BAYAFARM Token

BAYAFARM coin， future fortune

White paper

Catalogue

BAYAFARM overview

1 BAYAFARM introduction

BAYAFARM is committed to investing in Panama's premium agricultural assets through Real World Asset (RWA) technology, enabling the tokenization of physical assets. The BAYAFARM Token facilitates real-time asset management and financing by converting illiquid physical assets into highly liquid digital tokens, thereby enhancing market efficiency. Moreover, tokenized assets boost liquidity for physical goods, allowing investors to purchase and trade them more conveniently while reducing transaction costs. Our fishery products will also be digitized as NFTs, granting traditional assets verifiable and tradable attributes. In the near future, we plan to apply the Token in local agricultural transactions and financial sectors. Our DeFi platform will provide financing and credit services to local fishermen and related industries, empowering more participants in these fields.

Investor income includes: dividends from physical investment projects, Token appreciation income, digital exchange of physical assets, related agricultural transactions, credit, trade and financial system income.

Project side revenue sources: income from physical investment through online token financing, quarterly and annual dividends to investors, as well as transaction fees and commissions from other financial projects.

2 BAYAFARM Vision

The birth of any phenomenal enterprise or project is an explosive growth, and the explosion must come from the blank space. The so-called blank space is that the restrictive conditions that once bound the market have changed and the ceiling of the market has been opened up.

By using blockchain technology, BAYAFARM has opened up a new investment market, so that high-quality assets are no longer limited by regions and traditional finance, and individual investors have more abundant choices and more convenient investment channels.

In the early stages, we forged strong partnerships with the supreme leaders of 14 indigenous tribes in Panama, securing exclusive and long-term project rights in their territories through legal safeguards and commercial interests. This initiative enables local communities to benefit from blockchain investments, bypassing the constraints of traditional stock markets, investment funds, and conventional investor models.

In the future, we aim to eliminate illiquid high-quality physical assets from the global market. Our upcoming RWA Exchange will enable direct investment access for premium assets to individual investors. Going forward, we will facilitate asset chain IPOs through regulatory approvals and institutional endorsements from financial institutions, ensuring investor security throughout the investment process.

3 The advantages of BAYAFARM, why choose us?

Digitalization of physical assets achieves cost-effective efficiency: Effectively reduces operational costs and significantly enhances transaction efficiency. By leveraging smart contract technology to digitize land and natural resources, it creates a decentralized investment avenue for investors through democratized access.

Blockchain Technology Security: Leveraging the immutable, tamper-proof, and traceable nature of blockchain technology, it effectively reduces risks of manual tampering and minimizes the possibility of fraud. By establishing encrypted cities and communities, the region is evolving into a digital currency hub in Central America. In the future, fisheries-related transaction data will be stored on-chain for real-time access, ensuring greater transparency and reliability throughout the trading process.

Open, Transparent, and Regulated: Blockchain technology inherently features distributed, trustless, and transparent transaction mechanisms. BAYAFARM has partnered with local financial institutions to establish a regulated operational framework that enables swift policy adaptation, ensuring transaction security. Moving forward, we plan to develop a Central American digital exchange to provide financing opportunities for all real-world projects.

The NFT Transformation of Physical Investments: Future investment models will transcend traditional digital currency investments. By converting physical assets into NFTs, holders can redeem them at designated locations using BAYAFARM's NFTs (e.g., for physical assets —— fish species or peripheral industries). Moreover, transactions can be conducted directly through NFTs, eliminating cumbersome transportation and settlement processes inherent in conventional trading, thereby significantly enhancing convenience for both buyers and sellers.

Status of RWA assets

What is RWA?

Real World Assets (RWA), a key term in cryptocurrency circles, refers to physical or tangible assets with intrinsic value in the real world – including loans, insurance contracts, commodities, and real estate – that are tokenized through blockchain technology. Each Token represents a share, equity, or ownership stake in the underlying asset. This approach aims to make traditional assets more accessible for online trading and investment while leveraging blockchain's immutable nature and transparency. Furthermore, it enables integration into DeFi ecosystems (with fewer intermediaries) and expands the trading market's reach.

If we take traditional finance as an example, the chain of RWA is equivalent to the chain and securitization of capital. The success of securitization in the 1990s can be used as an example to illustrate how improved regulations have changed capital formation.

Securitization is a system that creates, aggregates, stores, and disperses risks. By setting benchmarks for assets (such as maturity and risk), it significantly enhances liquidity and funding sources. Through institutionalized mortgage loans, corporate loans, and consumer loans deployed via securitization, more affordable financing becomes available to consumers, businesses, and homebuyers.

In plain English, it means that if you buy a house in full payment, many people can not afford it, but through a loan, most people can afford it.

