

Access to clean water

Anticipated transaction impact

Improve health outcomes for Guatemalans by providing a more reliable, affordable and sustainable alternative to boiling water

Impact score Pass (19/20)
Credit score Pass (24/28)

Loan Overview

Loan A	\$ 250 k
Structure	Term loan
Tenor	5-year
Interest rate	7.5% p.a.
Collateral	Production equipment and vehicles (123% LTV)
Loan B	\$ 250 k
Structure	Non-revolving working capital loan
Tenor	1-year or at payment of CI Invoice, whichever is earlier
Interest rate	10% p.a.

Financial Overview

2021 Revenue	\$ 5.6 M
2021 Net Income	\$ 132 k
2021 Net Assets	\$ 1.0 M

Note: FX rate assumed at 1 USD: 7.70 GTQ

Company Information

Legal name	Ecofiltro S.A.
Incorporation date	2009
Corporate address	Antigua, Guatemala
Website	https://www.Ecofiltro.com.gt/

Shareholders

Name	Share (%)
Philip Wilson	100%

Company management

Name	Nationality	Position
Philip Wilson	Guatemalan	CEO
Kenia Quan	Guatemalan	CSO
Daniel dela Cruz	Guatemalan	COO
Sergio Muñoz	Guatemalan	CFO

Recommendation

Approval of a \$250k term loan and a \$250k bridge loan based on Ecofiltro's strong impact and credit rating.



Ecofiltro

Business overview

Ecofiltro is a thirteen-year-old Guatemalan company 100% owned by Philip Wilson, a Guatemalan who lives in Antigua. The company designs, manufactures, and sells low-cost water filters. Since its founding, the company has sold more than 700,000 filters in Guatemala and neighboring countries such as Mexico, Costa Rica, Honduras, and Nicaragua through its distributors.

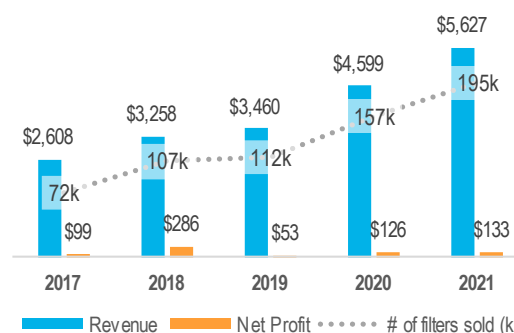


Figure 1 Ecofiltro Financial Performance USDk and # of filters sold (k)

Ecofiltro started as a philanthropic venture, but Wilson realized that giving away the filters was limiting the scale of their work. In 2009 Wilson incorporated Ecofiltro as a for-profit entity. He believed that the filter offered enough cash savings to sell the product in both urban markets, where customers were routinely spending \$200 per year on bottled water, and in rural markets, where an Ecofiltro was significantly less expensive and less cumbersome than collecting or buying wood and boiling water.

Ecofiltro has consistently grown revenue and has been net income positive every year since 2016. Before BR's first loan, Ecofiltro was selling 70 k filters annually. In 2021, it sold almost 200 k filters driven primarily by its direct rural and NGO sales. Ecofiltro expects this increased demand to continue and for its corporate sales channel to grow as they onboard customers such as CMI (top 5 National Company) and BAM (Top 5 Bank), among others. To match the growing demand, in 2022 Ecofiltro financed the expansion of its production capacity from 960 to 1,100 filters per day with its own cash.

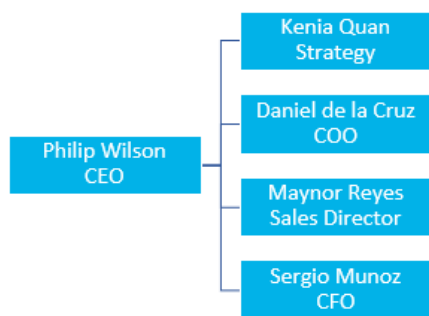
Ecofiltro is seeking additional capital to continue its factory expansion and is applying for a \$ 250 k term loan, as well as a \$ 250 k working capital loan to bridge its operating cash flows until they receive the next tranche of proceeds from carbon credits, expected in January of 2023.

