chain to incorporate sea and rail transport, reducing CO₂ emissions by 70% in the transportation of goods between Portugal and Italy.

Emissions Intensity (kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

PRODUCTION GOLD MEMBERS SILVER MEMBERS APPLICANTS HOW TO JOIN

ST. SUPÉRY ESTATE VINEYARDS & WINERY

Location: USA | No. Wineries: 1 | Member since: 2022



► Recycling
St Supéry is Napa Zero Waste Collective's collection hub for wineries' PET plastic label release liner and stretch film. So far, 12,200lbs of liner and 32,000lbs of film have been diverted from landfill.

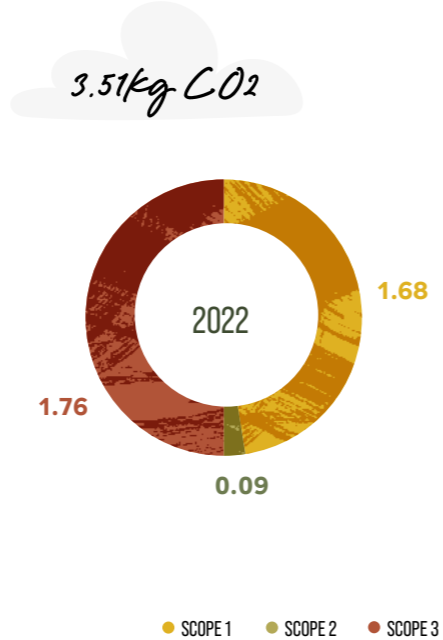
► Water management
We have cut water usage by 56% in eight years, and all process water is recycled. St Supéry irrigates with captured rainfall and recycled water.

► Renewable energy
Our solar arrays have offset 80-94% of the winery's energy bill in recent years.

► Packaging
Cabernet Sauvignon Napa Valley, our second-highest-production wine, is moving to 12% lighter glass (530g bottle to 467g).

Emissions Intensity

(kg of CO₂e per liter produced)



SYMINGTON FAMILY ESTATES

Location: Portugal | No. Wineries: 9 | Member since: 2019



► Packaging
Our average bottle weight was reduced by 4% to 455g in 2023, with 50% of our bottles at or below 420g.

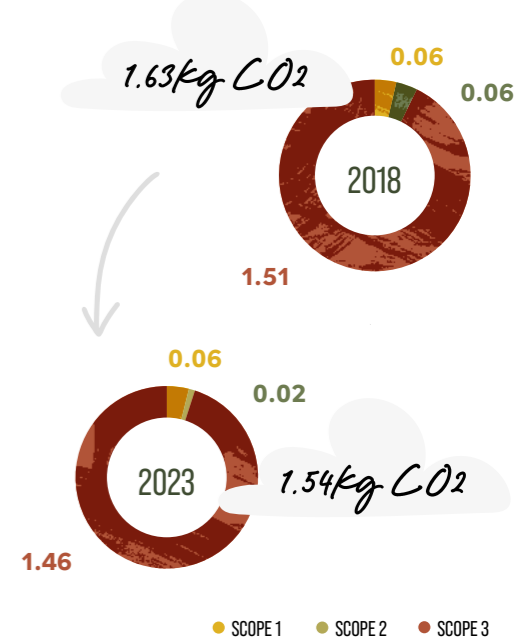
► Renewable energy
Our continued efforts to increase on-site renewable electricity production (840 kWp) have enabled us to offset 8% of our total energy consumption in 2023.

► Wine production
Our Ataíde winery was the first in Portugal to achieve LEED V4 Gold certification, the first in Europe to exceed 60 LEED points, and the fourth highest-scoring winery globally.

► Vineyard management
In 2023, we became the first wine producer in Portugal to earn the National Sustainable Winegrowing Certification at Level A.

Emissions Intensity

(kg of CO₂e per liter produced)



STE. MICHELLE WINE ESTATES

Location: USA | No. Wineries: 5 | Member since: 2023

► Vineyard management
All 2,400 acres of our estate vineyards are farmed and certified sustainable.

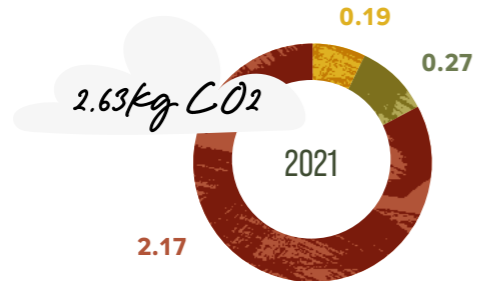
► Water management
We have made a commitment to capital investments that improve water usage at our wineries, including upgrading our waste water systems.

