CARBON GROWTH PARTNERS

2022 IMPACT REPORT





ACKNOWLEDGEMENT

We recognise the Traditional Custodians of the lands and waters on which we live, work and learn and pay our respects to Elders past, present and emerging. We celebrate the stories, culture and traditions of Indigenous people of all communities upon whose lands and seas we stand.

IMPORTANT INFORMATION

The information contained in this report is general information only about Carbon Growth Partners entities, encompassing the investments collectively made by the Carbon Growth Opportunities Fund, the Carbon Growth Fund and Carbon Growth Fund No.2. These funds are managed, respectively, by Carbon Growth Partners (Australia) Pty Ltd, Carbon Growth Partners Limited, and Carbon Growth Partners (International) Pty Ltd. Information given in the report is in summary form and does not purport to be complete. You should make your own independent investigation and analysis regarding any information contained in this report. It is not intended to be and should not be relied upon as advice to investors or potential investors and does not take into account the investment objectives, financial situation or needs of any particular investor. These should be considered, with or without professional advice when deciding if an investment is appropriate. Any references to past performance is not an indication or guarantee of future performance. This report may contain forward-looking statements or opinions including statements regarding our intent, belief or current expectations with respect to the market conditions. These statements may be affected by inaccurate assumptions or unknown risks and uncertainties. As such, these statements should not be relied upon when making investment decisions. The information provided in this report is private and confidential and should not be provided to third parties without the consent of Carbon Growth Partners.



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"THIS IS NO LONGER A BATTLE FOR HEARTS AND MINDS FULFILLED WITH PROMISES, PLEDGES, POLICY GOALS AND EMPTY GESTURES. IT IS A BATTLE FOR SURVIVAL – JUST ASK THE PEOPLE OF PAKISTAN".

NADEEM KHAN

CARBON GROWTH PARTNERS



Dear Investors and friends,

The words on page 2, shared with us by Nadeem Khan, one of Pakistan's conservation and community leaders and our partner in the Delta Blue Carbon project, are a frequent reminder that global warming is no longer an abstract concept, a future problem. It is an unfolding human and natural tragedy, requiring real solutions, with real money, that deliver real impact, right now.

To that end, we are pleased to present the 2022 Impact Report for Carbon Growth Partners (CGP). In the past two years CGP has committed more than US\$227 million¹ in financing to climate action projects. These projects are protecting forests from the Orinoco to the Amazon, improving indoor air quality in Africa, bringing clean energy to India's rural poor, restoring Mexico's coastal mangroves and much more. We are proud of what we have achieved to date, yet there is so much more to be done.

2022 was in many ways a challenging year for the verified carbon market (VCM). Prices of most credit types fell – with blue carbon a notable exception – due to a combination of macro factors including the Russian invasion of Ukraine, energy insecurity, spiking inflation and fears of recession. Inside the VCM we saw – as we at CGP had anticipated – a strong flight to quality as investors and end users sold down the value of credits perceived to be of lower quality in favour of more recent and higher quality vintages, project types and projects. While the sell down contributed to lower prices and lower investment returns overall, the flight to quality was a welcome development as it reinforced our investment thesis that quality, integrity and policy certainty will deliver both the most enduring climate impact and the optimal investment returns over the longer term.

In compiling this report, we've aimed to reflect on CGP's progress towards these objectives as well as some key lessons learned. We welcome your feedback on how well we have achieved that reporting goal, and what you would like to see covered in future reports.

Carbon Growth Partners has quickly become one of the most successful, impactful and influential forces in the international carbon market. We feel privileged to have been given the opportunity to engage with others in shaping this critical part of the climate change solution.

You, as our investors, partners and friends have made this impact possible. Thank you for the continued faith you've shown in us.

On behalf of the CGP team, we hope you enjoy the Impact Report. As always, please feel free to reach out to me or any members of the team at any time.

Yours sincerely,

THE CARBON GROWTH PARTNERS TEAM



Rich Gilmore



Stephanie Russo Chief Strategy Officer



John Coffeng Chief Investment Officer



Charles Bedford Chief Impact Officer

1 Comprised of \$173.6m of primary finance and \$53.8m of secondary finance.

"WE FEEL PRIVILEGED TO HAVE BEEN GIVEN THE OPPORTUNITY **TO ENGAGE WITH OTHERS IN SHAPING** THIS CRITICAL PART OF THE CLIMATE **CHANGE SOLUTION."**

RICH GILMORE



MEASURING OUR IMPACT

Our principal tool for measuring and reporting on our impact are the framework for the United Nations Sustainable Development Goals (SDGs).

According to the UN, the SDGs are 'the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice', and they provide a globally recognised way to identify and report on social and environmental impact.

This report covers investments collectively made by the Carbon Growth Opportunities Fund, the Carbon Growth Fund and Carbon Growth Fund No.2 between July 2021 and December 2022. Where possible we have shown the impact delivered in 2022 separately to that delivered in 2021. In preparing this report, we have summarised the climate and other SDG impacts that the funds under our management have financed on a primary or secondary basis. Primary finance means that we have directly funded a project through spot and forward purchase agreements and through project finance. Secondary finance means that we have used an intermediary to acquire credits.

For the purposes of impact accounting, we assume that each carbon credit we have financed represents one tonne of CO₂-e emissions avoided or removed from the atmosphere (SDG 13). Broader SDG contributions data are drawn directly from the projects and from publicly available information sourced from the carbon registries. Collective impact is essential to a safe climate and in many cases, we are co-investors with others. Thus, an SDG impact of a project cannot usually be fully attributed to CGP's investment, but are included here as an indicator of the impact to which the funds have contributed.

Should you require more data please contact us on **info@carbongrowth.com** and we will be happy to provide them.

A TRUSTED VOICE

Some of our impact – such as our thought leadership and the high integrity example we set – is less tangible than a tonne of CO₂-e removed.