Three decades later, on-chain securitization remains largely unchanged. Financial markets have yet to evolve sufficiently to effectively accommodate internet-based systems. The intermediary network involving investment banks, custodians, rating agencies, and service providers has driven borrowing costs beyond reasonable levels. Most assets remain unsecuritized, and entrepreneurs still struggle to access international financing channels. For the crypto industry to truly impact traditional business models, resolving value transfer challenges is imperative – and RWA represents a crucial transformation process in this evolution.

Examples of assets that can be tokenized

1. real estate

Traditional real estate investments are globally favored for their value preservation and long-term returns, yet the sector is notorious for its illiquidity. However, tokenization of RWA could enhance transparency and liquidity.

Furthermore, future developments may involve dividing entire properties into multiple shares, enabling multiple individuals to co-own a single real estate unit while lowering investment thresholds. Additionally, automated execution through smart contracts could streamline the distribution of rental income or dividend payments from property sales. (This approach still requires further regulatory refinement)

2. Volkswagen investment goods

The tokenization of physical commodities such as gold, oil, and agricultural products enables investors to trade and hold these assets more conveniently without physically owning them. (While traditional finance already optimizes such transactions, RWA holds promise for further refinement in this regard.)

3. intellectual property

This includes software code, copyrights, and patents. Tokenization can facilitate the licensing and commercialization of intellectual property more effectively. Artists may choose to sell partial rights to their works to raise funds while retaining certain control over their creations.

4. Loans and collateral

Lending with physical assets as collateral. For example, tokenizing cars or machinery to secure loans and improve the liquidity of assets.

Advantages of RWA

Improve liquidity and transaction efficiency: Through tokenization, assets that were previously "illiquid" (such as real estate) can be converted into divisible and easily tradable tokens, helping to improve market liquidity.

Increased transparency and security: Blockchain provides a tamper-proof ledger of ownership and transaction history, making asset management more secure and transparent.

Easier access to investment opportunities: RWA on the blockchain enables more people to invest in high-value assets by lowering the minimum investment and entry threshold.

Financial product innovation: RWA opens the door to front-end financial products, such as partial ownership and asset-backed loans, which can lead to a more dynamic financial market.

High quality assets in Central and South America invested by BAYAFARM

Project overview

Lake Yavano, the second largest freshwater lake in Panama, was created a hundred years ago as a natural source of drinking water. The lake is rich in aquatic resources (especially tilapia) due to its natural nourishment.

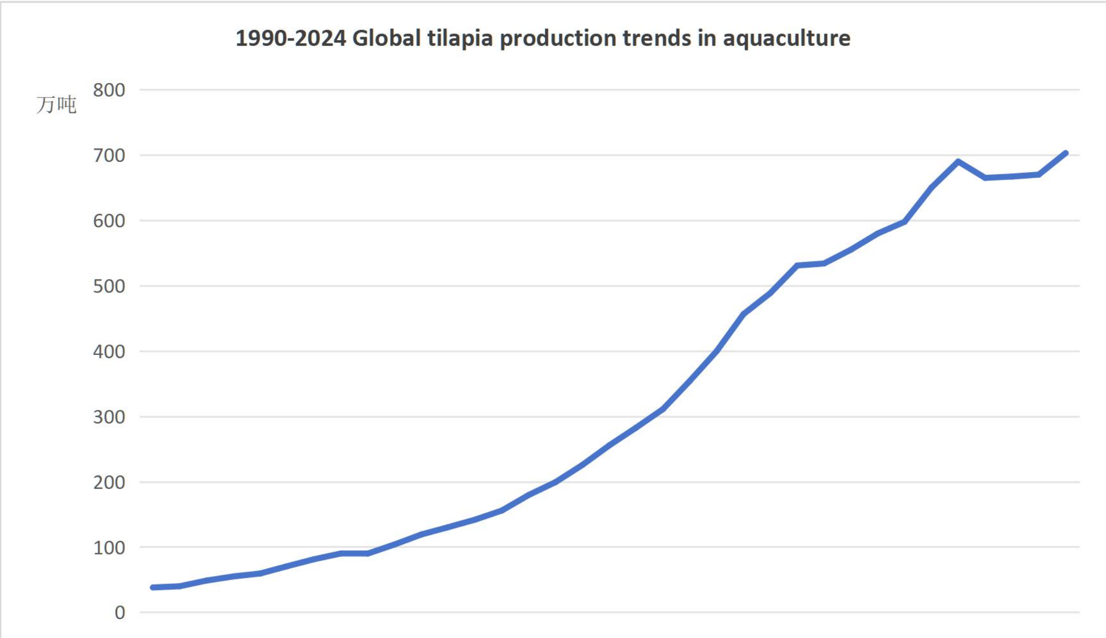
In 2014, BAYAFARM signed a contract with the Panamanian Kuna Regional Alliance of 14 indigenous tribes to acquire the right to develop 12,000 hectares of Bayano Lake and 1,000 hectares of land around it, with the option to purchase the remaining 30,000 hectares.

