



# PURELAND

SUPPORTING THE PLANET

Whitepaper

Version 0.1

“The only thing of importance, when we depart,  
will be the traces of love we have left behind.” (Albert Schweitzer)



03 THE CHALLENGE

05 LAND BANKS

06 PURELAND ZERO

11 PURELAND TOKEN

13 CREATING AN IMPACT

15 DEFINITIONS

16 YOUR CONTRIBUTION

17 QUICK FACTS & CONTACT

# THE CHALLENGE

## Facing Climate Change Head On

In an effort to prevent climate change, today's international leaders are crafting well-intentioned treaties. These treaties depend on industrialized countries to reduce CO<sup>2</sup> emissions within set periods. While attempts to change the behavior of whole countries through enforcement of treaties like the Kyoto Protocol and Paris Agreement may seem noble, they take time. Over the years, leaders have continued to negotiate terms, table conferences, or back out of these agreements completely. Meanwhile, the clock is ticking.

We know that CO<sup>2</sup> makes up the largest share of greenhouse gasses that disturbs the earth's radiative balance, trapping heat inside the atmosphere to increase the earth's surface temperature. We also know that rainforests absorb around 8.8 billion metric tons of CO<sup>2</sup> emissions each year, even from thousands of miles away. That is almost half the world's total CO<sup>2</sup> emissions. In turn, 20% of the earth's oxygen is produced by just one rainforest - the Amazon. However, rainforests are shrinking at a rapid rate. So, logic tells us the most effective and achievable initiative with the greatest immediate outcome would start with restoring and growing our rainforests.

PURELAND does this by bypassing the bureaucracies to tackle CO<sup>2</sup> emissions head on by fostering rainforests that simply absorb them.

Fossil-fuel companies, technology firms, banks, and other big corporations are under increasing pressure from shareholders and boards to address their environmental impact. The concept of companies, governments, and people participating in projects that compensate for the carbon dioxide they emit is not a novel one. The public's desire to invest in managed rainforest projects that most effectively counter carbon emissions has reached critical mass. However, for a climate protection project to be effective and instill confidence, it must first outline clear, rational, and deliberate solutions.

PURELAND projects are realistic in scale, competently managed, and modeled for adoption with confidence. And, with the help of blockchain technology, PURELAND provides everyone with an opportunity to participate.

The world is already heading toward a token-driven economy. In fact, nearly every industry, from pharmaceuticals to transportation, precious metals to fine art, is participating in blockchain technology. Some are even represented by tokens. In just a few years since the blockchain and tokens were adopted publicly, countless people have sought cryptocurrency advice and information on how to invest in them. Today, there are more than 25 million active blockchain wallet users.

With the help of blockchain technology, PURELAND mitigates environmental impacts through the purchase of tokens that fund the preservation, management, and restoration of land banks.

### Causes for Global Deforestation

-  **Tourism.** Many countries depend on tourism, with roads and development that support fragmenting forests.
-  **Overpopulation.** As humans move further into the forests and coastlines, flora and fauna are negatively impacted with the destruction of their natural habitats.
-  **Mineral Mining.** Due to high demand and the rise of mineral prices, more mining is being done in tropical forests.
-  **Illegal paper production.** While clear-cutting encourages the growth and development of new species of trees and provides a sustained production of timber, illegal logging harvests timber in protected areas.
-  **Expansion of agriculture, cattle, and ranching.** Farmers cut forests to provide more room for planting crops and grazing livestock.

# LAND BANKS

## Why They Work

In laymen's terms, land banks are not financial institutions. They are public or community-owned entities created for a single purpose: to acquire, manage, maintain, and repurpose vacant, abandoned, and foreclosed properties. In the industrial sector, these would include the worst abandoned houses, forgotten buildings, and empty lots. PURELAND Zero is a land bank of existing rainforest in Central America, namely 841.7 hectares of primeval forest cover in the Térraba Sierpe National Wetlands of Costa Rica.