We are active contributors to the development of the carbon market, collaborating with policymakers, investors, infrastructure providers, NGOs, local communities & others to shape the way in which the market delivers optimal climate, ecological, social and financial outcomes. Annually, Carbon Growth Partners thought leadership content online attracts more than 1.6 million engagements (impressions, likes, shares and comments).²

CGP has again been named one of Australia's **Green Power Players**, the top 100 people and organisations creating positive impact across agriculture, the environment, renewables, industry and technology to meet the challenge of the climate crisis.³



2 Engagement includes impressions, likes, shares and comments from Carbon Growth Partners company and staff LinkedIn accounts. Measured 23 February 2022 to 22 March 2023.

3 Williams P (2023) 100 Green Power Players, The Australian, accessed 23 March 2023. https://www.theaustralian.com.au/business/renewable-energy-economy/green-power-players-list



"LIKE THE CARBON MARKET ITSELF, OUR APPROACH IS UNDERPINNED BY A SIMPLE YET ELEGANT PREMISE: WHAT IS DIFFICULT AND EXPENSIVE TO ACHIEVE IN ONE PLACE, MAY BE LESS SO IN ANOTHER."

ABOUT CARBON GROWTH PARTNERS

We are leading investment managers in the global carbon markets.

OUR VISION

Forests and grasslands flourishing, at-risk communities prospering, and an effective carbon market financing a safe climate for all.

OUR MISSION

We deliver ethical, profitable & impactful climate finance to the people and places that need it the most.

OUR PURPOSE

We generate financial returns for our investors and positive impact for people and the planet by investing in carbon assets that:

PROTECT AND RESTORE NATURE By investing in projects that deliver co-benefits to forests, grasslands and wetlands, and the people who rely on them.

PROVIDE CLEAN, RELIABLE ENERGY By supporting the transition to renewables and distributing clean and safe household cooking devices.

ACCELERATE CLIMATE ACTION
 By bringing high-quality carbon offset solutions
 to responsible businesses that complement their
 own emissions reductions.

OUR ORIGINS

Carbon Growth Partners was established to meet the world's massively growing demand for climate finance. Our story begins in the boardrooms, halls of parliament, communities, forests, wetlands and grasslands of the Americas and Asia-Pacific, where our founding partners spent decades designing and implementing market-based solutions to complex environmental and social problems.

This experience included many years working with The Nature Conservancy, the world's largest environmental NGO. In 2020, we leveraged that experience to establish the world's first investment manager exclusively dedicated to generating returns and impact in the verified or 'voluntary' carbon market.

Uniquely, our team brings together skills and experience in investment management and operations, carbon policy and markets, community development and nature-based climate solutions. With rigorous attention to quality and integrity we are uniquely placed to generate financial returns alongside positive impacts for people and nature.

Like the carbon market itself, our approach is underpinned by a simple yet elegant premise: what is difficult and expensive to achieve in one place, may be less so in another. By financing emissions reductions and removals through investments in clean cookstoves, clean energy, nature conservation and restoration, and renewable biogas, we can accelerate a pathway to net zero that complements direct emissions reductions. In doing so, we help to create meaningful employment and a healthy environment for some of the world's most vulnerable people and places and help to ensure a safe climate for all.

IMPACT HIGHLIGHTS

Generating positive social and environmental impact is a key objective for CGP. We seek to demonstrate that it is possible to deliver financial returns to investors and genuine climate, conservation and community benefits. We track contributions to the United Nations Sustainable Development Goals (SGDs) from every project into which have invested, regardless of scale. In 2022, projects in our portfolio collectively addressed 15 of the 17 SDGs.

CGP's impact at a glance:



37 million tonnes

of verified emissions reductions since inception



More than **\$US227 million**

in financing[^] for emissions reduction projects since inception:

45% nature-based solutions
20% household devices
35% energy and industry



Projects in **27** countries across five continents:

25% of projects located in Least Developed Countries

73% of projects located in Developing Countries

2% of projects located in Developed Countries



^\$173.6 million of primary finance and \$53.8 million of secondary finance. \$79 million in 2022 and \$148 million in 2021.

76%

24%

primary finance

secondary finance

ALIGNED IMPACT – MEETING THE UN SUSTAINABLE DEVELOPMENT GOALS

Every carbon project in which CGP has invested contributes, by definition, to **UN Sustainable Development Goal 13: Climate Action.** Across the portfolio, CGP's investments have contributed to 15 of the 17 global goals, helping to alleviate poverty, improve education, and protect and restore biodiversity on land and in the ocean.

To date, just some of the SDG contributions from projects we've invested in include:

1 poverty Թծ֎֎֎֎

GOAL 1 ENDING POVERTY EVERYWHERE

In Colombia, the REDD+ Mataven Project is providing alternative incomes to villagers by paying indigenous forest owners to protect their forests.



GOAL 2 ZERO HUNGER

In the Delta Blue Carbon Project in Pakistan, 43,000 villagers will have better food security through protection against loss of vegetation and sea level rise. Increased fisheries production through mangrove protection which has further boosted spawning.



GOAL 3 GOOD HEALTH AND WELLBEING

In Africa, financing from CGP is helping to distribute 4.5 million fuel-efficient cookstoves to families. These clean cookstoves replace inefficient firewood stoves, helping to improve women's education and safety, reduce the burden of respiratory disease in children and reduce deforestation.



GOAL 4 QUALITY EDUCATION

In China, the Qianbei Afforestation Project is training local farmers in seed and seedling selection, nursery management, site preparation, planting models and integrated pest management. This had led to native species being restored across 50,000 hectares and providing jobs for 16,339 local farmers (70% of whom are women).



GOAL 5 GENDER EQUALITY

The Delta Blue Carbon project will train 6,000 women in home based industries to generate more income in an area of extreme poverty.

6 CLEAN WATER	R On
Q	

GOAL 6 CLEAN WATER AND SANITATION Project owners are investing in safe and affordable drinking water supply while also bringing improvements to current

7 AFFORDABLE AND CLEAN ENERGY	
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GOAL 7 AFFORDABLE AND CLEAN ENERGY

Renewable energy projects in Uganda, India, Turkey and the Dominican Republic are contributing to human well-being and avoiding the long term lock in of large coal fired power plants.



GOAL 8 DECENT WORK AND ECONOMIC GROWTH

hygiene facilities.

