

Greenlight given to the world's first gigaton-capable 10,000 year carbon removal methodology by Puro.earth

Helsinki, December 5th 2022 – Enhanced Rock Weathering (ERW), a process of removing CO₂ from the atmosphere for over ten thousand years, is now available as an accredited carbon removal methodology for companies wishing to purchase carbon credits on the voluntary carbon removal market.

ERW is a cutting-edge carbon dioxide removal method (CDR) that can significantly accelerate naturally occurring rock weathering which sequesters carbon. The debut of the [ERW methodology](#) by Puro.earth to the voluntary carbon market will enable ERW projects to monetize their carbon removal activities with CO₂ Removal Certificates, CORCs, and allow corporates to purchase these carbon removal credits for the first time to increase global ERW capacity by providing early-stage financing opportunities.

Strengths of Enhanced Rock Weathering:

- **Huge scalability potential - suitable rock types and well-established supporting industries for rock mining, grinding and spreading exist across the globe**
- Carbon sequestration volume potential of **over a billion tons per year**
- Permanent carbon sequestration of **over 10 000 years** with low reversal risk
- **No dependency** on biomass feedstocks
- **Positive impact** beyond carbon removal, particularly in agriculture as it can counteract soil acidity and increase soil fertility.

Enhanced rock weathering has been considered for decades to remove atmospheric carbon dioxide yet it had not been included in any existing carbon crediting standard. The new methodology was developed by an interdisciplinary working group led by Nasdaq supported [Puro.earth](#) and composed of scientists, carbon market experts and project developers. The group was aided by an [Advisory Board](#) which oversees [Puro Standard's](#) carbon removal methodologies and followed a period of public consultation.

“Puro Standard and the working group have leveraged the latest scientific research on Enhanced Rock Weathering and created a breakthrough carbon crediting methodology that will advance corporations’ climate action. ERW’s potential to remove atmospheric carbon dioxide at the gigaton scale makes it a vital solution in the fight against climate change”, says Marianne Tikkanen, Head of Carbon Crediting Program at Puro.earth.

ERW accelerates the natural weathering process by selecting the most reactive rock types, increasing the surface area of the rock by grinding it into fine particles, and applying the ground rocks to soils with optimal climatic conditions. The methodology focuses on soil applications and currently excludes any ocean-based approaches.

The working group defined strict environmental safeguard procedures, carbon net-negativity quantification methods and monitoring, reporting and verification (MRV) processes. Project developers must perform a site-specific environmental risk assessment to ensure little to no environmental impact. This assessment considers multiple potential sources of contaminants against robust risk EU-designated thresholds for inorganic soil improvers and requires thorough soil sample laboratory testing.

Jim Mann, CEO & Founder of UNDO Carbon, ERW project developer and member of the working group says: *“As pioneers in enhanced rock weathering, we were excited when Puro.earth started to look at developing a methodology and we’re proud to have been part of their working group from the start. Enhanced rock weathering is one of the most important climate tech solutions available today because it provides a host of co-benefits, is permanent removal and is highly scalable. It is, in fact, likely to be the first gigaton carbon removal solution.”*

Projects are also required to provide evidence of informed consent from local communities, and engagement must be maintained on an ongoing and transparent basis throughout the project’s lifetime. Evidence will also be required to demonstrate that the project safeguards the rights of indigenous communities and does not operate on culturally sensitive land or risk community displacement.

Noah Planavsky, Co-founder Lithos Carbon, ERW project developer and member of the working group, said: *“ERW has tremendous potential to mitigate anthropogenic climate disruption, but only if done the right way. We’re excited to have contributed to Puro.earth’s work in bringing MRV to the forefront of this discussion, and we see this methodology as a living document that will continue to evolve over time.”*

Dr. Rafael M. Santos, Associate Professor, University of Guelph, GeoRewind Team, said: *“The enhanced rock weathering methodology of Puro.earth is an important tool to increase awareness about this form of negative emissions technology and to encourage its wider adoption across the world, within a well-informed framework that will lead to both climate and agronomic benefits.”*

Professor David Beerling, Director, Leverhulme Centre for Climate Change Mitigation, University of Sheffield, UK, said: *“Puro.earth are pioneers in developing a robust enhanced weathering certifiable carbon removal methodology. This is essential for driving rapid upscaling to address the climate emergency. We are delighted that our Leverhulme Centre’s foundational science helped make it possible”.*

Note to editors

Natural rock weathering is a slow chemical and physical process in which CO₂ is removed from the atmosphere and converted to bicarbonates and/or carbonates, sequestering the carbon for 10,000+ years. Basically, when rainfall comes into contact with the rocks it triggers the chemical reaction that mineralizes the CO₂. The (bi)carbonates either remain in the soil or slowly drain into the groundwater, where they are transported and stored permanently in the ocean.

About Puro.earth

Puro.earth is the world’s leading carbon crediting platform for carbon removal. Our mission is to mobilize the economy to reward carbon net-negative emissions. We do this by helping voluntary corporate buyers accelerate carbon dioxide removal at an industrial global scale.

Through the Puro Standard we create carbon credit methodologies for processes that remove carbon dioxide from the atmosphere for at least 100 years. We then certify suppliers that run those processes and issue digital tradable CO₂ Removal Certificates (CORCs) into the public Puro Registry per metric ton of carbon dioxide removed. CORCs are then purchased directly from suppliers or via sales channel partners by ambitious corporations, like our customers Microsoft, Shopify, and Zurich Insurance, to help reverse climate change and neutralize their residual carbon emissions. With Puro Accelerate, our program to scale the carbon removal ecosystem, we assist suppliers who require

financing to launch or expand operations to secure funding through CORC advance market commitments and prepayments.

In 2021, Nasdaq acquired a majority stake in Puro.earth and together we are driving forward the carbon removal industry, enabling new revenue streams to accelerate its growth. Visit us at <https://puro.earth> or on LinkedIn Puro.earth and Twitter @PuroCO2Removal