The company will process the timber, aquatic products, crops and other products produced by the above projects and export them in the form of international trade. Adhering to the concept of win-win cooperation, the company will return part of the profits to the local Native Americans to improve their quality of life.

As a "protein source that doesn't require protein," tilapia has been recommended by the UN Food and Agriculture Organization (FAO) as an excellent aquaculture species worldwide. Excluding wild-caught fish, global farmed production has surged from 379,000 tons in 1990 to an estimated 7.03 million tons in 2024, with a median of 3.541 million tons recorded in 2010. This exponential growth in production capacity demonstrates remarkable upward momentum.

China has always been the largest producer of tilapia farming. In the two decades prior to 2015, it experienced rapid growth, achieving a dramatic increase in production from 300,000 tons to 1.6 million tons. By 2007, its production capacity had reached 1.21 million tons, accounting for approximately 55% of the global total.

However, after 2014, China's share in global tilapia production began to decline continuously. The output and world share in 2017,2018,2019, and 2020 were 158.47 million tons (27.33%), 162.45 million tons (27.18%), 164.17 million tons (25.26%), and 170 million tons (24.64%) respectively, with its proportion in the global total production capacity narrowing. Although it has been growing steadily, the rate has been slower than the global increase. This indicates that due to massive overall demand, other countries are also joining the tilapia farming industry in large numbers, and the development speed in breeding and production is accelerating. Other tilapia-producing countries in Asia and Latin America continue to expand their production capacity driven by regional demand. Currently, the ranking of tilapia farming capacity countries is China, Indonesia, Egypt, Brazil, the Philippines, and Bangladesh.



Global trade volume

According to data from the Food and Agriculture Organization (FAO), the global aquaculture industry generated an annual output value of approximately $400 billion in 2023. Aquatic products accounted for 35% of total global aquatic trade, with exports reaching $137.1 billion (slightly lower than the $160.6 billion in meat products). This represents about 0.6% of all global merchandise exports, growing at a compound annual growth rate (CAGR) of 5% over the past two decades. This means that 35% of global aquatic production enters international trade, while the remaining 65% is consumed within producing countries.

As a premium economic fish species, tilapia has established a global presence in over 150 countries and regions, ranking as the third most traded aquatic product after salmon and shrimp. In 2023, the global market consumed over $438 million worth of tilapia. According to International Trade Centre (ITC) data, the United States, Canada, Netherlands, United Kingdom, and France are the top five markets for tilapia consumption, with import values exceeding $300 million, $33 million, $11 million, $10 million, and $9.4 million respectively. Notably, the U.S. market's consumption volume surpasses the combined total of the other four countries, accounting for two-thirds of global consumption. This makes the U.S. market a key indicator in global tilapia trade trends.

Note: The total trade volume includes four products: frozen tilapia, frozen tilapia slices, chilled tilapia and chilled tilapia slices.

In addition, as can be seen from the table below, the total import volume and import amount of tilapia in the United States in recent years are basically stable:

a particular year	2017	2018	2019	2020	2021	2022	2023
Total import volume (10,000 tons)	18.42	17.25	17.25	19.05	17.25		16.97
Imports (billion United States dollars)		5.917	5.917	6.15	5.917	7.49	6.34

The United States is the world's largest import market for tilapia, while China is the largest exporter to the United States, accounting for more than half of U.S. imports over the years.

The international tilapia trade is largely affected by the development of sino-US trade relations.

Since 2002, China has maintained its position as the top exporter of tilapia to the U.S. market. The trade volume of tilapia imported into the United States also increased from 19,000 tons in 1996,24,400 tons in 1997, and 67,200 tons in 2002 to 173,700 tons in 2007. That year, tilapia accounted for 7% of the 2.46 million tons of edible fish imported into the United States, becoming the most important fish product after tuna, cod, and salmon. Until 2012, the international trade volume of tilapia continued to grow rapidly, coinciding with the rapid increase in China's tilapia aquaculture production before 2014.

In 2013-2014, China's tilapia industry had already reached a ceiling, with tilapia becoming the world's third fastest-growing aquaculture species. This period also marked the ceiling for U.S. tilapia imports, which fluctuated between 170,000 to

190,000 tons over the subsequent decade. The latest data shows that in 2023, the total U.S. imports of tilapia amounted to 169,000 tons.