In Cambodia, the Keo Seima REDD+ project has secured Indigenous Community Land Title on behalf of the Indigenous Bunong people. A total of 449 jobs have been created through the project, including law enforcement and community agents drawn from the Bunong communities.



GOAL 9 INDUSTRY INNOVATION AND INFRASTRUCTURE

In Bangladesh, one of the world's Least Developed Countries, the Titas gas leak project inspected the infrastructure at 500,000 households and fixed more than 38,000 gas leaks. 10 REDUCED INEQUALITIES

GOAL 10 REDUCED INEQUALITIES

Improved cookstoves in Malawi, Rwanda and the Democratic Republic of the Congo free women from the drudgery, long walks to gather wood and health problems from smoke inhalation that most African men do not endure.



GOAL 14 LIFE BELOW WATER

In Pakistan, Indus Delta Mangrove Restoration Project is restoring 350,000 ha of coastal mangrove forest, which is helping to recover depleted local fisheries, provide food and fibre for over 34,000 local people and help protect threatened and endangered species.



GOAL 15 LIFE ON LAND

In Brazil, the Amazon Reforestation Consortium REDD+ Project is working with 40 families to improve land rights and develop training and agroforestry systems to protect 165,707 hectares of Amazonian rainforest, including five threatened species. The impact of CGP is truly global, having supported 96 projects in 27 countries since inception across Africa, Latin America, India, Pakistan, China, Southeast-Asia and North America.



TECHNOLOGY-BASED SOLUTIONS

- 29 windfarm projects in China, Dominican Republic, India, Indonesia, Mauritania, Mongolia, Thailand and Turkey
- 14 solar farms in Burkina Faso and India
- 13 run-of-river hydropower plants in Brazil, Colombia, Côte d'Ivoire, India, Indonesia, Turkey, Uganda
- 4 biomass projects in Brazil, China and India
- 2 fugitive methane emissions projects in Bangladesh and South Korea
- 3 industrial efficiency projects in the United States

NATURE-BASED SOLUTIONS



- 10 afforestation/reforestation projects in China, Colombia and Uruguay
- 8 forest protection and reforestation projects in Brazil, Cambodia, Colombia, Indonesia and Peru
- 1 mangrove forest protection and restoration project in Pakistan



HOUSEHOLD DEVICES

12 clean cookstove projects in Peru, Mongolia, China and Sub-Saharan Africa, including Democratic Republic of Congo, Ghana, Malawi, Nigeria, Tanzania, Uganda and Zambia.

IMPACT CASE STUDY RESTORING THE INDUS RIVER DELTA

PRIMARY FINANCE - 2022

In 2022, CGP was the largest offtake investor in Delta Blue Carbon, the largest mangrove restoration project of its kind in the world.

Pakistan-based team member Usman Rao leads CGP's oversight there and spoke with Chief Impact Officer Charles Bedford about his reflections on the project.

Usman is a noted conservationist in his own right, having lived and worked across Asia for 20 years, including with The Nature Conservancy and most recently in Bangkok where he was the operations and finance director for the multi-agency Responsible Asia Forest Trade project. Usman has travelled across the length and width of the Indus Delta, meeting with government officials, the project team, local communities and conservation groups.

Q: Firstly, what is the Indus River delta and why does it matter?

A: The Indus River delta is a vast complex of tidal river channels and creeks, low-lying sandy islands, mangrove forests, and inter-tidal areas in Sindh Province, south-eastern Pakistan, on the border with India. The delta's mangrove forests are unique in being the largest area of arid climate mangroves in the world. The Indus River is the main migration route for millions of birds that cross over the Himalayas to spend winter in Pakistan or further south. The delta forms part of the Indus flyway and is a stop on the Green Route, one of the seven major bird flyways of the world. It is home to 11 globally threatened species including the Fishing Cat, Indus Dolphin, Indian Ocean Humpback Dolphin and Indian Pangolin.

Q: What is the situation on the ground there?

A: About 5,000 households live in 60 coastal villages in the project area. Most live below the poverty line, surviving on less than US\$ 1.25 a day. These villages lack access to safe and affordable drinking water and are deprived of basic education, health, and hygiene facilities. These are very poor people and are extremely vulnerable to different types of disasters including tsunamis, cyclones, floods, and droughts. The Indus delta historically hosted an enormous mangrove forest. Some of it remains, though much was degraded by marginal agricultural activities over the past hundred years and then abandoned. Villages and communities in the Indus delta primarily make their living through fishing, and there is very little prospect of employment.

Q: Seems like a tough place to do conservation and carbon projects. How did the project come about?

A: The Government of Sindh's Forest and Wildlife Department is well known for its sound science and leadership in Pakistan. The Government was approached by a Pakistani couple living in London, Mr and Mrs Nadeem Khan, who are passionate about conservation and climate issues. They conceived the project as a public-private partnership and started working together around 2015. The Department brings the science and conservation expertise to the table and the Khans bring project management, finance and marketing savvy. The project really couldn't happen without this kind of partnership, which is rare in Pakistan and the region.

Q: What is the project doing?

A: The project has three areas of focus: climate, community and biodiversity. This translates into a whole host of activities: upscaled mangrove reforestation, participatory planning, and awareness-raising, access to education, sustainable fisheries, access to safe drinking water and healthcare, improved protection and law enforcement, community-based business development, and access to microfinance, sustainable energy development, training & capacity building of the Sindh Forest Department, promotion of various gender development and incomegenerating activities for women. And they measure all of these outcomes as well as the carbon sequestered.

Q: What has been achieved so far?

A: Since 2015, they have planted 75,000 hectares of mangroves. They've put 150 Mangrove Stewardship Agreements in place with community members for seed collection planting and stewarding trees. They built a new health center deep in the project zone and re-habilitated an existing health center. They've repaired water wells and plants that serve a number of the villages. It's made a big impact on the area, and they seem to just be getting started. The Sindh Forestry Department, as I mentioned, are known to be an innovative and talented group – they've got a national reputation for the quality of their work.

Q: What does the future look like for the people and nature of the delta?