Impact background and delivery

Water-borne diseases are a national priority for the government of Guatemala as almost 10% of under-five child mortality is due to diarrhea.¹ Beyond childhood, without clean water, people face increased rates of illness and lost productivity. To combat this, most urban Guatemalans boil their drinking water using gas or buy purified bottled water. In rural Guatemala, over 61% of households report boiling their water over wood fires². Although effective, the related environmental, health and economic costs of wood fires are high. Studies show that the average rural Guatemalan family spends over \$ 82 per year just to buy firewood to boil water. The smoke from open fires causes the same respiratory damage as smoking two packs of cigarettes a day, and deforestation is rampant in Guatemala – a country that has lost 17% of its forests in the past fifteen years.

The Ecofiltro filters are composed of a ceramic filter, a spigot, and a plastic or enamel casing. Ecofiltro only manufactures the ceramic filter and purchases the other components from local manufacturers. The ceramic filter is composed of clay, water, and sawdust. The clay is the first layer of decontamination and captures all contaminants such as solids, bacteria, and parasites. The sawdust removes bad smells, tastes, and turbidity. Each filter is also coated with a thin layer of colloidal silver which acts as a bactericide. Water is filtered through gravity at a rate of 1-2 liters per hour. The filter has a guaranteed useful life of 2 years, exceeds all WHO standards, and has consistently been tested by independent labs which have confirmed its efficacy and quality. After two years it is recommended that the clay pot be replaced. Ecofiltro’s warranty return rate is less than 1%. The most popular model retails for \$ 43, can hold 22 liters, and is perfect for a family of 6 to 7 members.

Company overview



Philip Wilson, CEO and founder, leads the 125-employee-strong organization. He is supported by 4 main officers who oversee several self-managed teams in production, logistics, administration, and sales. The organization believes that human capital is its most prized asset and shares 25% of its profits each month with its employees.

Since 2020, Ecofiltro has been a B Corp certified company. Ecofiltro and Philip Wilson have been widely recognized for their work. Wilson was awarded the Schwab Foundation for Social Entrepreneurship (World Economic Forum) Fellowship in 2012.

Supply chain

Ecofiltro sources clay from a property it owns several hours away. The clay is dried, pulverized, then mixed with water and sawdust, and molded into a pot with an automated press. The pots are then air-dried and fired in a kiln which hardens the pots and converts the sawdust into a carbonized layer within the walls of the pot.

At this point, the pots are painted with a colloidal silver solution and submerged in water. The wet pots are then filled with water and tested for flow rate. Pots that pass this test are then fitted with a spigot and outside cover or are sold as-is as replacement filters.

The Ecofiltro facility is located forty-five minutes from Guatemala City on the outskirts of Antigua, Guatemala. The factory is kept meticulously clean even though it is an open-air factory. 90% of the factory’s power is generated from solar panels. All company functions including design, sales, marketing, accounting, and production are handled from this location. In 2021, Ecofiltro’s factory was ISO 9001-2015 certified for quality.

¹ [Diarrhoea - UNICEF DATA](#)

² Braghetta, A. (2006). Drawing the Connection between Malnutrition and Lack of Safe Drinking Water in Guatemala. *American Water Works Association Journal*. Pg. 98

Ecofiltro operates five primary sales channels:

- Direct to Rural Consumer – through a network of commissioned salespeople. Ecofiltro will also often deliver filters free of charge to schools (either through a donation received by Ecofiltro or at their own expense) and then use this “anchor” to educate and persuade local families to buy the filter. Between 2014 and 2021, Ecofiltro installed filters in almost 6,000 Guatemalan schools at no cost.
- Big Box Urban Retail – through Walmart, Cemac (Guatemala’s equivalent of Home Depot), and other large retailers. Retailers have 30 – 90 day credit terms.
- Kiosk Urban Retail – through four kiosks located in malls. Ecofiltro splits the kiosk lease cost with entrepreneurs who run the kiosks.
- Export – Ecofiltro is currently exporting to 15 countries through distributorships. These distributors pay FOB cash. These distributors are in Mexico, Dominican Republic, Honduras, El Salvador, Belize, Haiti, Jamaica, Nicaragua, Panama, Costa Rica, Venezuela, Peru, Dubai, Spain, and Chile. Export accounts for 16% of filters sold in 2021.
- NGOs/Corporates – sales to NGOs (Rotary, etc.) who give them away or to big corporate employers (Coca Cola, Nestle) who subsidize the price for their employees. Employers have seen up to a 54% reduction in employee sick days after distributing filters.