Rainforests play an invaluable role in maintaining the ecological balance that is the foundation for all life on earth. While humans and livestock produce tons of carbon dioxide daily, it's the tropical rainforests that absorb them. Though located on every corner of the planet, rainforests cover only two percent of the total surface area, and yet nearly half of all known plant and animal life live inside them. The urgency to preserve these fragile ecosystems comes from the discovery that a depleted or damaged rainforest can take from 60 to 100 million years to evolve.

Twenty-seven percent, or 229 hectares of PURELAND's forest area, belong to the Golfo Dulce Forest Reserve created in 1979 to protect the wooded lowland areas along the Pacific coast of Costa Rica. It is a vital biodiverse corridor of both flora and fauna that connect Corcovado National Park with the Piedras Blancas National Park. Mangroves play a major role in the protection of the coasts against wind erosion and the product of waves. The PURELAND Zero project aims to preserve the Térraba Sierpe National Wetlands from deforestation.

In June 2016, Costa Rica announced plans to become the first carbon-neutral nation in the world by 2021. Studies have shown that plants in this area have the capacity to process more than 100 tons of CO<sup>2</sup> per hectare annually, with an additional 2.7 metric tons per hectare if the forest remains in pristine condition.

# PURELAND ZERO

## PURELAND Project

PURELAND is based on blockchain technology. All contributions made to the PURELAND Zero project are utilized for financing environmental projects to save our planet.

The PURELAND Zero project is the first PURELAND project and part of Costa Rica's accredited Carbon for the Planet project portfolio. Its mission is to execute forestry projects that contribute to the removal of greenhouse gasses while restoring, protecting, and managing both green and tropical forests.

The PURELAND Zero forest area has already been acquired and has a density of 340 trees per hectare and a total biomass of 105 tons per hectare. This meets the criteria of a primary forest with the immediate capacity to host an advanced secondary forest and the preferred habitat of sloths.

Upon the completion of Project Zero, plans are underway to acquire further projects funded by the proceeds from the token sales of PURELAND Zero. The nature of the next PURELAND project is going to be resolved in the scope of a consensus procedure in the blockchain.

PURELAND was surveyed and divided into rectangular plots geo-referenced with GPSS with each measuring 10 by 50 meters. Its data related to the principles, criteria, and indicators of flora and fauna species have been established by the National Forest Certification Commission of Costa Rica.

PURELAND's carbon certification was granted on June 19th, 2017 and is valid through May 31st, 2022.

-  PURELAND Zero has a varied elevation anywhere from 10 to 200 meters above sea level.
-  With an average rainfall of 3.5 to 4.5 meters per year and temperatures between 27 and 30 degrees Celsius, it is very humid.
-  PURELAND Zero hosts Costa Rica's largest and most important mangrove forests.
-  Native trees like the Manilkara chicle, False Mamery, Danto, and endangered Chaperno are part of PURELAND's unique and diverse forest ecosystem.
-  While periodic flooding occurs, the tides provide a nutrient sludge of rich organic material.

## The Battle with Deforestation

More than 20 years ago, trails and paths were carved into the dry and flat areas of today's PURELAND Zero Project. Evidence of these extractions are still visible and estimated at 20% deforestation of the total land bank. Faced with the threat of deforestation through political pressure and a lack of forest management options, it was vital to establish this conservation project.

In 2004, protective measures were put in place to encourage valuable species to migrate home. In March 2012, a permanent protection plan was established for dedicated research and the protection of all existing resources. A topographic survey utilizing a Global Positioning System (GPS) determined the land's cadastral map and measurement of biomass. This, in turn, determined its carbon stock.

## **Tropical Rainforest Decline**

Forests currently cover only 30% of the world's landmass. Of that, only 2% are rainforests. According to a University of Maryland study, global tree cover loss had reached a record of 29.7 million hectares by 2016. The Food and Agriculture Organization of the United Nations (FAO) reported half the world's tropical rainforests have already been cleared.

Despite preservation and reforestation efforts, 18.7 million acres per year, or the equivalent of 27 soccer fields each minute. This deforestation directly results in a 15% increase in all greenhouse gas emissions.

## **Objective**

The objective of PURELAND is to establish a stable ecosystem. This would include a number of set conditions, including the establishment of parameters and declaration of boundaries along the entire land bank, maintenance without intervention, preventing alterations, and encouraging natural evolution without interruption to establish a healthy ecosystem for the process of photosynthesis. Annual monitoring measures to ensure compliance are already in place.