A: I'd say it is much brighter than before the project! The funding provided by the project brings jobs and benefits to the people of the area and reinforces their commitment to each other and to the land. Before the project started, these communities had barely seen or heard from the Pakistani government. Now, thanks to the carbon project, the nearly 5,000 households living in the project area are making progress towards their development goals. And the restoration of nature in the delta will ultimately provide a virtuous circle for the fishing families, where mangroves increase productivity of the fishery.

Mangrove forests provide so many benefits to the planet and are so scarce. Of course, projects of this size are complicated and tough to implement, but it provides a chance to reset the clock, grab carbon out of the air, produce fish for fishing dependent villagers, bring healthcare, education and jobs to local people, and restore natural habitats for birds, dolphins and mammals like fishing cats. It's a huge benefit to the people and nature of the delta.

SDG contributions:





WALKING THE TALK: ACHIEVING NET ZERO AT CARBON GROWTH PARTNERS

CGP has compensated for 100% of its residual Scope 1, 2 and 3 greenhouse gas emissions for financial year 2022, by retiring high integrity credits at above market prices.

We have done so as part of a holistic approach to emissions reductions that includes resource efficiency, renewable energy and low emissions forms of transport.

As an investment manager with an agile team that uses resources wisely, our company emissions for the year were low, totalling 244.3 tonnes. Almost all of these emissions (241.7 tonnes) were from Scope 3 (that is, the emissions generated by our service providers).

Some sources of emissions were higher than expected, such as increased professional services (134.3 tonnes) during the period of fund establishment and initial capital deployment, and some were lower, including commuter and business travel, mostly due to the effects of COVID-19. We will continue to be selective when choosing to fly and will prioritise virtual meetings over air travel whenever possible.

When they did commute, our staff typically chose low emissions forms of transport and when working from home had high uptake of solar renewable energy. After professional services, the next largest source of emissions was information and communications technology (ICT) at 65.8 tonnes.

Emissions were calculated and reported by specialist climate change and ESG advisory firm Pangolin Associates (<u>https://pangolinassociates.com/</u>).

We compensated for our emissions by buying and retiring carbon credits from four high quality projects. Adopting a portfolio approach reflects the diversity of abatement outcomes that the carbon market makes possible and was constructed in a way that could be realistically replicated by businesses of any size. As such the portfolio includes both removal credits and avoidance credits. The four projects retired were:

- Delta Blue Carbon mangroves, Pakistan (Verra ID 2250), Vintage 2018
- Selva de Mataven REDD+, Colombia (Verra ID 1566), Vintage 2018
- Nouakchott Wind Power, Mauritania (Verra ID 1733), Vintage 2019
- C-Quest Cookstoves, Zambia (Verra ID 2371), Vintage 2022

COMPENSATION BY PROJECT TYPE (tCO2-e)



The weighted average vintage of the credits retired was 2018.9. The weighted average cost of the credits retired was US\$18.30 per tonne. Adding the cost of the emissions calculation and reporting (US\$3,200) brought the total cost to calculate and compensate for our full scope emissions to US\$7,665 (US\$31.40 per tonne).

We think that's money well spent and we invite you to join us in doing the same.

"WE COMPENSATED FOR OUR EMISSIONS BY BUYING AND RETIRING CARBON CREDITS FROM FOUR HIGH QUALITY PROJECTS."

IMPACT CASE STUDY A WORLD-FIRST ARTICLE 6 PARTNERSHIP

PRIMARY FINANCE – COMMITTED 2022

At the COP27 climate conference in Sharm El-Sheikh, Egypt, Carbon Growth Partners and the Republic of Senegal announced a world-first private sector investment to generate carbon credits under Article 6 of the Paris Agreement, in partnership with Swiss carbon project manager ALLCOT and the National Integrated Waste Management Company of Senegal (Sonaged).

The innovative partnership serves as a disruptive new paradigm to break the global deadlock on climate finance. It does so by overcoming the need for often complex and lengthy bilateral negotiations to be concluded before project finance can begin to flow. Under the arrangement, private sector investors will take on the financial risk of carbon projects, which allows the host country to negotiate the ITMO process from a position of strength.

Under the terms of a Memorandum signed at COP27 in Egypt, funding will be provided to the Governmentbacked Sonaged (in French: *Société Nationale de Gestion Intégrée des Déchets*) to implement sophisticated compost technology for food waste, which currently contributes up to 10% of global greenhouse gas emissions. Waste will be diverted from ten sites and processed into organic compost, which reduces methane emissions. Apart from that, it can be used as a lowercost, environmentally friendly alternative to chemical fertilisers. Plastic waste recovered in the process will also be recycled.

The program is expected to reduce carbon emissions by almost 250,000 tonnes by 2030. Emissions reductions from the projects will generate carbon credits, known as Internationally Transferred Mitigation Outcomes (ITMOs), which will be sold to countries and companies under Article 6 of the Paris Agreement.

The announcement of the partnership was made by Mr Alioune NDOYE Minister of the Environment for the Republic of Senegal. Speaking ahead of Senegal Day at COP27, Mr Ndoye said: "Senegal – and the other nations of the global south – are not just here to claim damages & interests. We are here to demonstrate that we have the solutions – with the support of the private sector – to unlock the great potential of the Paris Agreement. Senegal is confidently leading the way and we warmly welcome this partnership with Carbon Growth Partners and ALLCOT in that respect."

Speaking on behalf of Sonaged, Mr Mass Thiam highlighted the numerous benefits of the program: "In addition to climate outcomes, the program will foster employment opportunities for hundreds of women and men, improve the local environment and contribute to reduce Senegal's dependence on chemical fertilisers".

Carbon Growth Partners CEO Rich Gilmore said this new investment approach was key to ensuring Developing and Least Developed Countries can confidently assert the value of their role in climate action: "Innovative investment partnerships like this one can transform the way the private sector views climate investment in developing nations; moving from a focus on risk, to a focus on opportunity with strong partners like the Republic of Senegal. We are privileged to have been invited to play our part". The partnership was facilitated by the Switzerlandbased carbon project manager ALLCOT. Alexis L. Leroy, CEO & Founder of ALLCOT, said "We celebrate this partnership as it sets a new – and long overdue - market dynamic. The confidence shown by Carbon Growth Partners is a great enabler for Senegal's leadership under the new Paris economy era. ALLCOT is proud to be part of this paradigm shift and hopes that will inspire many other Parties to follow the movement for equity in the carbon markets."