Although China has remained the world's largest tilapia aquaculture and exporter over the past decade, and the United States continues to be the largest tilapia importer globally, the structure of both countries has undergone adjustments. While China's largely balanced export volume still largely remains allocated to the United States, its export shares distributed to Latin America, Europe, the Middle East, Africa, Japan, and other regions have been steadily increasing. Since 2009, the United States has focused on improving the issue of single-source imports, with Chinese products' proportion in its total imports continuing to decline. During the same period, the share of Indonesian and Latin American products began to grow rapidly.

In 2023, China's annual tilapia exports to the United States reached 58,000 tons. Although China remains the largest supplier to the U.S., the share of Latin American suppliers such as Colombia, Mexico, and Honduras has been gradually increasing. The U.S. is the most important target market for high-quality tilapia exports from Latin America.

In the first phase, the project area is set at 2000 hectares of aquaculture water and 100 hectares of land area. The total investment of the project is expected to reach 50 million US dollars over a period of 10 years! The total value of the project is expected to reach 1.3-1.8 billion US dollars.

The total investment for the current phase of the project is $50 million.

1、$2 million is required for the preliminary work of project planning and approval (various international level demonstration).

2、Fixed assets (US$30 million required) include:

1）The project is expected to use 100 hectares of land. The lake center island (including land leveling, ship dock, 6 tower cranes, aquaculture hatchery, inspection laboratory, processing plant, logistics land, power generation equipment, photovoltaic facilities, water purification equipment, sewage treatment, etc.) is expected to invest 18 million US dollars;

2）The processing line for tilapia (including cutting, cleaning, sterilization, quick-freezing, packaging and warehousing) is expected to cost $7.5 million (based on a daily processing capacity of 60 tons)

3）The processing line for white shrimp is expected to cost $2.5 million;

4）Net boxes, feeding machinery, patrol boats, salvage boats and other equipment are expected to cost $5 million;

5）Freezing and fresh storage warehouse, with a storage capacity of 1200 tons, is expected to invest 5 million US dollars;

The liquidity injection (requiring $20 million) includes:

1）$2 million for fish seedling; $1 million for shrimp seedling;

2）Feed feeding is estimated at $4 million/year;

3）For workers in processing plants, seedling raising and fishing, 500 people (two shifts, $1,500 per person per month, 14 months), the annual wage reserve for workers should be $10.5 million per year;

4）Management and technical management personnel, estimated at $2.5 million/year;

Combined with domestic breeding data and preliminary estimates by the expert team:

1）The 2,000-hectare lake produces approximately 57,375 tons of fish annually. With a 1:0.38 ratio for producing fresh fish fillets, this translates to an estimated 21,800 tons. As of December 2023, the retail price in Panama stands at $10.96 per kilogram, while the U.S. CIF price is $6 per kilogram. After deducting shipping costs, port charges, other export expenses, and inland transportation fees, we calculate the net price at $5.10 per kilogram based on an 85% discount rate.

Annual sales revenue is $110 million

2）The annual white shrimp production is expected to exceed 20,000 tons in the initial stage; as of November 2020, the FOB price of Ecuador's white shrimp exports to China was $4.94 per kilogram, and it has been gradually increasing. Based on an average price of $4.5 per kilogram, the sales revenue of white shrimp is $90 million.

This could bring in more than $200 million a year for fish and shrimp.

Fresh tilapia is exported to Europe and the United States, and white shrimp is exported to China.

We currently manage 12 million hectares of water surface, which is six times the current aquaculture area. The entire lake region spans 45 million hectares. If we expand aquaculture operations, the production capacity will increase not by six times, but by seven to eight times, with capital investment required to rise only 3-4 times.

Moreover, we still have vast tracts of indigenous lands available for utilization.

As our fishery farming and processing operations reach a certain scale, we will expand and refine projects including feed processing, integrated livestock meat processing, fish meal production, intelligent low-temperature cold chain logistics, pharmaceutical-grade fish skin refining, and collagen extraction from fish scales. This comprehensive development will ultimately create an integrated industrial park that combines fishery breeding, slaughtering, processing, refining facilities, and aquaculture training bases.

Export projects of aquaculture processing in expandable lake areas

Project 1. The annual export value of tilapia in Europe and the United States is 150 million US dollars, including 130 million US dollars of chilled fish slices and 20 million US dollars of fish bone and fish powder particles.

Carp farming, processing and sales: output value of 180 million, after-tax profit of more than 50 million US dollars

1、Annual production of fish fillets (H.S. code 0304) 36,000 tons

The per-mu yield is 3,000 adult fish. With three production seasons annually, the qualified output reaches 8,000 fish, with surplus used as feed. Each fish weighs approximately 1,000 grams, enabling a per-mu yield exceeding 10,000 fish. Conservative estimates indicate an annual production of 8,000 metric tons (8,000 fish) of adult fish. For a 1,000-hectare cultivation area, the annual output reaches 120,000 metric tons, with each season maintaining a stock of 40,000 tons.