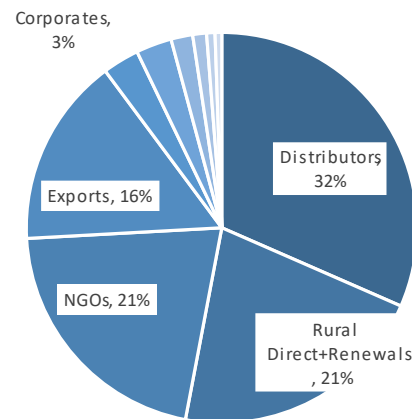


Figure 2 2021 Sales by Channel

Carbon Credits

Ecofiltro qualifies for carbon credits because rural customers stop burning wood to boil water. Ecofiltro signed a Carbon Credit Marketing Agreement with Natural Capital Partners (Natural Capital) in 2017. In May 2021, Natural Capital was acquired and merged with ClimateCare³, another leading provider of carbon offsets. The resulting entity is Climate Impact Partners (CI), which now controls most of the high-quality retail market for carbon offsets, servicing more than 500 clients through projects reducing and removing carbon emissions across 56 countries.

CI oversees the documentation, monitoring, and validation of the emission reduction benefits related to the filters. The credits must be verified to ensure that they represent valid emission reduction activities and that the benefits accounted for in this project do not overlap with other solutions. Ecofiltro shared the 2020 and 2021 vintage monitoring and audit reports, accomplished in May 2022.

Once certified, CI is also responsible for marketing and selling the credits to retail and wholesale customers in the voluntary carbon market.⁴ Prior customers include big brands such as Delta Air, SITA (European Airline), PWC, Bain, Microsoft, Salesforce, and Kaiser Permanente. These companies buy portfolios of credits which include Ecofiltro. The prices range from \$ 7 to \$ 15 per ton, and the carbon credit marketing agreement set a floor price of \$ 5 per ton.

Note that carbon credits are not recognized on the PnL upon the advice of Ecofiltro’s auditors. These are currently reflected in the balance sheet under Liabilities, under Other Payables based on their auditor’s recommendation. This is a temporary classification while they are finalizing the set-up of a holding company that will recognize income from carbon credits and inject as equity to Ecofiltro. As such, moving forward, hard carbon offsets will be capitalized.

³ [ClimateCare and Natural Capital Partners Merge to Form a World-leading Voluntary Carbon Market Organisation - Bloomberg](#)

⁴ The voluntary market serves the purpose of businesses (typically blue-chip corporations), government departments, NGOs, and individuals wanting to be accountable for their carbon footprint. This contrasts with the compliance market, where regulated entities obtain and surrender permits or offsets to meet predetermined regulatory targets. [Gold Standard \(freshdesk.com\)](#)

Financial overview

Ecofiltro has been profitable since 2016 on the back of constantly improving topline and cost-efficient operations that have allowed the enterprise to maintain stable margins. We assess Ecofiltro's credit standing to be strong with a score of 24 out 28 (See Appendix 2: Ecofiltro Credit Assessment)

