



April 1, 2023 - July 3, 2025

# Katingan Mentaya Project

# **Project Details**

**Activity Types** Avoided Deforestation, Wetland Restoration and

Conservation

Impact Type Avoided Emissions

Oxford Category II

**Developer** PT. Rimba Makmur Utama (PT. RMU)

Methodology VM0007

Crediting Period 2010 - 2070

Purchased From CNaught Inc.

**Registry** Verra (VCS 1477)

# **Project Description**

The Katingan Mentaya Project protects and restores 149,800 hectares of peatland ecosystems in Indonesia. The surrounding land was drained and converted to palm and other plantations, and the project prevents the protected area from the same fate. The are is a vitally important and dense carbon sink. While peatlands represent only 0.3% of the earth's surface, their destruction contributes between 2-5% of annual anthropogenic greenhouse gas emissions. Katingan is one of the highest-regarded, large-scale avoided deforestation projects in the world.

#### Risk of Reversal

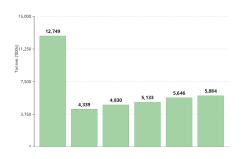
Nature-based projects like this one face some risk of reversal. Carbon storage may be affected by natural hazards such as wildfires, flooding, and escalating climate change impacts. Additionally, human-driven factors such as changes in land use or local governance structures can also impact carbon storage.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

#### Central Kalimantan, Indonesia







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# **Fuzhou Hongmiaoling Landfill Gas to Electricity Project**

#### **Project Details**

Activity Types Landfill Gas Capture

Impact Type Avoided Emissions

Oxford Category I

**Developer** Fujian Tianyi Renewable Energy Technology & Utilization

Co., Ltd.

MethodologyACM0001Crediting Period2007 - 2017Purchased FromCNaught Inc.

**Registry** Verra (<u>VCS 253</u>)

**Verifying Body** Germanischer Lloyd Certification

# **Project Description**

This project supports collection of landfill gas and generation of 2.5MW of electricity at a landfill in Fuzhou City in Fujian Province in southeastern China. The landfill received waste from 1995 until 2008, and—like most landfills—throws off methane as some of that waste decomposes. Credits are generated from two pieces of the project: (1) avoiding the emissions of methane (a potent greenhouse gas) into the atmosphere and (2) using the power generated from the methane (natural gas) to displace dirtier coal-fired power coming from the electric grid. The project clearly required carbon revenues to achieve these two goals and therefore generates high-quality carbon offsets.

#### Risk of Reversal

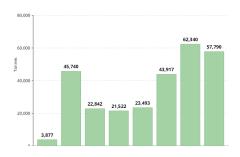
This project has no risk of reversal because its avoided emissions are not subject to being undone.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

Fujian Province, China







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# Titas Gas Leak Repair

# **Project Details**

**Activity Types** Fugitive Emissions Reduction

Impact Type Avoided Emissions

Oxford Category I

**Developer** Titas Gas Transmission & Distribution Co.

Methodology AM0023

Crediting Period 2017 - 2027

Purchased From CNaught Inc.

**Registry** Verra (<u>VCS 2478</u>)

Verifying Body TUV SUD

## **Project Description**

Located in Greater Dhaka, Bangladesh, this project reduces natural gas leaks from a gas distribution network in Bangladesh through the use of an advanced leak detection and repair program. Natural gas is a potent greenhouse gas and the technology is available to detect and repair pipeline leakage. But, without carbon credit revenue, deploying that technology would not be economical (or otherwise required) in Bangladesh. Beyond being highly additional and conservative with its emission reduction calculations, this project also supports the safety and well-being of local communities by improving their access to a cleaner source of energy.

#### Risk of Reversal

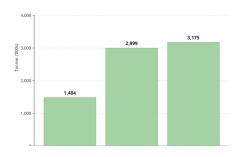
This project has little to no risk of reversal because its avoided emissions are not subject to being undone.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

Greater Dhaka, Bangladesh







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# **Gaziantep Landfill Gas Project**

## **Project Details**

Activity Types Landfill Gas Capture

Impact Type Avoided Emissions

Oxford Category I

**Developer** CEV Enerji

Methodology ACM0001 v18

Crediting Period 2010 - 2031

Purchased From CNaught Inc.

**Registry** Gold Standard (GS 745)

**Verifying Body** RINA Services S.p.A. (RINA)

## **Project Description**

This project supports collection of landfill gas and generation of 5.655MW of electricity at a landfill serving Gaziantep City, Turkey. The project is expected to reduce more than 91,000 tonnes of CO2e emissions each year. Credits are generated from two pieces of the project: (1) avoiding the emissions of methane (a potent greenhouse gas) into the atmosphere and (2) using the power generated from the methane (natural gas) to displace dirtier fossil-fuel-produced power coming from the electric grid. The project clearly required carbon revenues to achieve these two goals and therefore generates high-quality carbon offsets.