Fish: Moisture: Fish slices = 40%: 30%: 30%

Per standard fish fillet (two servings): 150g x 2 = 300g

Standard box is 600g, net weight 600g (4 tablets)

There are 24,000 kilograms of fish slices per mu

The yield per hectare is 8000X15=120000 kg.

36,000 kg of adult fish slices per hectare, and 36,000 tons (about 36,000 tons of raw fish slices) of chilled fresh fish slices per 1,000 hectares

The fish is 48,000 tons

The domestic breeding cost is within 0.7 to 1 US dollar per kilogram.

The breeding volume of tilapia in Hainan, China is 325,000 tons.

2、The annual output value of tilapia is $182.4 million.

According to the market price in North America and Europe, it is 4 US dollars/kg (FOB wholesale price), and the total value is 36000X4X1000= 144 million US dollars

The price of fish meal back to China is $800 / ton, totaling $38.4 million. The price of fish meal back to China is $800 / ton, totaling $38.4 million.

The total of the two is 14,400 +3840 = $182.4 million, which counts as $180 million

Note: Export quarantine standards (US FDA low acid registration), price increase of 15%.

The breeding cost of tilapia in the United States is $2.30 per kilogram, while the export price in China is $1.80 per kilogram. The loan interest rate for Chinese farmers is 6%! The water temperature should be maintained at 28 degrees Celsius, and the oxygen content must not be lower than 5 mg/L.

Cooked tilapia skin sells for 40 yuan/kg (6 US dollars) on JD

Project 2, the annual export value of breeding South American shrimp is 20 million US dollars

Mainly sold to China, Japan, South Korea, and other regions, with local procurement (breeding + logistics costs) at $0.2 per kilogram, while the domestic wholesale price is $3 per kilogram. The production line in China utilizes mature processing machinery such as automatic shrimp shelling machines. The company began large-scale breeding operations in its second year. The breeding base can accommodate 500 hectares of water area.

South American shrimp in China originates from Ecuador, with a local procurement price of $0.15 per kilogram. It is currently in high demand on the Chinese mainland.

Project 3: Breeding large crabs in lake water, with meat exports to China reaching $30 million.

The cultivation of hairy crabs requires a subtropical monsoon climate characterized by warm, humid conditions with high temperatures and abundant rainfall. The water temperature ranges between 15-30°C, supported by dense river networks and numerous lakes. These natural freshwater ecosystems feature high dissolved oxygen levels, thriving aquatic vegetation, and abundant small fish and shrimp populations. For optimal conditions, 1,000 hectares of pure freshwater lake areas can be utilized, which can also be integrated with tilapia farming systems.

The yield per mu (approximately 667 square meters) reaches 120 kg. The aquaculture system spans 1,500 mu (1,000 hectares) of ponds, which can be co-cultured with tilapia and South American shrimp. The total production stands at 1,800 tons, with 10% meat yield and 180 tons of crab meat output, supported by ready-made harvesting equipment.

The domestic wholesale price is 200 yuan per kilogram, and the domestic order is 15 US dollars per kilogram (for the domestic Yimai Company order). The output value is 27 million US dollars. The output value of other shellfish used as feed is 3 million US dollars. This project is valued at 30 million US dollars. Whether to freeze and export to China and other regions will be planned based on market conditions.

Project 4, breeding more than 10,000 short-mouthed crocodiles, annual output value of 15 million US dollars (100 million yuan)

The temperature should be 20-35 degrees Celsius, and direct sunlight is needed every day to promote calcium metabolism. The water area should be more than 70%, and the depth should be more than 2 meters, which is 1.5 times the length of the crocodile.

The enclosure walls are over 2 meters high and angled at 45 degrees. Maintenance costs: Adult crocodiles require 5-7 kilograms of live fish or poultry weekly, with annual feed costs reaching $1,000. During breeding season (June-July), sandy spawning areas must be provided under a constant temperature of 28-32°C.

The output value of 10,000 breeding animals is 100 million yuan, or $15 million.

Crocodile meat and leather. Crocodile meat is a high-protein, low-fat, and low-cholesterol food rich in amino acids and trace elements, which helps boost physical fitness and immunity. The market demand for crocodile meat is substantial, particularly in regions like Southeast Asia and Africa, where it is considered a premium delicacy with a high price tag.

Crocodile leather, a premium material prized for its fine texture, glossy finish, and exceptional durability, is the go-to choice for crafting luxury items like handbags, shoes, and belts. Its demand remains strong in developed markets such as Europe, America, and Japan, where it's widely regarded as a symbol of luxury with premium pricing. Notably, a square meter of this premium leather can fetch over $10,000 in international markets.