Financial performance

- Revenues have consistently grown since 2016. The 25% increase in the number of units sold in 2021 propelled revenue growth by 22% to \$5.6M. Growth was primarily driven by the direct rural and NGO sales channels.
- Gross margins have also been relatively stable averaging 53% from 2017-2019. Wages and salaries account for majority of operating expenses (~46% of total opex). With opex to sales ratio at around 52% of sales, net margin has been averaging 4% . We believe that these stable margins reflect Ecofiltro's ability to manage costs and expenses while steadily growing revenues.
- As of June 2022, sales were recorded at \$ 2.8M and are expected to reach \$ 8.0M by end-2022 or a forecasted 43% improvement from 2021. This is in tandem with the target 35% increase in filters sold to 264,719 units. For the balance of the year, they are expecting to sell almost 80% higher than 2021 monthly average. Confirmed orders include new sales from Corporacion Multi Invenrsiones (CMI) 29,740 units (to El Salvador, Honduras, Costa Rica, and Guatemala), and Ministerio de Salud Publica y Asistencia Social for 10,000 units.
- Ecofiltro aims to further increase its sales by tapping more into the rural direct market and expanding its export and corporate sales channels. For these channels, Ecofiltro will continue to capitalize on cost savings as the major value proposition to drive frequent sales. They will also leverage their good reputation with major national retailers such as Walmart to help them reach a wider market.
- To cope with the increased demand, Ecofiltro will also expand its production capacity. Recently, it has increased its daily production capacity from 960 filters to 1,100 filters per day (+15%), and they will make further investments in the next months.
- Given this development, we believe that the enterprise is poised to continue its growth trajectory and will remain profitable in the coming years.

PnL (in USD k)	2019	2020	2021	Jun 2022	2022F
Revenue	3,459.8	4,598.9	5,627.2	2,788.3	8,032.3
Cost of Sales	-1,909.5	-2,155.8	-2,519.0	-1,255.3	-3,559.1
Gross Profit	1,550.2	2,443.1	3,108.1	1,533.0	4,473.2
Overhead costs	-1,496.9	-2,317.4	-2,975.6	-1,488.1	-4,098.3
Net Profit	53.4	125.7	132.6	44.9	374.8
Financial performance metrics					
Annual revenue growth rate	6%	33%	22%		43%
Gross profit margin	45%	53%	55%	55%	56%
Net profit margin	2%	3%	2%	2%	5%

Financial position

- There is a notable dip in cash in 2022 because Ecofiltro invested \$ 308 k to partially increase its production capacity. Ecofiltro needs to increase this further to meet its continuously growing demand.
- Ecofiltro expects this will continue into 2023 and beyond. Figure 3 shows the actual and projected sales with respect to the current installed capacity and the proposed increase with the current loan (2023 Capacity).
- Despite having lower cash, balance sheet structure remained sound with positive working capital. We highlight its prudent debt structure with long-term loans accounting for only 6.7% of total liabilities. \$1.05 million of Liabilities are carbon credits which, as mentioned earlier, is a temporary classification.
- We are also comfortable with the enterprise’s repayment capacity. It is notable that despite having lower cash reserves due to its recent production expansion, Ecofiltro has remained current with its debt servicing. Using 2022 forecasted figures, DSCR will remain healthy at 3.3x.

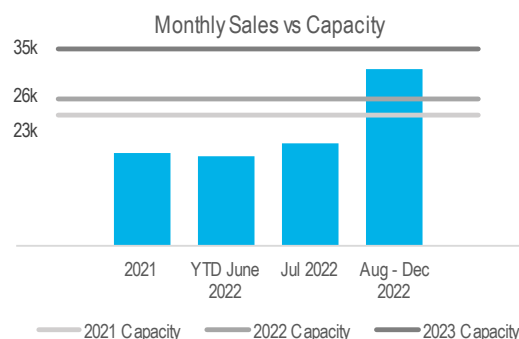


Figure 3 Sales vs Current and Projected Capacity, # of filters

Balance Sheet (in USD k)	2019	2020	2021	Jun 2022
Cash	100	488	603	292
Receivables	700	1,200	1,187	1,172
Inventory	134	372	425	558
Other current assets	185	51	68	113
Current assets	1,120	2,110	2,283	2,135
Current liabilities	574	1,355	1,358	1,354
Working Capital	546	754	925	781
Total assets	2,642	3,756	4,181	4,257
Total liabilities	2,188	3,195	3,170	3,194
Total equity	454	561	1,011	1,063

Financial position metrics

D/E Ratio	4.82x	5.69x	3.14x	3.00x
D/E Ratio	0.75x	1.32x	1.02x	1.01x
Current Ratio	1.95x	1.56x	1.68x	1.58x

*Assuming capitalization of carbon credits to equity

Transaction Overview

Ecofiltro is seeking \$ 500k, of which \$ 250 k is a 5-year term loan and \$ 250 k is a bridge loan, to continue its factory expansion. These will support the increasing demand from its corporate and government clients. The proposed pieces of equipment will be installed in Ecofiltro’s already existing facility. The 5-year term loan will be secured by \$ 300 k additional equipment and the existing guarantee from prior loans of BR.

