

**puro •  
earth**

# **Puro.earth Annual Report 2024**

## **2024 was a Year of Foundational Strengthening and Strategic Growth**

In 2024, Puro.earth continued to advance its mission of developing a leading, science-based carbon removal market and accelerating the carbon removal economy. The year was characterized by significant growth in the issuance of CO<sub>2</sub> Removal Certificates (CORCs), a strategic evolution of Puro Standard General Rules and methodologies - both existing and new - and deeper engagement with our global ecosystem of suppliers, buyers, and policymakers.

### **Fostering the Carbon Removal Ecosystem**

Central to our progress is the vibrant ecosystem we support. In 2024, we convened our network at three pivotal **Puro.earth CDR Summits** in Singapore, New York, and San Francisco. These events provided a critical platform for suppliers, corporate buyers, investors, and other stakeholders to connect, share insights, and foster the collaborations necessary for scaling the industry. This ecosystem-centric approach is fundamental to building a transparent, efficient, and high-integrity carbon market.

This collaborative spirit was further reflected in key partnerships. Our qualification as a qualified credit issuer for **Frontier** and an expanded partnership with **Standard Chartered Bank and SEB** were instrumental in enhancing market access and liquidity for CDR suppliers.

### **Market Growth and Maturation**

The market demonstrated considerable maturation in 2024, with approximately **406,000 CORCs** issued, a threefold increase over the previous year. This growth reflects both an expansion of supply and increasing demand for high-durability carbon removal. To support this scaling, the Puro.earth team grew with the addition of **14 new members**, strengthening our capabilities across methodologies, verification, and market development.

In 2024, Puro.earth certified and issued credits for three new carbon removal methodologies, each a world's first for the voluntary carbon market:

- The certification of **Climeworks' Orca plant**, issuing the **world's first-ever credits for Direct Air Capture with permanent Storage (DACs)**.
- The issuance of credits for **Red Trail Energy**, representing the **first-ever certified credits for Bioenergy with Carbon Capture and Storage (BeCCS)** from a bioethanol facility.
- The issuance of CORCs to **Woodcache PBC**, the **world's first credits for Terrestrial Storage of Biomass (TSB)**.

### **Strengthening Standards and Incentivizing Scale**

A primary focus for 2024 was the continued refinement of the Puro Standard. To better align with the requirements of leading meta-standards such as **ICROA, ICVCM, and Frontier**, we introduced a revised **certification fee model**. This new structure is designed to incentivize the scaling of carbon

removal projects by rewarding suppliers for larger volumes, thereby promoting market maturity and operational efficiency.

### **Policy Engagement and Future Outlook**

Looking ahead, we significantly increased our engagement with policymakers, especially within the **European Union and the Asia-Pacific (APAC) region**. Our primary objective is to advocate for and support the integration of durable Carbon Dioxide Removal (CDR) into compliance frameworks. We believe that such integration is crucial for driving the long-term demand and viability of the CDR industry.

The progress made in 2024 has laid a robust foundation for the future. We will continue to focus on maintaining the highest standards of integrity, supporting the growth of our ecosystem, and working to ensure carbon removal plays a central role in achieving global climate targets.

Antti Vihavainen, Co-founder and CEO

## **Governance and Oversight**

Puro.earth Oy, a limited liability company headquartered in Finland, is committed to upholding the highest standards of governance and integrity to build trust in the carbon removal market. Our governance framework is designed to ensure scientific rigor, transparency, and independence in all our operations.

### **Board of Directors and Management**

The company's strategic direction is overseen by a Board of Directors, chaired by Fredrik Ekström, the Chairman of Nasdaq's Stockholm Exchange. The Board is comprised of independent board members who assume fiduciary responsibility for the organization and operate according to robust bylaws. The Board convened 7 times during 2024 to guide the company's mission and growth.

The day-to-day business operations are managed by the Chief Executive Officer, Antti Vihavainen, and an executive team composed of leaders from four core divisions: Standard and Methodology Development, Technology, Frontline, and Operations.

### **Independent Scientific Advisory Board**

To ensure the scientific integrity of the Puro Standard, the Board of Directors has delegated the authority to an independent Scientific Advisory Board to set the General Rules and to approve new or modified carbon crediting methodologies. This board is chaired by Professor Myles Allen from the University of Oxford and is composed of distinguished experts in climate science and carbon removal.

### **Integrity Policies and Responsible Conduct**

Puro.earth maintains robust policies to ensure ethical conduct and full compliance with international standards. In line with our commitment to transparency, this annual report provides a comprehensive overview of our mission, major programs, activities, and governance. The financial statements detailing the organization's revenues, expenses, and net assets for the past year can be found in the Financials section of this report.

Our commitment to corporate social and environmental responsibility is fundamentally integrated into the Puro Standard. The General Rules and specific methodology requirements include safeguards and 'do no harm' principles to ensure positive outcomes beyond carbon removal.

To ensure the highest level of ethical conduct, Puro.earth has implemented robust anti-money laundering (AML), anti-bribery, and anti-corruption policies. These policies are based on the comprehensive frameworks of our parent company, Nasdaq, and apply to all operations and partnerships. Furthermore, a Grievances Policy provides a clear process for external stakeholders to address any concerns.