Project 5. Export of farmed eel to Japan

Upon receiving an inquiry from Japan's Itochu Corporation China, we are requested to provide 100 hectares of freshwater eel aquaculture water in Panama's pristine lake area. The project will be invested in, cultivated, and operated by Japan, while we will provide labor services and leasing support. We plan to collect a ten-year resource fee for the cooperative aquaculture operation.

Eels, a commercially valuable aquatic species, have garnered significant attention due to their high nutritional value and market demand. They excel in both culinary and medicinal applications. Most processed eels are primarily consumed, supplied to seafood restaurants and major markets. With relatively high prices, eels are particularly prized for their exceptional nutritional content—vitamin A levels are 60 times higher than those in common fish species and hundreds of times greater than regular beef or pork. Additionally, they are rich in vitamin E, vitamin B1, vitamin B2, and abundant phospholipids. Domestically, eels maintain strong demand in first-and second-tier cities, consistently ranking among the top-performing aquatic products in annual sales. Internationally, their popularity drives substantial exports, with Japan showing notably high consumption levels.

BAYAFARM financial platform section

Linking DeFi Capital to the RWA Revenue Platform for Physical Agriculture

BAYA FARM is committed to becoming the world's leading RWA investment protocol, specializing in the assetization of Panama's high-value and high-growth agricultural commodities (including Panamanian tilapia, livestock, and regional agricultural products). Through a multi-chain, composable, and deeply liquid decentralized finance ecosystem, it delivers stable, substantial returns with minimal correlation to crypto markets to qualified global investors.

By digitizing traditional investment banking and securities services through financial institutions 'regulatory and clearing platforms, we will establish a digital financial exchange using cryptocurrency as the financing instrument. Leveraging third-party service providers including institutions and law firms, we will build integrated infrastructure spanning from digital listings to cryptocurrency investments, fulfilling the financing needs of global SMEs for digital IPOs. This initiative achieves authentic RWA transformation by creating blockchain-based regulatory frameworks for digital financial institutions, establishing foundational settlement technologies and operational infrastructure for global crypto finance. Supported by cryptocurrency technology (cryptoconcurrency) and Web3.0's next-generation internet platform, this business ecosystem delivers seamless, round-the-clock financial services that cover the entire lifecycle of real economy digitalization.

The current global financial landscape is a complex network of intermediaries, inefficient systems, and legal frameworks. Traditional cross-border payments are often slow and costly, while foreign exchange transactions face uncertainties and risks due to currency volatility and high fees. The decentralized nature of currencies further contributes to a lack of standardization and interoperability. The digitalization capabilities we support have the potential to fundamentally transform this ecosystem. By providing decentralized, transparent, and secure transaction recording methods, these technologies can eliminate many inherent inefficiencies in current systems. For instance, stablecoins like USDC could enable faster, cheaper, and more transparent cross-border payments by eliminating the need for intermediaries.

Similarly, we can develop a more stable and efficient approach to foreign exchange trading that reduces risks and uncertainties. These technologies have the potential to fundamentally transform international transactions, creating a more inclusive, efficient, and secure global financial system. By democratizing access to financial services, digital currencies and blockchain technology can empower individuals and businesses worldwide, driving economic growth and financial inclusion. While challenges remain, the transformative potential of digital currencies in revolutionizing cross-border payments and foreign exchange remains immense.

Legal Framework Support for Regulatory Compliance: With the advancement of Risk-Based Assurance (RWA), global legal and regulatory frameworks have been progressively refined, providing robust support for RWA compliance operations. Regulatory Recognition Through Institutions and Law Firms: An increasing number of regulatory bodies are recognizing RWA's potential and have implemented measures to promote its healthy development.

Global Investor Access: RWA enables global investors to access and invest in assets previously restricted to specific regions or countries, expanding market coverage. Cross-border Transaction Convenience: Blockchain technology applications streamline international transactions while reducing friction costs in trade. Enhanced Financing Efficiency: Our RWA exchange boosts capital formation and economic growth by providing innovative financing channels that help businesses—especially SMEs—secure funding more effectively. Post-launch diversification: The platform attracts diverse capital sources including traditional financial institutions and cryptocurrency investors, offering enterprises broader financing options.

Trade settlement issues

In traditional cross-border payment systems, merchants and consumers face challenges including high transaction fees, lengthy processing times, and lack of transparency. First, these payments typically involve multiple intermediaries such as banks, payment platforms, and clearing institutions, where each step may incur additional costs and delays. Second, traditional financial institutions often require several days to complete cross-border transactions, with opaque progress tracking at every stage that prevents real-time monitoring of fund movements. Furthermore, evolving foreign exchange controls, tax policies, and compliance requirements create complex regulatory environments for cross-border payments, significantly increasing operational risks and costs.