The second loan is a 12-month non-revolving working capital loan at 10% p.a. interest, payable within three days of payment of CI of the January 2023 invoice, or at maturity, whichever comes first. 3rd Creek Foundation has expressed interest to extend the bridge loan to Ecofiltro through BR.

In the last three years, Ecofiltro earned \$ 976 k from carbon credits. After collecting from its customers, CI deducts its costs, takes a 30% share of the net proceeds, and sends the balance to Ecofiltro. CI provided a letter confirming the credits sold and the status of other credits accumulated from the 2020 and 2021 vintage. In total, there are about 200,000 tons CO₂ equivalent to \$ 846 k of net proceeds to Ecofiltro. \$ 112 k has already been sold and collected by CI. Figure 4 shows the breakdown and status of these credits.

Conversation with CI

Ted spoke with Eddy Melendez from Climate Impact. They met during the site visit right before we made our first loan. Eddy Confirmed that every year, all credits of Ecofiltro are sold and at a premium. CI only pays for credits that have been purchased and paid for by customers. They have a policy of paying twice yearly, but the Chief Commercial Officer has agreed to pay Ecofiltro quarterly. They are confident that all 200,000 tons CO₂ of Ecofiltro will be sold.

2020-2021 Vintage, as of June 30 2022	Tons CO ₂	Gross Proceeds	Project Costs	Net Proceeds	30% CI Share	70% Eco Filtro Share
Credits Paid	27,025	199,972	(39,371)	160,601	48,180	112,421
Credits with Signed Contract (not yet paid)	92,656	685,610	(134,985)	550,625	165,187	385,437
Credits reserved (no contract signed)	52,328	387,202	(76,234)	310,969	93,291	217,678
Credits available for sale	31,353	231,997	(45,676)	186,321	55,896	130,425
TOTAL	203,362	1,504,782	(296,266)	1,208,515	362,555	845,961

Figure 4 2020-2021 Vintage Carbon Credits breakdown from CI, BR Estimates based on credits sold and paid up to 30 June 2022

Previous Transactions

In 2018, BR extended a \$ 225k term loan to double the size of the factory and improve product quality. In 2019, BR extended a \$ 40k term loan to acquire new production equipment. Ecofiltro has so far been 100% on time with the invoices for these loans. Both loans are secured by non-possessory *garantia mobiliaria* on production equipment and vehicles. *Garantia* on collateral of existing loans will be extended until the proposed loan matures.

BR Loans to Ecofiltro

	Loan 1	Loan 2	Total
Disbursement date	Aug 2018	July 2019	
Original loan amount	\$ 225 k	\$ 40 k	\$ 265 k
# of invoices billed and collected	44	33	77
Outstanding, as of Jul 2022	\$ 121 k	\$ 25 k	\$ 146 k
Net of participations	\$ 25 k	\$ 25 k	\$ 49 k