ABOUT SONAGED

Established by the Senegalese government in 2022, Sonaged are a national private company for integrated solid waste management. Sonaged's goal is to enhance the healthiness of people and the environment through improved solid waste management systems, with a focus on three key priorities: the collection and transport of waste on behalf of local authorities, the management and operation of infrastructure, and to design and implement solid waste management projects and programmes in Senegal. Its vision is to promote the circular economy through an improvement of the solid waste sector in Senegal.

ABOUT ALLCOT

ALLCOT provides innovative solutions to combat climate change and promote sustainability through project development, carbon markets, and advisory services. ALLCOT's vision is to lead and accelerate the global transition towards a climate-neutral society by 2050. ALLCOT's unique approach is based on Article 6 of the Paris Agreement, its linkage to the SDGs, nonmarket approaches, and other market mechanisms.

SDG contributions:



CARBON GROWTH PARTNERS

INVESTING IN QUALITY AND INTEGRITY

Beyond the verified climate impact that carbon credits reward, investing in the highest integrity and most impactful projects is good for returns: these projects are generally lower risk, will attract premium sell-side prices and provide the most liquidity by appealing to the largest pools of future buyers.

Integrity, quality and impact matter not only to CGP and its investors, but increasingly matter to offset end-users, policymakers and society at large. The Integrity Council on the Voluntary Carbon Market has drafted the Core Carbon Principles (CCPs) to ensure all projects excel at their objectives, and the Voluntary Carbon Markets Integrity Initiative is guiding corporates to focus on high quality projects in their offset purchases. This focus on quality is integral to the robustness, longevity and policy certainty of the market.

That's why we go above and beyond when selecting projects into which to invest. In addition to the CCPs, Carbon Growth Partners has developed its own set of assessment criteria, developed by our dedicated team of in-house staff and external associates. This team encompasses a broad range of skills from climate negotiators and political consultants to experts in carbon finance, community development, remote sensing, and project development. This diverse skill set gives CGP a unique edge when assessing a project for its climate, social and environmental impacts. In addition to the core tenet of additionality and complementing the CCPs, we prioritise investments in projects that:

- 1. Are owned by credible actors, with whom we can build trusted relationships.
- 2. Are supported by local, provincial and/or national host governments.
- 3. Demonstrate free, prior and informed consent with local and indigenous people owning or sharing fairly in the financial and wellbeing benefits, with strong decision rights and sovereignty.
- 4. Deliver benefits to natural systems and the people that rely on them.
- 5. Have independent third-party verification and validation of their scientific integrity, within a recognised registry system.
- 6. Are verifiably aligned with the UN Sustainable Development Goals, with a focus on the economic and social development of the world's 42 Least Developed countries.
- 7. Use peer-reviewed scientific modelling and project design to support the carbon benefits.
- 8. Provide opportunities for CGP to partner in the long-term, adding value through our backgrounds and networks in finance and conservation.
- 9. Provide opportunities for CGP to support the project's progress, through participation in project governance.

CGPs' unique combination of rigorous criteria and experienced staff ensure that we are fully aware of the risks to the project which can affect its performance and its value to future buyers. By taking time to undertake detailed due diligence, we provide investors and end-users with assurance that we have invested in the highest integrity carbon projects that provide the greatest climate impact while bringing needed finance to advance the Sustainable Development Goals.

IMPACT CASE STUDY REPAIRING GAS LEAKS IN BANGLADESH

SECONDARY FINANCE - 2022

Finding and fixing gas leaks is not glamorous, but it slows global warming and saves lives.

Many of us at Carbon Growth Partners have spent decades in nature conservation and are inspired by initiatives that include nature as a carbon sink.

And rightly so: protecting and restoring forests, grasslands and near shore marine habitats are powerful and important means of addressing climate change and they provide enormous co-benefits to people and wildlife. In fact, nature-based solutions will need to contribute as much as 30% of the solution to climate change and must be maintained forever to ensure a safe balance of carbon dioxide in the atmosphere.⁴ The other 70% of abatement, the non-nature-based solutions, are highly diverse and include investments in clean energy, modernised industrial practices, lower energy buildings, demand destruction for fossil fuels and transformed food systems. These projects don't have the same charisma and storytelling attached to them as nature-based solutions but they are no less important; it is easier to wax poetic about a project that contributes to protecting rare and highly endangered birds than a project that eliminates CFCs. Storytelling disadvantages notwithstanding, these 'low charisma' projects are critical. They provide a compelling investment opportunity as well, with typically lower entry prices and robust end-user demand, especially when located in Least Developed Countries.

One such project seeks to detect and repair gas leaks in the ageing municipal gas systems of Dhaka, Bangladesh. Over the past three years, explosions from gas leaks have killed dozens of people in the city, including a family with kids eating dinner and 34 people at prayer in a mosque.⁵ The source of the explosions is not only deadly for people, but for the climate: methane.

4 Griscom B.W, Adams J, Ellis P.W, Houghton R.A, Lomax G, Miteva D.A, Schlesinger W.H, Shoch D, Siikamäki J.V, Smith P and Woodbury P., (2017) 'Natural climate solutions', Proceedings of the National Academy of Sciences, 114(44), pp11645-11650.

5 Seba S (2020), Deadly gas explosions in Bangladesh in recent years, The Business Standard, accessed 23 March 2023

https://www.tbsnews.net/bangladesh/deadly-gas-explosions-bangladesh-recent-years-129217

Methane has 25 times more warming potency than CO₂, so avoiding its release into the atmosphere is a high priority.⁶ The Titas Gas Leaks project finances network repairs through the issuance of carbon credits. This lifesaving work is tough in any city, but is especially so amongst the narrow, crowded streets and creaking infrastructure of Dhaka, and would be otherwise unaffordable in one of the world's poorest countries.