These challenges not only undermine the efficiency of global trade but also erode trust between businesses and consumers, hindering the growth of the digital economy and cross-border e-commerce. As the world undergoes digital transformation, addressing these pain points has become a critical priority for both merchants and governments. Our financial platform effectively tackles these issues through blockchain technology, which enables seamless cross-border payments via fast, convenient, and real-time settlements. Unlike traditional payment systems, blockchain creates a decentralized payment network that eliminates intermediaries and transaction fees in conventional banking, significantly reducing cross-border payment costs. Our instant settlement feature eliminates lengthy waiting periods, allowing real-time transaction confirmation for both merchants and consumers, which greatly enhances transaction efficiency.

BAYA FARM Fisheries RWA Financial Platform

1. BAYAFARM Linked Stablecoin: The cornerstone of programmable currencies

As federal regulation looms, stablecoins — embodiments of programmable currencies — are teetering on the brink of transformative growth, fundamentally reshaping our understanding of money. In the U.S., two issuers dominate this field: Circle (issuing USDC as a multi-chain solution) and Paxos (providing token solutions like PayPal's PYUSD). Globally, stablecoins have a market capitalization of approximately $125 billion, forming the foundational layer powering value internet ecosystems. With their stability and flexibility, stablecoins will revolutionize global payments, remittances, e-commerce, and trade finance. Our settlement platform will also enable trading investments using stablecoins and BAYAFARM's linked tokens, reducing risks while enhancing transaction convenience.

2. Private credit: Empowering small and medium-sized local fisheries businesses through DeFi

Our platform will also provide on-chain loans for future Panamanian industries and SMEs, helping them overcome financing challenges, secure funding more easily, and expand their operations. While the U.S. private credit market is valued at $1 trillion and the global private credit market at $1.7 trillion, small and medium-sized enterprises have long been excluded from these markets. DeFi lending platforms like Centrifuge, Goldfinch, Credit, Maple, and Huma are redefining the game, opening doors to access debt capital from public markets, banking systems, and traditional private lenders.

3. NFT: Changing the Model of Physical Transactions

In the RWA field, more and more entities are being NFTed. NFT has become a transaction certificate, which is a digital certificate based on blockchain. Its characteristics include:

-Non-replicable: Each NFT represents a unique asset that cannot be replaced or split.

-Ownership transparency: Ownership changes are recorded on the chain and can be verified without third-party intermediaries.

-Supply chain management: Fishery products are tracked through one code per item, and NFT records test reports to enhance consumer trust.

Our physical fish can also be tracked in the future, and may become a certificate when users trade and deliver, so that traditional assets have new properties of verification and trading.

4. DeFi in Climate and Regenerative Finance

As environmental, social, and governance (ESG) concerns gain momentum, blockchain technology is driving transformative changes in the $2 billion carbon market. Companies like Flowcarbon are harnessing blockchain's potential to enhance transparency in this critical sector, which must expand 15-fold by 2030 to meet the Paris Agreement targets. The technology's precision and transparency across every phase of the carbon lifecycle are essential for advancing a sustainable future.

5. Tokenized deposits and wholesale bank settlement: revolutionizing cross-border transactions.

Blockchain technology is revolutionizing how banks process tokenized deposits and wholesale settlements. While central bank digital currencies (CBDCs) may not be an urgent priority in the U.S. – particularly when private issuers remain subject to federal or state-level regulation – several banks are already conducting blockchain trials for tokenized deposits and intra-bank/interbank wholesale settlements. Industry leaders like Citibank and JPMorgan Chase have demonstrated the potential of instant cross-border transactions through their pilot programs. Over the coming months, this sector will continue to expand, driving greater efficiency across global financial systems.

These RWA trends herald the dawn of a new financial era, offering solutions to longstanding challenges. While their current market value may seem modest, their transformative potential is immeasurable. Stablecoins, decentralized private lending, physical-backed intangible assets, consumer brand intangibles, DeFi in climate and renewable finance, along with tokenized deposits/wholesale banking settlements are not just trends—they form the bedrock of a more inclusive, efficient, and sustainable financial future. By 2026, these innovations will undoubtedly lead the charge, unlocking unparalleled opportunities for businesses and individuals alike.

The blockchain (RWA) technology and solutions used

How RWA works

A complete Real-World Asset (RWA) system requires three essential components: off-chain standardization, asset information alignment, and DeFi protocols specifically designed for RWA. Off-chain standardization is crucial as it establishes the asset's value, ownership rights, and legal status within the physical world before integrating real-world assets into digital ledgers. When evaluating RWA value, key factors include market prices, historical performance records, and the physical condition of assets. Furthermore, the asset must possess undisputed legal ownership verified through contracts or official documentation.