► Packaging
We have improved our packaging, with a bag-in-box option, local purchasing and the adoption of lightweighted glass for one-quarter of our Washington brand volume.

► Transportation
We have EV charging hook-ups at select wineries for both winery staff and guests to use.

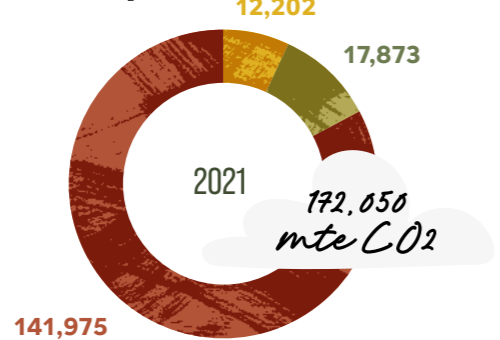
Emissions Intensity

(kg of CO₂e per liter produced)



Absolute GHG Emissions

(MTE CO₂)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3



TIKVEŠ

Location: North Macedonia | No. Wineries: 1 | Member since: 2023

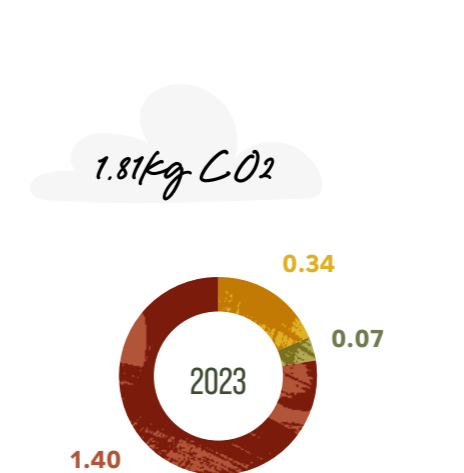
► Renewable energy
In 2023, 34% of the electricity consumed by the winery was self-generated on site, thanks to increases in the capacity of our solar power plant (0.9MWp in 2022; an additional 0.7MWp in 2023). We also use renewable energy from the solar plant for temperature control during grape processing and fermentation.

► Emissions reduction
The introduction of ISO 50001 – Energy Management in 2023, and its application in the overall process, also contributes to better energy consumption per unit of production – reflected in reduced GHG emissions intensity.

► Packaging
Our commitment to using lighter bottles, recycled materials and the planned filling of products also helps to reduce our GHG emissions.

Emissions Intensity

(kg of CO₂e per liter produced)



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

HOW TO JOIN: APPLICANTS, SILVER MEMBERS, GOLD MEMBERS, PRODUCTION



VOYAGER ESTATE

Location: Australia | No. Wineries: 1 | Member since: 2021



● SCOPE 1 ● SCOPE 2 ● SCOPE 3

► Packaging

We continued the roll-out of lightweight bottles to four wines, covering 60% of production by volume and saving approximately 31,000kg of glass and 20.5 tonnes in packaging-related emissions.

► Transportation

We are gradually replacing older tractors with more fuel-efficient models, saving more than 7,000 liters of diesel in 2023.

► Emissions reduction

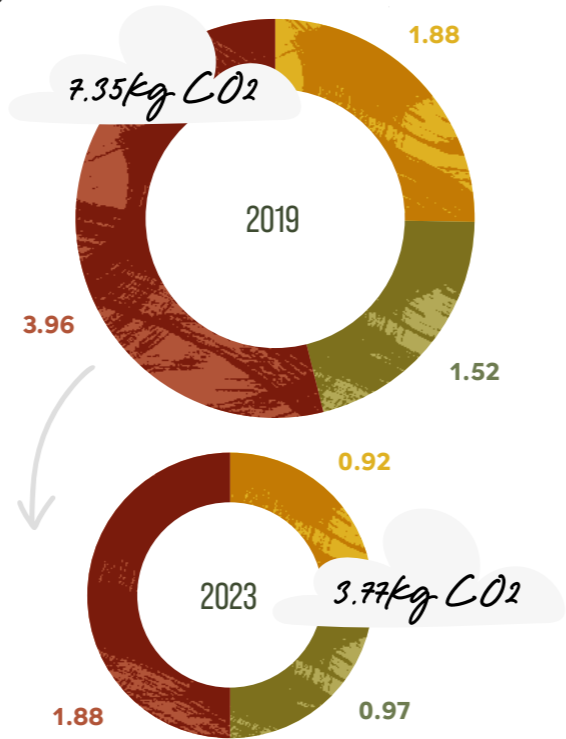
Through a better understanding of our emissions accounting, we reduced biomass burning at our cellar door by over 50%, saving approximately 10 tonnes per year.