Other projects are even messier; like those that we've invested in that capture methane emissions from the manure of pigs and chickens collected from smallholder farmers in Turkey, turn it into electricity and provide that electricity back to the local community. Compost is returned to the farmers as well, and this circularity is a critical piece of the economic and social development of the rural communities that are a part of it. Without the finance from carbon credits, animal effluent would end up in local waterways, causing risk to human health and to the health of aquatic plants and wildlife.

The carbon market can't solve all the problems of climate and sustainable development, but it can drive funding to the most efficient ways of addressing climate change and create economic opportunity that improves the lives of people in developing nations. For those interested in the ESG or impact investing thematics, the carbon markets – and the businesses the markets catalyse – offer direct and measurable benefits to the climate and returns for investors. These businesses, subsidised by carbon credit revenues, play a key role in the decarbonisation of the global economy, lift people out of poverty, and save lives. Some of them are less glamourous than others, but they all need to be done.

- United Nations research has found that many measures to curb gas leaks can be implemented at no cost – and may even result in cost savings.
- Reducing the oil and gas industry's methane emissions by 45 percent <u>could avoid 0.2°C</u> of warming by 2100.⁷

Right now, the oil and gas industry has the technical capability to reduce methane emissions by 75 percent at low or even zero cost. Implementing those solutions at scale, quickly, is a high priority for the climate.⁸

SDG contributions:



6 IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.

- 7 Sun X, Wang P, Ferris T, Lin H, Dreyfus G, Gu B, Zaelke D and Wang Y (2022) 'Fast action on short-lived climate pollutants and nature-based solutions to help countries meet carbon neutrality goals', *Advances in Climate Change Research*, 13(4), pp 564-577, doi:/10.1016/j.accre.2022.06.003
- 8 IEA (2023), Methane emissions remained stubbornly high in 2022 even as soaring energy prices made actions to reduce them cheaper than ever, accessed 23 March 2023. https://www.iea.org/news/methane-emissions-remained-stubbornly-high-in-2022-even-as-soaring-energy-prices-made-actions-to-reduce-them-cheaper-than-ever

STATE OF THE MARKET

In a difficult year for all markets, returns in the VCM highlighted the importance of investing in high quality carbon assets, with the Carbon Growth Opportunities Fund outperforming the benchmark GEO and NGEO contracts by 36% and 45% respectively for the calendar year.

Despite severe energy and political insecurity, generational inflation and fears of recession, commitments to carbon offsetting proved resilient in 2022 with bona fide corporate retirements increasing by 11% over 2021^.

All markets experienced heightened volatility in 2022 and the VCM was no exception. As the year began, stock and bond markets were immediately under pressure and volatility rose. Russia's invasion of Ukraine in February triggered concerns about political stability and energy security and exacerbated inflationary pressures. Inflation was central to market movements throughout the year. The US Federal Reserve was forced to change their 'transient' inflation view as US CPI hit a 40-year high. Both stock and bond markets had numerous rallies between sell-offs but still finished sharply lower. The magnitude of the interest rate move was dramatic with the 10-year US Government bond more than doubling to 3.9% from its starting point of 1.5%.

The year began well enough for the VCM with nature credits reaching all-time highs in late January. However, the Ukraine invasion sent margin levels for energy futures soaring and this in turn caused energy trading houses to cut positions across the board, including VCM positions which they had been accumulating in late 2021 and early 2022.

Their selling triggered a sharp correction in February which saw the nature benchmark pull back almost 50% in just six weeks. This was followed by a reflexive rebound in April but as the year progressed buying interest was insufficient to match sustained selling. The selling peaked in early December when new short positions combined with investors cutting their NGEO future positions ahead of the year-end physical delivery sent the NGEO December contract down sharply. This was followed by an equally sharp rebound but the extreme volatility unsettled investors and buyers retreated. The extreme price moves continued to close out the year. The Carbon Growth Opportunities Fund recorded a decline in NAV of 21.93% for the calendar year. The Carbon Growth Fund, and Carbon Growth Fund No.2 – which launched in May 2022 – recorded declines in NAV of 12.10% and 13.83% respectively.

While we would not have been happy predicting this performance at the start the year, against the broader market's 2022 performance, these were solid results and demonstrated the value of CGP's approach to asset selection, including a focus on high quality credits that continue to attract the largest pools of end user buyers.

In late 2021, GEO and NGEO futures actually traded at a premium to physical credits as speculative money took exposure through these new contracts. This premium disappeared in early 2022 and by the end of the year the standardised, anonymized contracts were trading at a discount to high quality OTC credits of \$2-\$5.

This bifurcation in pricing supports the notion that end user buyers want to know exactly which projects they are buying and are unwilling to accept projects that they have not done due diligence on.

Another outperformance driver was our diversification by project type, including an underweight allocation to forest protection (REDD+) and non-CORSIA renewables and overweight allocation to blue carbon. Our overweight exposure to cookstoves also held up better than both renewables and forest REDD+ prices as can be seen in the attached chart.

2022 was a difficult year for returns in the VCM, but we retain strong conviction in the investment thesis and the essential role that carbon markets will play in the path to a safe climate.

^According to Trove Research, with the one-off crypto effect from 2021 removed. Including the crypto effect, retirements in 2022 rose by 2.3% over 2021.





IMPACT CASE STUDY BUILDING A BETTER COOKSTOVE

PRIMARY FINANCE - 2021 AND 2022

CGP finances clean cookstove projects in Africa and Asia. The positive impacts for people and the planet are staggering.

Nearly three billion people worldwide cook their meals and heat their homes using open fires. Harvesting and burning wood and charcoal in open fires worsens deforestation, causes respiratory diseases and prevents women and girls from participating in work and education. For decades, international aid agencies have attempted to upgrade this rudimentary technology to a healthier option for people, nature and the climate. Those attempts are finally getting traction thanks to the financial incentives provided by the carbon market, through unusual alliances between partners as diverse as factory owners in Malawi, trucking companies in Zambia, churches in the DRC, French banks, multilateral agencies and of course, Carbon Growth Partners.