Figure 5 BR Existing loans of Ecofiltro as of July 2022

Major risks and mitigating factors

Risk	Risk factor	Probability	Risk mitigating factor
Ecofiltro is unable to sustain its positive earnings trend	Failure to sustain growth trends	Moderate	<ul style="list-style-type: none"> Should sales stall and net income remain at 2021 level, the debt service coverage ratio of all BR term loans will remain at 1.2x.
Ecofiltro is unable to continue manufacturing operations	Inability to procure sufficient raw materials	Moderate	<ul style="list-style-type: none"> Ecofiltro's has several alternative suppliers for its raw materials from Europe and the United States.
	Business interruptions from the coronavirus pandemic	Low	<ul style="list-style-type: none"> Ecofiltro demonstrated its ability to continue its strong growth even during the pandemic. It is safe and comfortable to continue operations in its open-air facility.
Ecofiltro fails to meet its payment obligations to BR	Credits are not sold, or are sold at a lower price	Moderate	<ul style="list-style-type: none"> The carbon credits marketing agreement ensures Ecofiltro credits fetch at least \$ 5 per ton, or an effective net proceed of \$ 2.80 per ton. Historical sales have indicated customers are willing to pay more than this.
	CI fails to pay Ecofiltro	Low	<ul style="list-style-type: none"> Ecofiltro credits are sold to reputable brands. CI paid Ecofiltro in the first week of August for credits sold up to June 30, 2022.
	Fx risk	Moderate	<ul style="list-style-type: none"> The loan will be denominated in US dollars and Ecofiltro may be vulnerable to foreign exchange risk, as most of its customers are in Guatemala. Dec 2021 saw the Guatemalan quetzal at its weakest since 2017. It has so far hovered at the same level as of writing.

Conclusion

We recommend extending the two loans of \$ 250 k each to Ecofiltro. The company's continued growth and history of consistent profitability indicate that Ecofiltro's solution matches the problem of access to water in the regions they serve. The adequate collateral offered for the term loan, as well as the credibility of Climate Impact Partners and the carbon credits customers, give us confidence that Ecofiltro will remain to be one of the payers in the Beneficial Returns portfolio.

Appendix 1: Ecofiltro Impact Assessment

Impact score: 19 out of 20

Prospective borrowers are rated with 1 point for Low, 2 points for Moderately Low, 3 points for Moderately, and 4 points for High. Minimum score of 14 for approval.

	Low	Moderately		High	Score
		Low	High		
1 DEPTH AND BREADTH Is the breadth of impact wide, relative to the current size of the org? How meaningful are the changes to the beneficiaries? Are the beneficiaries truly excluded and marginalized?				✓	4
2 SYSTEMIC CHANGE Is the social enterprise focused on systemic change? Is the social enterprise directly driving policy change or serving as an example to the industry and its peers? What behavior change has taken place? Do the beneficiaries become dependent on the social enterprise?			✓		3
3 COMMUNITY ENGAGEMENT Does the social enterprise engage all stakeholders in their work? Is the social enterprise building local, human resources? Does it actively share its insights with others? Are indigenous communities involved?				✓	4
4 INTENTION How committed to its social or environmental mission is the social enterprise?				✓	4
5 ADDITIONALITY Is Beneficial Returns' investment crucial to the company's goals related to the loan?				✓	4
TOTAL					19

Appendix 2: Ecofiltro Credit Assessment

Credit score: 24 out of 28

Prospective borrowers are rated with 1 point for Low, 2 points for Moderately Low, 3 points for Moderately , and 4 points for High. Minimum score of 20 for approval.

	Low	Moderately		High	Score
		Low	High		
1 BELIEF IN MANAGEMENT Does the social enterprise have a strong management team (extensive industry experience, strong leadership and entrepreneurial background)? Is the governance structure adequate?				✓	4
2 ACCOMMODATIVE BUSINESS ENVIRONMENT Is the social enterprise operating in an industry with low level of competition? Does the social enterprise provide products or services that have low threat of substitution?		✓			2
3 QUALITY OF FINANCIAL INFORMATION Can the financial information provided be depended on? Has its financial statements been audited?				✓	4
4 ABILITY TO BE PROFITABLE Does the social enterprise have a positive earnings trend? Are the earnings sustainable?			✓		3
5 STRENGTH OF FINANCIAL POSITION Does the social enterprise maintain adequate financial ratios (DSCR, Debt-to-equity, Current ratio) to support a debt obligation?				✓	4
6 ABILITY TO SERVICE DEBT Does the social enterprise have the ability to establish a strong cash position to meet its debt obligations on time?				✓	4
7 COLLATERAL OR GUARANTEES Is there collateral for the loan with an adequate loan-to-value amount? Is there a guarantor for the loan?			✓		3
TOTAL					24