#### Risk of Reversal

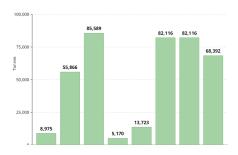
This project has no risk of reversal because its avoided emissions are not subject to being undone.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

Gaziantep City, Turkey







April 1, 2023 - July 3, 2025

# Oeste de Caucaia Landfill Project

#### **Project Details**

Activity Types Landfill Gas Capture

Impact Type Avoided Emissions

Oxford Category I

**Developer** GNR Fortaleza Valorização de Biogás Ltda.

Methodology ACM0001 v15

Crediting Period 2016 - 2023

Purchased From CNaught Inc.

**Registry** Verra (<u>VCS 2600</u>)

Verifying Body KBS Certification Services

## **Project Description**

This project supports collection of landfill gas at a municipal landfill near the city of Fortaleza in the state of Ceará, Brazil. As organic matter like food waste decomposes, the landfill emits landfill gas, which is primarily methane. The project reduces emissions by (i) capturing landfill gas that would, under normal circumstances, be emitted to the atmosphere and (ii) by using it to produce natural gas. Captured landfill gas is sent to an upgrading facility and then injected into Companhia de Gás do Ceará's natural gas distribution grid, which then displaces other natural gas that would otherwise be used.

#### Risk of Reversal

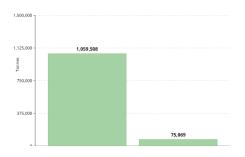
This project has no risk of reversal because its avoided emissions are not subject to being undone.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

Caucaia, Ceará, Brazil







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# **Istanbul Landfill Gas to Electricity Project**

#### **Project Details**

Activity Types Landfill Gas Capture

Impact Type Avoided Emissions

Oxford Category

**Developer** Ortadoğu Enerji

Methodology ACM0001

Crediting Period 2010 - 2024

Purchased From CNaught Inc.

**Registry** Gold Standard (GS 707)

# **Project Description**

This project supports collection of landfill gas and generation of more than 51MW of electricity at the Odayeri and Komurcuoda landfill sites near Istanbul in Turkey. Like most landfills, these sites throw off methane as some of the waste decomposes. Credits are generated from two pieces of the project: (1) avoiding the emissions of methane (a potent greenhouse gas) into the atmosphere and (2) using the power generated from the methane (natural gas) to displace dirtier coal-fired power coming from the electric grid. The project clearly required carbon revenues to achieve these two goals and therefore generates high-quality carbon offsets.

#### Risk of Reversal

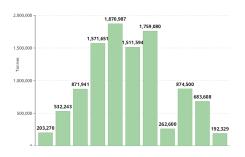
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## **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

#### Istanbul, Turkey







April 1, 2023 - July 3, 2025

# X-Hazil

# **Project Details**

Activity Types Improved Forest Management

Impact Type Removal

Oxford Category IV

**Developer** THEEARTHLAB SA de CV

Methodology CAR Mexico Forest Protocol V3.0

Crediting Period 2021 - 2121

Purchased From CNaught Inc.

**Registry** Climate Action Reserve (CAR 1863)

Verifying Body ANCE

## **Project Description**

This project focuses on Improved Forest Management through strategic interventions in forest ecosystems. It aims to enhance sustainability by implementing regeneration practices that improve tree mass structure and maintain forest coverage. The project emphasizes maintaining the functional integrity of ecosystems while implementing silvicultural treatments and Forest Stewardship Council (FSC) monitoring protocols to ensure proper forest management.

#### Risk of Reversal

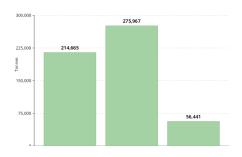
Nature-based projects like this one face some risk of reversal. Carbon storage may be affected by natural hazards such as wildfires, flooding, and escalating climate change impacts. Additionally, human-driven factors such as changes in land use or local governance structures can also impact carbon storage.

### **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



# Credits by Vintage



#### Location

Yucatan Peninsula, Mexico







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# **Delta Blue Carbon**

#### **Project Details**

Activity Types Reforestation, Wetland Restoration and Conservation

Impact Type Removal

Oxford Category IV

**Developer** Government of Sindh, Forest Department & Indus Delta

Capital Ltd.

Methodology VM0033

Crediting Period 2015 - 2075

Purchased From CNaught Inc.

**Registry** Verra (<u>VCS 2250</u>)

Verifying Body ICONTEC

## **Project Description**

The Delta Blue Carbon project seeks to to restore degraded lands through large-scale mangrove reforestation on the Indus Delta in Pakistan. While the area was previously covered in mangroves, which sequester 3-5 times more CO2 per hectare than upland tropical forests, they largely disappeared by the 1980s. The project will ultimately plant mangroves on nearly 225,000 hectares of land and estimates that it will remove over 2.4 million tonnes of CO2e per year. This makes it the largest restoration program in the world. Despite inherent challenges involved in mangrove restoration projects, Delta Blue is also highly regarded, with Renoster stating that its "governance, design, and execution is well orchestrated and scientifically rigorous."