CGP has close partnerships with the French carbon developer AERA and the US-Australian C-Quest Capital, global leaders of the cookstove revolution that deliver social impact, carbon mitigation and financial sustainability. Decades spent decoding the local economies and cultures of Africa, Asia and Latin America, combined with carbon financing, are now scaling up the manufacture and distribution of cookstoves to families in poverty-stricken, war-torn and vulnerable regions of the world. Cookstoves reduce greenhouse gas emissions by slowing unsustainable harvest of woody biomass, reducing emissions from deforestation. The documented co-benefits of clean cookstoves include:

- Reduction of physical harm and risks to women's safety while collecting wood, often collected by hand and on foot many kilometers away from their villages.
- Health improvements from the reduction of exposure to toxic PM2.5 (small particulate matter) when inhaling smoke while cooking.
- Time-savings of up to two hours per day from reduced fuel collecting and cooking food, providing more opportunities for work and study, especially for women and girls.
- Healthier agricultural landscapes and nearby forests, protecting watersheds and biodiversity and increasing resilience to climate change.
- Cookstove projects reduce drudgery and free up time for women and girls by eliminating the need for frequent gathering of large diameter firewood.

It is these co-benefits that make cookstove credits increasingly attractive to companies with an integrated climate and ESG agenda. Meeting this increasing demand isn't easy. Imagine building a factory in Burundi, training workers, finding facilities, and getting tools imported. Then think about moving finished stoves onto trucks and then onto boats to sail down Lake Tanganyika to a small port in the Democratic Republic of the Congo where they have to clear local customs, then be sold and distributed by a network of local contractors, usually women on bicycles, into rural villages across the eastern Congo. The complexity of having to deal with rainy season roads is only partially offset by the support of the Catholic Bishop for the region who has embraced these stoves as part of the critical path out of poverty for his flock.

Now imagine going back to these villages, every few months, to make sure the stoves are in good repair and in use to be able to prove the carbon outcome and then navigate the rigorous credit verification process.

While challenging to deploy, clean cookstoves are the sort of innovative, entrepreneurial and simple idea that can make a huge difference in the lives of individual people and families, while helping to heal our collective atmosphere. We are a long way from eliminating poverty and from fixing the climate, but to Carbon Growth Partners, clean cookstoves are an impactful and profitable way to invest in both.

SDG contributions:



Image: C-Quest Captial

THE ESSENTIAL ROLE OF FOREST CARBON OFFSETS

From 2001 to 2021, a total of 437 million hectares of tree cover was destroyed globally, equivalent to an 11% decrease in tree cover since 2000 and 176 billion tonnes of CO₂ emissions.⁹

Permanently maintaining and increasing tropical forest cover – and other nature-based solutions – can deliver as much as 30% of the solution to climate change. Carbon offsets from REDD+ projects are critical for getting climate finance to communities on the front lines of tropical deforestation.

REDD+ is a United Nations-backed framework that aims to curb climate change by stopping the destruction of forests. 'REDD' stands for 'Reducing Emissions from Deforestation and forest Degradation'; the '+' signifies the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. Critics of REDD+ have raised concerns that projects may be issued with more carbon credits than they should be entitled. As responsible investment managers, we work hard to ensure the robustness of the projects into which we invest. To that end, we analysed the data to find out the scale of any over-crediting 'problem'. Searching the University of California, Berkeley, Goldman School of Public Policy Voluntary Registry Offsets Database¹⁰ yields comprehensive information about the scale and nature of the REDD+ project ecosystem.

At the time of writing in early 2023:

- 184 REDD+ projects had ever been registered
- Of those 184, **82** projects had ever issued a credit
- Of those 82, **64** projects are 'active' (i.e., they have issued at least one credit since 2016)
- Those 64 projects have collectively issued
 393,303,391 credits
- Of all issued REDD+ credits, 219,369,365 remain unretired

9 Global Forest Watch, Tree cover loss globally, accessed 20 March 2023. <u>www.globalforestwatch.org</u> 10 So I.S, Haya B.K and Elias M (2022), Voluntary Registry Offsets Database, Berkeley Carbon Trading Project, University of California, Berkele This can be used as a proxy for the existing universe of the potential problem: 219,369,365 credits that have been issued and are still available for use as an offset (of course, more will be issued in the future, but this is the figure that could be used as an offset right now). Now taking the Berkeley data and overlaying independent ratings information from Sylvera we see that of the 219,369,365 credits in the market:

- **59.8%** are from projects rated BBB or higher (investment grade)
- 23.3% are from projects rated C-B (speculative grade)
- **16.9%** are from projects rated D (junk) or have not been rated (This equates to 37Mt, or about 6 hours of emissions).

The difference between these findings, and the concerns of those critical of the market, is explained in part by whether one chooses to use the number of projects or the volume of credits issued to make the assessment. For us, what matters most is not how many projects exist but how many tonnes of emissions reductions were claimed compared to the actual abatement delivered by those projects. On that metric, REDD+ performs much better, which is largely a function of scale. With a few exceptions, the biggest projects tend to perform better; they have more money to fund field work and social programs, more staff to do that work, more capacity to do high-quality MRV etc. Small projects are still important – vital in fact – it can just be harder for them to meet the hurdles imposed by the Verra system. The challenge before us now is to identify and improve any shortcomings, without diminishing the pace and scale of finance being provided to protect forests.

After decades of failure to mobilize adequate climate finance, it is imperative that governments, NGOs, civil society and the private sector take an 'all-hands-on-deck' approach and work together in good faith to take collective action on climate change. Carbon offsets that protect and restore nature, accelerate the clean energy transition and capture and store carbon are an essential part of the suite of net zero solutions.

IMPACT CASE STUDY ASSOCIATIVE REFORESTATION IN THE COLOMBIAN ANDES

PRIMARY FINANCE - 2022

CGP is supporting small landholders in the Colombian Andes to implement cooperative approaches to forest restoration and conservation. In 2022, CGP's María Angélica Parra ventured into the field to see the results first-hand.

María Angélica recently completed her Masters in Sustainable Development at Universidad de los Andes in Colombia. Last year she set out to meet communities as well as the managing director and key staff from the Forestry Consulting Group, a small business founded by forestry engineer Paulo Hernández, that specializes in the development of 'associative' carbon projects.