PURELAND has committed itself to maintain, restore and preserve PURELAND projects. Such measures include regular surveillance on land and by air with drones, labeling, and protection from wood exploitation - with the exception of dry or fallen trees that must be managed by a compliance professional.

## Side Effects

The same photosynthesis, particularly that of tropical rainforests, that uses sunlight to extract foods from greenhouse gases and water to produce life-sustaining oxygen, also produces a glucose necessary to re-fuel plant growth and generate useable cellular energy. The T rraba Sierpe National Wetlands host seven species of mangrove; crawler red mangrove, red knight mangrove, pineapple mangrove, white or ladybird mangrove, and black mangrove. It is also the refuge for rare birds, fish, mammals, and reptiles that depend on this project to thrive, and in some cases, survive.

While it's critical to save every habitat from deforestation, PURELAND Zero has taken a special interest in that of the three-toed pygmy sloth. With sources indicating only 100 or so remaining, the IUCN Species Survival Commission's lists them as one of the most threatened species. Sloths cannot survive on the forest ground, have little means to defend themselves, and move at an average pace of two meters per minute. These truly irresistible traits also make them easy prey.

Deforestation, specifically mangrove forests cut down by local fisherman, are one reason for the sudden decline. Sloths depend on mangroves for food and shelter. One of the key components to saving the sloths will be building a coalition devoted to the species long-term survival by increasing the density of mangroves found in the Golfo Dulce Forest Reserve.



### Fascinating Facts about Sloths

- 🌳 Sloths may be clumsy on land but are terrific swimmers.
- 🌳 Arboreal animals, they spend most of their time in trees.
- 🌳 Sloths choose the same place, usually once a week, to empty their bowels and bladders. This makes them easy and predictable prey.
- 🌳 Algae grow on their fur, camouflaging them in green and forming a micro-ecozone inhabited by hundreds of arthropods.
- 🌳 Their diet consists mostly of leaves, giving them minimal energy and nutrition.
- 🌳 Their predators are usually eagles, snakes, and jaguars.
- 🌳 Three-toed sloths can turn their heads almost 360 degrees.
- 🌳 Sloths are nocturnal and sleep an average of 10 hours per day.
- 🌳 Their claws can be up to four inches long.
- 🌳 Sloths are solitary creatures who only gather to mate.
- 🌳 A female sloth gestates for up to 10 months and gives birth to one baby at a time.

# PURELAND TOKEN

## DISPATCH

The PURELAND Token is a durable and fungible land-backed utility token. For maximum safety and convenience, every donation generates an encrypted digital certificate of land ownership on the blockchain. Users can track their PURELAND Token purchases 24/7 online via the PURELAND web app.

PURELAND is a hybrid decentralized application developed on the Dispatch public ledger. It is using an interface that end-users are already familiar with. The decentralized solidity smart contract guarantees immutability, transparency and custody.

PURELAND Zero Tokens embody an additional voting mechanism for Pureland Token (PLT) stakeholders. One PURELAND Zero Token represents one square meter of rainforest land created by a smart contract for token creation, token keeping and handling balances. In order to tokenize and protect more land through the PURELAND Community, stakeholders are allowed to vote yes or no on the minting of more tokens to represent addition of further land for protection.

The PURELAND Token runs inside the Dispatch Virtual Machine (DVM) of the Dispatch protocol. Today that means PLT holders will not have to worry about transaction fees or scalability and can interact with the PURELAND DApp from their browser of their choice on mobile or desktop web. The Delegated Asynchronous Proof-of-Stake (DAPoS) consensus algorithm provides quick transaction finality and scalability. We work very closely with the Dispatch development team, and their data-oriented roadmap gives us the opportunity to expand the PURELAND DApp functionality to include immense amounts of meta-data on the land being protected. Environmental protection and protecting our planet are not matters of speculation, but our duty. A purchase of PLT is a donation, it does not mean a financial investment. It is an investment in the future of our children and mankind.