► Vineyard management

In 2024, 100% of our wine was produced from certified organic vineyards for the second vintage in a row.

Emissions Intensity

(kg of CO₂e per liter produced)



Courtesy: Sogrape

Notes on Inventory Data

According to Race to Zero requirements, members may choose whether to report absolute emissions or emissions intensity, although all members hold to the Race to Zero commitment to achieve absolute Net Zero carbon emissions by 2050 at the latest.

The emissions data presented here are drawn from members' GHG emissions inventories, which must follow the [IWCA GHG Inventory Scopes Guidance Document](#).

Among other IWCA requirements, the inventory must be verified by an external auditing firm of the winery's choosing that has been ISO-14064- or CDP-accredited. We share here the most recent year of audited data provided by members to IWCA, along with their baseline year data. For many, their first year of data is their first year as an IWCA member; for other wineries that had previously conducted inventories, they have an earlier baseline year.

According to IWCA's policy, emissions reduction targets must be met based on a winery's own efforts to decarbonize, rather than through any purchased offsets. We do, however, encourage sequestration strategies carried out directly by members (such as reforestation on owned or long-term leased land). We invite member wineries to submit biogenic emissions data, but due to the lack of definitive research and scientific consensus on vineyard sequestration (eg short-cycle emissions from vineyard photosynthesis or from wine fermentation), we do not presently count sequestration efforts towards meeting IWCA requirements.

As part of the aim to be the industry-leading organization on climate action, we have taken steps to ensure rigor and consistency in our wineries' GHG inventory and audit processes, and greater transparency in emissions reporting, while simultaneously working to protect the security of our wineries' data. Implementing these new procedures has involved transitioning some of our existing members to a new inventory and audit process. For these wineries, we have worked to ensure alignment with the new procedures.



Courtesy: Ramón Bilbao

APPLICANT *Members*

The newest members of the IWCA community, our Applicant Members are working to complete a baseline, audited GHG emissions inventory on their path to achieving IWCA Silver or Gold membership.

ALTOLANDON

Location: Spain



“At Altolandon we are respectful of the environment, which is why all *our plots are cultivated organically*. At high altitudes, the winds clean the air and the vegetation enjoys excellent health thanks to the absence of pesticides.”

CHÂTEAU KSARA

Location: Lebanon

“As the *first Lebanese winery to join IWCA*, we are proud to be a leader in sustainability in our region. By participating in IWCA, *we are actively working to reduce our environmental impact* and contribute to a more resilient wine industry.”



CHÂTEAU TOUR DES TERMES

Location: France

“Joining IWCA is *a great opportunity as a winery* living a new chapter of its life under new ownership with high environmental impact commitment. We are thrilled to join this group, which is *paving the way to a sustainable wine world* as a collective action.”



CEDARCREEK ESTATE WINERY

Location: Canada



“We’ve implemented a company-wide policy mandating that all future fleet vehicles be *hybrid or fully electric*, supporting the phase-out of Scope 1 *mobile emissions* across our operations.”

ESPORÃO

Location: Portugal

“Over the past two years, we have installed *1,170 photovoltaic solar panels* across our three wineries, *significantly reducing* our indirect *emissions*.”





FROG'S LEAP WINERY

Location: USA

“Our efforts around *lightweight glass* continue, and we have *removed capsules* from several wines. We also have one SKU with a *wash-off label* in anticipation of reusable bottles.”



HENSCHKE

Location: Australia

“During the mid-2000s, we began trialling *biodynamic principles*, which have now become a vital part of the ongoing regeneration of our precious *old-vine sites*.”

NELEMAN

Location: Spain

“We have installed *solar panels*, *reducing our electricity* consumption by 50%, and we have *reduced the glass* in our bottles, thereby lowering their weight.”



RAMÓN BILBAO

Location: Spain

“We have implemented measures to *control and save energy*, through night-time consumption and *battery optimization* systems in our forklift trucks.”

HUNT COUNTRY VINEYARDS

Location: USA

“We are committed to *responsible farming and caring for the land that has given us so much*. We have reduced our fossil fuel use by installing award-winning solar and geothermal systems.”