#### Risk of Reversal

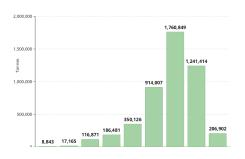
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# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



## Credits by Vintage



#### Location

Sindh, Pakistan







April 1, 2023 - July 3, 2025

# **Kootznoowoo Native Community Forestry Project**

## **Project Details**

Activity Types Improved Forest Management

Impact Type Removal

Oxford Category II, IV

**Developer** Anew

**Methodology** Improved Forest Management (IFM) on U.S. Timberlands

Crediting Period 2018 - 2035

Purchased From CNaught Inc.

**Registry** American Carbon Registry (ACR 499)

Verifying Body S&A Carbon

## **Project Description**

The Kootznoowoo Project protects 20,159 acres across four areas of forest on the Dolomi and Dora Bay tracts of Prince of Wales Island, Alaska. 8,000 acres of the project include rare, old-growth forest. The project is owned by the native Haida and Tlingit people and managed in partnership with the U.S. Forest Service. The carbon revenue supports the native population of about 500 living in the village of Andoon through job and scholarship opportunities. There is good evidence, based on both past practice in the project areas and current practice in surrounding areas, that the project area would be at significant risk of logging absent the project as a means to support the livelihoods of the native project owners. The project is an improved forestry management project, with carbon credits allocated by formula to avoided emissions from logging and to carbon removals from additional tree growth. CNaught retires both carbon removal and emission avoidance credits.

#### Risk of Reversal

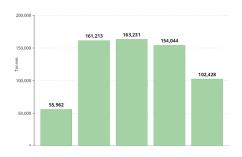
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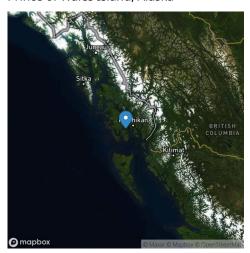


# Credits by Vintage



#### Location

Prince of Wales Island, Alaska







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# **Frontier Carbon Removal Portfolio**

#### **Project Details**

**Activity Types** Long-Lived Removals

Impact Type Removal

Oxford Category V

**Developer** Frontier Climate

Methodology Various

**Crediting Period** 2027 and beyond

Purchased From CNaught Inc.

Registry None ()

# **Project Description**

The Frontier offtake portfolio focuses exclusively on the most innovative permanent carbon removal technologies ready to rapidly scale. Frontier technologies are highly vetted against target criteria, including the ability to store removed carbon for more than a thousand years and the potential to be low-cost and high-volume in the future, in line with 2050 climate goals. Offtake carbon removal units come from a diverse and globally distributed portfolio of the most promising carbon removal technologies, vetted by industry experts and Frontier's team of scientists. The portfolio approach is intended to accelerate the broader carbon removal ecosystem and mitigate delivery risk. The portfolio includes a combination of: direct air capture, biomass carbon removal and storage, and other pathways as they become offtake ready.

#### Risk of Reversal

These projects face low risk of reversal because they are designed to store captured carbon for hundreds or even thousands of years. The primary risk of reversal comes from failure of the storage mechanism over the promised timeframe.

# **Accountability Measures**

A registry-managed buffer pool exists to safeguard against project reversals. If a carbon storage project is reversed, credits from the buffer pool compensate for the shortfall, preserving environmental integrity.



#### Location

South San Francisco, California, United States







April 1, 2023 - July 3, 2025

# **Charm Industrial Bio Oil**

#### **Project Details**

**Activity Types** Bio-Oil Sequestration, Long-Lived Removals

Impact Type Removal

Oxford Category V

**Developer** Charm Industrial

Methodology Charm

Crediting Period 2021 - 2025

Purchased From CNaught Inc.

Registry None ()

# **Project Description**

Living plants, whether trees or agricultural crops, capture carbon dioxide from the atmosphere. However, after the plants die or the crops are harvested, the plants decompose and re-release that carbon. Charm collects plant waste, applies a heating process called pyrolysis that converts the plant waste into bio-oil, and injects that bio oil into deep wells or caverns where it hardens and will be stored permanently. Charm thereby makes the plants' temporary removal of carbon dioxide permanent. While its technology is promising, Charm currently charges \$600 per metric tonne of CO2e sequestered and is delivering only a small amount of carbon removal per year. CNaught supports companies like Charm to help send a market signal that will help innovative technologies like that developed by Charm can reach scale.

#### Risk of Reversal

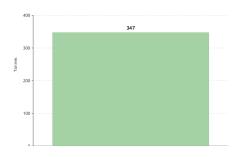
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# Credits by Vintage



#### Location

San Francisco, California, United States