100% of the proceeds of token sales are invested in protecting land and buying and receiving new land. There will always be a fixed price of US Dollars 2,- for purchase and US Dollars 1.50 for sales since each token is backed up with 1 (one) m<sup>2</sup> of land. The spread of US Dollars 2 to US Dollars 1.50 is used to cover internal costs (platform, development, administration, land conservation).

## Blockchain Technology

Blockchain is a technology in which computers share the same database. Imagine information stored on tens of thousands of computers around the world and that simultaneously updates itself in real-time when new data is entered. This technology also requires that an entire community verify the data preventing any one person or entity to tamper or change it. With blockchain decentralized technology, an entire community is in charge.

Financial transactions and peer-to-peer interactions in the form of smart contracts are tracked and verified to ensure accountability and transparency of environmental projects. A recording made in the blockchain stays in the blockchain forever. It cannot be changed.

Besides supporting transactions in cryptocurrencies such as Bitcoin, Ethereum, PURA, and various alt-coins, the blockchain's ability to verify and store tamper-proof data and transactions is the preferred method for recording and managing environmental projects.

### Did You Know That ...

-  The top two nations responsible for the majority of carbon dioxide emissions are the United States and China. Yet, 70% of Americans and 85% of Chinese are still not convinced that climate change will ever affect them personally.
-  The most prominent rainforests are located in Alaska, Canada, Asia, Latin America, and the Amazon, with the latter producing more than 20 percent of the world's oxygen.
-  More than 1.5 billion people depend on forests for their livelihood.
-  More than half of the world's known 10 million species of plants, animals, and insects live in tropical rainforests.
-  Costa Rica is home to the most diverse rainforest (per hectare), with more species of plants and animals than anywhere else in the world.

# CREATING AN IMPACT

## The Importance of Proper Messaging

While the United States and China are the top two nations responsible for the majority of carbon dioxide emissions, 70% of Americans and 85% of Chinese are still not convinced that climate change will ever affect them personally. That's a 25% jump in just two years. How can we blame them?

Ever since climate change became a political issue, the public has lived through six environmental global apocalyptic predictions; the "population" bomb, "acid rain", the ozone "hole", global cooling, global warming, and now climate change. Each new cry of impending doom was louder and more hysterical than the last, and while evidence proves they remain a clear and present danger, the ends didn't happen exactly as predicted.

This has resulted in climate-change deniers becoming more embolden and public opinion shifting in the wrong direction. Should we be stewards of our environment? You bet. But turning away public support isn't going to help the planet or its people. Have our leaders learned anything? Hardly. And, here's the bigger problem.

In 2012, polls showed that the majority of Americans (nearly 88%) were willing to forgo fossil fuels, conserve energy and water, adopt alternative energy measures, and contribute financially in a cooperative effort to save the planet. Since before the Paris Agreement, U.S. state and federal funding on climate changing initiatives over three decades have cost taxpayers nearly two trillion US dollars.

The good news is that according to the Environmental and Energy Study Institute (EESI) report published in March 2018, the U.S. made great gains in greenhouse gas reductions.

The bad news is that while the U.S. was producing more electric and hybrid vehicles and developing hydropower, geothermal, biomass, solar, and wind power, the government and media were failing to communicate this message to its people and the world. Despite their accomplishments, only six percent of Americans believe that their nation, or any other, can and will successfully combat climate change. The public has grown weary of rhetoric. And yet, fear-mongering continues to be the catch-all solution.

Not all, but many of today's most climate destructive industries are driven by greed. Some are protected and supported by corrupt leaders or local and state governments. Most are simply catering to the demands of their consumers.

 PURELAND uses the art of persuasion to impart a positive message.

 PURELAND encourages the public and industries to cooperate in exciting and impactful climate changing initiatives.

 Only PURELAND provides accountability, transparency, and the control, transfer, analysis, and disposition of physical or electronic evidence.

 PURELAND ensures individuals, corporations, governments, and leaders aren't merely negotiating environmental agreements and then ignoring them but following an intentional path of conservation in the preservation of our planet.