VIÑA CONCHA Y TORO

Location: Chile

“We have *installed six photovoltaic generation plants* in the wineries of Cachapoal, Chimbarongo, Lontué, Lourdes, Nueva Aurora and Santa Elisa.”



How to become an IWCA winery member

Interested in joining IWCA's quest to create a zero-carbon wine industry? Here's the process summarized in five steps...



1

Get in Touch

Contact IWCA and express your interest in joining.

We will send you the IWCA Standing Rules and Non-Disclosure Agreement to review. We will also ask you to supply the necessary documentation to prove that you meet the IWCA entry requirements.

These are the minimum requirements to join as an Applicant Member. You should:

- ▶ Be involved in the production process, from grape-growing to bottling

and...

- ▶ Have completed a baseline GHG emissions inventory (inclusive of at least Scopes 1 and 2) and/or a verifiable plan to complete a baseline Scopes 1-2-3 inventory

and...

- ▶ Provide IWCA with a written commitment to complete and third-party audit a baseline Scopes 1-2-3 inventory within one year.



2

Signature and Approval

We will help you set up a scoping meeting with the IWCA Executive Director and/or an IWCA Founding Board Member. This is an opportunity for you to ask questions and for us to learn more about your winery's climate action journey.

- ▶ You sign both the IWCA Standing Rules and Non-Disclosure Agreement

- ▶ IWCA Board of Directors approves your candidature

- ▶ We send you the countersigned documentation

- ▶ We coordinate on a public announcement of your winery joining the IWCA family

Congratulations!

You are now an IWCA Applicant and part of our globally recognized, rigorous movement for climate action.



3

Measure Your GHG Footprint

Within one year of joining IWCA, wineries must complete and audit a baseline Scopes 1-2-3 GHG emissions inventory.

▶ Required components

Your winery's GHG inventory must follow [IWCA's GHG Emissions Inventory Guidance Document](#).

▶ External help

You may need to ask for help with compiling your inventory. We can provide a list of GHG consultants familiar with IWCA, if helpful.

▶ IWCA tools

Wineries in Australia, New Zealand and the USA can make use of [IWCA's free GHG emissions calculators](#).

Audit Your GHG Inventory

4

Contact your preferred audit firm (which must be ISO-14064-3- or CDP-accredited) and engage them to verify your inventory.

You may consult our (non-exhaustive) [list of accredited auditors](#).

▶ Important items to keep in mind:

If your preferred audit firm is not listed on our list of accredited auditors, verify that the firm is ISO-14064-3-accredited or accredited as a solutions provider in CDP's Greenhouse Gas Emissions Inventory services area.

- ▶ Send your auditor the Process for Audit Companies to Evaluate IWCA Membership Requirements document. This document outlines the paperwork your auditor must complete for you to achieve IWCA Member status.

▶ When finalizing your audit service contract:

- Confirm that your auditor will verify your GHG emissions inventory to the ISO-14064-1 standard, consistent with the WRI GHG Protocol

- Confirm that your auditor understands and agrees to complete the required IWCA paperwork, as outlined in the Process document

- Ask your auditor to [contact IWCA](#) so that we can send them the most up-to-date IWCA paperwork to complete

Approval from IWCA

- ▶ Once your audit is complete, your auditor submits to IWCA the required audit paperwork. You and your auditor should proactively contact IWCA if there are any questions, delays or concerns as the audit gets under way.

- ▶ If all requirements are met, the Board will approve your upgrade to IWCA Member status (Silver or Gold, as relevant).

- ▶ IWCA will review and audit paperwork for completeness. We will contact you and your auditor to resolve any issues.

Congratulations!

You are now an IWCA Silver or Gold Member.



5



Become a member

*and join us
in the race to zero*

IWCA is a collaborative working group of environmentally committed wineries taking a science-based approach to reducing carbon emissions across the wine industry.

Our goal is to share best practices that mitigate climate change impacts in vineyard and winery operations so that we can act collectively to decarbonize the global wine industry — applying direct solutions that avoid purchasing carbon offset credits.



GLOBAL LEADERSHIP

We raise awareness in the viticulture community of the urgent need to take climate action



TOOLS & EXPERTISE

We have developed rigorous carbon accounting methodologies for the wine sector



KNOWLEDGE EXCHANGE

We share strategies and best practices to help wineries reduce their GHG emissions

Collective action is the only way to transform the wine sector.
We're doing it for the future of our businesses,
our industry and our planet.

Will you join us?