The projects are designed so that dozens of small-scale farmers can combine their landholdings into one carbon project. Without 'associating' the participants and their titled land holdings into a single project, certifying these carbon projects would be cost prohibitive; average plot size generally ranges between 3 and 12 hectares. Projects take place on degraded lands, primarily areas that were previously used for cattle ranching, sugarcane, coffee and banana plantations and later became deforested. A number of activities, ranging from restoration, tree plantation development, reforestation and conservation of remaining and remnant forests, once certified, provide participants with an incentive for demonstrating better and more sustainable land management practices that reduce carbon emissions and begin reversing deforestation.

The project area spans nearly 1,500 hectares across the departments of Antioquia and Caldas in the foothills of the Colombian Andes and includes some 29 municipalities. Carbon removal is certified by monitoring increased biomass and forest cover.

The project serves as an important hedge against two local threats. The first is gold and copper mining. Southern Antioquia is home to two of Colombia's largest and most controversial gold mining projects: the Quebradona project managed by AngloGold Ashanti (South Africa) and the Buritaca mine managed by Zijin-Continental Gold (China). Currently, Colombia has just one copper mine, however, large deposits have been identified in the Western Andes, including the department of Antioquia. Additionally, the area is in the midst of a boom in avocado farming. The high price of Hass avocados in the US, Canada and Europe has led to a surge in water-intensive avocado production in Colombia, where exports have skyrocketed from just 1,400 tonnes in 2014 to 544,933 tonnes in 2020.¹¹

¹¹ Janetsky M (8 October 2021) 'Colombia's avocado boom shows the hidden costs of 'green gold'', *Aljazeera*, accessed 23 March 2023. https://www.aljazeera.com/economy/2021/10/8/colombias-avocado-boom-shows-the-hidden-costs-of-green-gold

Finally, it is important to note that the department of Antioquia, and especially municipalities like Urrao, where the project has been embraced, were some of the areas most impacted by violence during Colombia's protracted civil war. In the aftermath of the civil conflict, degraded and unproductive lands were especially susceptible to land grabbing, as local criminal groups forced small farmers with limited income opportunities off their lands, a trend that unfortunately continues today in many parts of the country with limited government presence. Income generated from the sale of carbon credits not only helps reduce emissions but is helping farmers in Colombia's rural areas to maintain productive farms and stay on their land.

SDG contributions:



POST-SCRIPT: EVERYTHING, EVERYWHERE, ALL AT ONCE

As this Impact Report was going to press, the United Nations' Intergovernmental Panel on Climate Change (IPCC) published its AR6 Synthesis Report: Climate Change 2023. The report summarizes eight years of findings from more than 1,000 scientists, providing the most current and best available science on what's going on in our climate.

The reports paint a harrowing picture of the devastating consequences on all of us, and in particular people in poverty around the world, but it does highlight a set of solutions pathways that we can take.

The main findings of the report include that:

- 1. We've already warmed the planet by 1.1°C, resulting in more heatwaves, fiercer storms and more severe droughts.
- 2. Climate impacts on people and nature have been worse than expected; the report was described by the UN Secretary General as "an atlas of human suffering and a damning indictment of failed climate leadership."
- 3. Loss and damages that are unrecoverable are already happening, but more finance can help scale up solutions.
- Fossil fuel use must decline much more rapidly in order to keep warming under 1.5°C by 2050. Coal use must decline by 95%, oil by 60% and gas by 45%.
- 5. Systemic change must happen in agriculture, transportation, food, buildings and materials, energy, and forest conservation.
- 6. Rapid action and finance must increase dramatically to reduce emissions, remove carbon from the atmosphere and adapt to negative climate impacts.

As the graphic opposite shows, the two biggest impact levers we have to pull are renewable energy (especially wind and solar) and nature-based solutions (especially forest protection, nature restoration and agriculture). These are the activities that our funds are most focused on scaling.

Delivering a safe climate is a hugely challenging, but not impossible, task that requires unprecedented coordination action across the world. As you've heard us say many times – and as the UN Secretary General reiterated – we need to do everything, everywhere, all at once. The role that Carbon Growth Partners, and you, our investors and partners, play in helping to finance the reduction and removal of carbon is more important than ever.

There are multiple opportunities for scaling up climate action

a) Feasibility of climate responses and adaptation, and potential of mitigation options in the near-term



"THE ROLE THAT CARBON GROWTH PARTNERS, AND YOU, PLAY IN HELPING TO FINANCE THE REDUCTION AND REMOVAL OF CARBON IS MORE IMPORTANT THAN EVER."

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Image: C-Quest Captial

GLOSSARY

TERMS	DEFINITIONS
CO ₂ -e	Carbon dioxide equivalent or CO_2 -e means the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas.
Core Carbon Principles	CCP was established by the Integrity Council for the VCM to define a threshold standard to ensure the integrity of the voluntary carbon market (VCM).
Integrity Council for the Voluntary Carbon Market	The Integrity Council for the Voluntary Carbon Market (Integrity Council) is an independent governance body for the VCM whose purpose is to ensure the just transition of the VCM to 1.5°C.
Scope 1, 2 and 3 emissions	 Scope 1 emissions 'Direct' emissions – those that a company causes by operating the things that it owns or controls. These can be a result of running machinery to make products, driving vehicles, or just heating buildings and powering computers. Scope 2 emissions 'Indirect' emissions created by the production of the energy that an organization buys. Installing solar panels or sourcing renewable energy rather than using electricity generated using fossil fuels would cut a company's Scope 2 emissions. Scope 3 emissions indirect emissions covering those produced by customers using the company's products or those produced by suppliers making products that the company uses.
Sustainable Development Goals (SDGs)	SDG were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 people enjoy peace and prosperity.
Verified or 'Voluntary' Carbon Market (VCM)	The VCM is where private individuals, corporations and other actors issue, buy and sell carbon credits outside of regulated or mandatory carbon pricing instruments. The VCM aims to mitigate climate change by enabling private actors to finance activities that remove greenhouse gas (GHG) emissions from the atmosphere or reduce GHG emissions associated with industry, transportation, energy, buildings, agriculture, deforestation, or any other aspect of human life.

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