## About Costa Rica

Costa Rica is a country in Central America with an area of 51,000 square kilometers that is covered in rainforest. Its coastlines include the Caribbean and Pacific. National parks and nature reserves encompass about one quarter of the area (25.6%). Costa Rica is home to more than 500,000 animal and plant species. The Térraba Sierpe is a refuge for rare birds, fish, mammals, and reptiles. Its forests host felines, sloths, deer, goat, various monkey species, and even otters. Tapirs and birds include the red limpet, large peacock, eagles, hawks, and owls. The Pacific Ocean and streams are home to fresh and seawater fish, mollusks, oysters, and crustaceans. A lesser number of mammals and birds include crocodiles, alligators, blue egret, white ibis, and osprey.

## DEFINITIONS

### **Carbon Dioxide (CO<sup>2</sup>)**

The nations emitting the most CO<sup>2</sup> worldwide are China, the USA, India, Russia, Japan and Germany, in that order. 60.8 percent of all annual global CO<sup>2</sup> emissions are caused by six nations.

### **Kyoto Protocol**

In the scope of the Kyoto Protocol signed on December 11, 1997 by 191 governments including the European Union, countries agreed to reduce carbon emissions worldwide by 5.2 percent annually. The USA and Canada pulled out of the agreement in 2001 and 2011, respectively.

### **The Paris Agreement**

The Paris Agreement of 2015 to go into force in 2020 aims to limit the increase in global average temperatures to below 2°C above pre-industrial levels. Yet again, the only country worldwide to pull out of this agreement even before it went into effect was the USA.

### **Carbon Credits**

CO<sup>2</sup> emission rights, in the form of certificates, were established on an international level as a tool for reducing greenhouse gases. For every ton of carbon dioxide that a power plant or an industrial enterprise emits into the atmosphere, it must hold a carbon credit certificate. The underlying principle was to reduce emissions in areas that are the most cost effective, thereby minimizing financial penalties. This provided companies the incentive to adopt and implement climate-friendly and sustainable technology.

## YOUR CONTRIBUTION

PURELAND Zero tokens directly fund our ongoing efforts to restore and manage T rraba Sierpe's fragile ecosystem while protecting it from invasion and deforestation. This portion of PURELAND is host to the population of endangered sloths and their habitat.

PURELAND Zero tokens fund the preservation of rainforest and riverine wetlands for future generations. Purchased land shares cannot fall prey to invasion, use, or deforestation. PURELAND Tokens also make wonderful gifts for loved ones, friends, and colleagues.

For maximum safety and convenience, every donation generates an encrypted digital certificate of land ownership on the blockchain. You can track your PURELAND Token purchases 24/7 online via the PURELAND web app.

One PURELAND Zero token is the equivalent of one (1) square meter (m<sup>2</sup>) of rainforest land.

The certificate received upon purchase is merely a confirmation of the deposit made for token purchases. It is not to be used for tax purposes or purposes of financial reporting. PURELAND assumes no liability if this certificate is presented to local tax authorities for purposes of tax deduction or similar purposes and not accepted.

## QUICK FACTS

Token Name:	PURELAND Token
Token Tag:	PLT
Total Token Supply:	8.493.925*
P2P Port:	1973
RPC Port:	1975
Blockchain:	Dispatch Network
Consensus Algo:	DPos (Delegates Proof-of-Stake)
Processing:	DVM (Dispatch Virtual Machine)
Token:	ERC-20
Type:	Fungible Token
Decimals:	Two (2)
Block Time:	1 second
USP (unique selling proposition): Suitable utility PURELAND Web App:	high throughput at low cost DApps (decentralized apps) app.pureland.earth
App transaction limits: Protection Amount: Sending Amount:	 25.000 tokens / transaction 100.000 tokens / transaction

\* PURELAND Token supply minting is governed by a community voting process that 1:1 reflects the amount of square meters of land that the community wants to protect. As additional projects are voted in, the token supply will increase.

## CONTACTS

### WEBSITE

<https://pureland.earth>

### WEB APP

<https://app.pureland.earth>

### SOCIAL MEDIA

#### Facebook:

<https://www.facebook.com/pureland.earth>

#### Twitter:

@Pureland.earth

#### Instagram:

@Pureland.earth