### **Development of the Standard in 2024**

In line with our commitment to a transparent and collaborative process, Puro.earth conducted several public consultations and initiated significant updates to the Puro Standard throughout 2024. This work ensures our methodologies remain at the forefront of climate science and market needs. Key activities included:

- **General Rules Update:** Following an extensive development and consultation process that began in 2023, the new major version of the Puro Standard General Rules 4.0 was prepared for publication. Scientific quantification and the safety of the environment have always been key considerations for the Puro Standard. On February 1st, the Advisory Board approved changes to implement:
  - Enhanced monitoring and reporting, including the opportunity for closer to real-time on-going issuances.
  - Enhanced quantification rules of indirect emissions (leakage) and uncertainty.
  - Requirements on reporting positive impacts on Sustainable Development Goals (SDG) and enhanced stakeholder consultation, including free, prior and informed consent (FPIC).
  - Rules to enable CO<sub>2</sub> Removal Certificates (CORCs) to be used for compliance in the aviation market (CORSIA), and other compliance markets.
- **Geologically Stored Carbon:** A public consultation was held for the Geologically Stored Carbon methodology, seeking expert feedback on requirements for projects utilizing this durable storage pathway.
- **Enhanced Rock Weathering (ERW):** A significant revision to the ERW methodology was announced, followed by a public consultation period. The methodology was subsequently updated, incorporating stakeholder feedback.
- **Marine CDR Development:** Work to unlock the potential of ocean-based carbon removal continued, highlighted by the launch of a new methodology working group for Ocean Storage of Biomass.
- **Terrestrial Storage of Biomass (TSB):** The TSB methodology was applied for the first time, leading to the issuance of the world's first TSB credits to Woodcache PBC.

## Market Expansion

Puro.earth continued to lead the CDR market with a total of 406,422 CORCs issued across four different carbon drawdown methodologies. Biochar was still the most popular methodology with over 200.000 credits issued from 66 different facilities, but BeCCS and DACS that fall under Geologically Stored Carbon is catching up quickly due to the large facility size. There were altogether 120 issuances during 2024.

### Issued CORCs per methodology

	2024				
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total
Biochar	39356	49697	45796	65684	<b>200533</b>
Carbonated Materials	29154			14873	<b>44027</b>
Geologically stored carbon	157592	158	429	366	<b>158545</b>
Terrestrial Storage of Biomass			69	3248	<b>3317</b>
<b>Total</b>	<b>226102</b>	<b>49855</b>	<b>46294</b>	<b>84171</b>	<b>406422</b>

In terms of retirements, biochar was the most popular among beneficiaries with more than 130,000 CORCs retired.

### Retired CORCs per methodology

	2024				
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total
Biochar	34016	45470	18417	32329	<b>130232</b>
Carbonated Materials	1690		2	805	<b>2497</b>
Geologically stored carbon	44276	156		10700	<b>55132</b>
Soil Amendment				40	<b>40</b>
Terrestrial Storage of Biomass			6	3063	<b>3069</b>
Wooden Building Elements	162	1071	2482	1203	<b>4918</b>
<b>Total</b>	<b>80144</b>	<b>46697</b>	<b>20907</b>	<b>48140</b>	<b>195888</b>

The cumulative number of beneficiaries at the end of 2024 was 526 organizations. This and much more information can be extracted from the data in Puro Registry on website [registry.puro.earth](https://registry.puro.earth).

The geographic scope of operations is global and increasingly high issuance volumes originate from the Global South. However, USA based organizations are still the largest producer of negative emissions in the Puro ecosystem.

Issuances per country	2024								Total	
TOP 5	Qtr 1		Qtr 2		Qtr 3		Qtr 4			
USA	163 206	72 %	8 307	17 %	10 903	24 %	10 523	13 %	192 939	47 %
Brazil	17 927	8 %	17 423	35 %	16 727	36 %	23 373	28 %	75 450	19 %
Bolivia	12 591	6 %	21 843	44 %	12 284	27 %	24 425	29 %	71 143	18 %
UK	29 435	13 %					14 873	18 %	44 308	11 %
Namibia			555	1 %	4 568	10 %	6 018	7 %	11 141	3 %

### Verification activity

In 2024, the Puro Standard demonstrated significant global reach and market adoption, with a total of **46 independent third-party audits** paid by Puro and conducted across our network of carbon

removal suppliers. This activity underscores the growing number of projects seeking high-integrity certification. In line with the number of issued credits, verification activity is strongest in the Americas and EMEA regions, with the **United States** leading as the single largest market. This is complemented by a strong presence across Europe, with notable activity in the United Kingdom, Germany, France, and Iceland. APAC region is also growing, but still smaller than the other two regions. The integrity of these audits was upheld by **9 independent approved auditors**, ensuring a robust and objective assessment for all certified projects.

## **2024 Financial performance**

In the 2024 fiscal year, Puro.earth demonstrated significant commercial growth. The company's revenue reached €2.7 million, more than doubling from the €1.2 million recorded in 2023.

Expenses for the period were €7.9 million. This reflects our continued investment in a business and market development phase, with a focus on helping carbon removal suppliers scale their businesses and working on the long-term viability of the carbon markets.

Puro.earth closed the year with a strong balance sheet, with net assets valued at €5.4 million. This ongoing development has been made possible by the strong backing of our investors, positioning the company for sustained growth.