Design a DeFi protocol dedicated to RWA A DeFi protocol designed specifically for the RWA financial model will not only facilitate transactions for users, but also facilitate access to information related to off-chain assets, thereby attracting more investors.

Four core attractions tailored to investors

We deeply understand the core demands of investors: returns, safety, liquidity, and transparency. Every design at BAYA FARM is designed to maximize these values.

1. Diversified and predictable sources of "real yield" (Real Yield)

Investors no longer need to rely on unsustainable token inflation to generate returns. BAYA FARM's returns are directly derived from the value creation of the real economy, with a natural anti-inflation attribute.

Capital Appreciation Income: Invest in Angus cattle breeding across Argentina's Pampas region. RWA tokens represent ownership shares in the cattle herd. As the cattle grow and reproduce, their biological assets naturally increase in value. When the herd is sold to premium meat processors, investors receive profit distributions corresponding to the capital appreciation.

Cash flow returns: Invest in Colombian coffee bean plantations or Panamanian tilapia farms. RWA tokens represent ownership of forward sales contracts for future production. Investors can receive regular (e.g., quarterly) stable cash flows from global coffee buyers or aquaculture distributors.

Carbon Credits and ESG-Enhanced Returns: We collaborate with farms implementing sustainable and regenerative agricultural techniques. Through remote sensing satellites and IoT devices, we verify their carbon sequestration capacity and environmental contributions, generating certified on-chain carbon credits (CCRs). These credits can be bundled into Renewable Wind and Solar Assets (RWSAs) and sold on dedicated markets to large enterprises seeking carbon neutrality solutions, delivering additional green returns for investors.

2. Organizational-level security and risk isolation framework

When investing in physical assets, risk control is the first priority. We have designed a comprehensive safeguard system combining off-chain and on-chain.

Legal Entity Separation (SPV): Each underlying asset (such as a ranch or fishery) is registered in a separate Special Purpose Vehicle (SPV) in jurisdictions with sound legal frameworks, such as Panama or Switzerland. The RWA purchased by investors essentially represents equity or debt instruments in this SPV. This structure ensures that even if the BAYA FARM platform itself encounters operational issues, ownership of the underlying assets remains legally protected, maintaining complete operational isolation from platform risks.

Full-asset insurance: We partner with leading insurance groups to insure all tokenized physical assets (such as live cattle and farmed fish stocks), covering risks including natural disasters, theft, accidental deaths, and other hazards. Critical policy details will be recorded on-chain as metadata for investors' easy access.

Third-party custody and audit: Introduce institutions to conduct regular asset audits, and have reputable third-party custodians supervise the bank accounts and legal documents of SPV to ensure that the flow of funds and the status of assets are open and transparent.

3. A deep mobility engine built in a Lego-style combination

Liquidity is the lifeblood of RWA. Through innovations at the protocol layer, we enable non-standard entity assets to achieve liquidity comparable to native crypto assets.

Double-layer token structure:

Ownership Certificate Layer (SFT): Using the ERC-3525 standard, an asset (such as a herd of cattle) is tokenized into a semi-homogeneous token (SFT) that can be split and merged. This solves the problem of the original asset being indivisible.

Liquidity Certificate Layer (vToken): This is the core mechanism for investor attraction. Investors can deposit their SFTs into ERC-4626-standardized vaults categorized by asset types (e.g., "Argentine Beef Pool No.1" or "Panama Tilapia Pool No.3"). In return, they receive a highly standardized, freely tradable Vault Token (vToken), such as vARBeef or vCLSalmon.

Instant trading and exit: These v tokens can be paired with other assets (USDC, wETH) on any mainstream public chain DEX (such as Uniswap, Curve) to achieve

7x24 hour instant trading, completely solving the pain points of traditional physical asset investment exit cycle and difficult to find counterparties.

Capital Efficiency Maximization: Investors holding BAYAFARM Tokens can serve as over-collateralized assets to lend stablecoins through lending platforms like Aave and MakerDAO, enabling "multi-use of a single asset". For example, by staking vARBeef to borrow USDC and then using the USDC to invest in new RWA projects, this creates a capital circulation loop.

4. Data-driven "God's-eye view" transparency on the chain

Using blockchain and Internet of Things technology, providing investors with unprecedented due diligence convenience.

Real-time asset monitoring: Each farm deploys IoT sensors to track livestock health, aquaculture water quality, and crop growth conditions in real time. This data is transmitted hourly via the Chainlink (Chainlink Predictors) to corresponding SFT metadata. Investors can monitor in real-time whether their cattle herds are healthy and coffee trees receive adequate irrigation.

Imtamable traceability records: From the birth/nursing of livestock, to each quarantine, feed feeding, and finally processing and transportation, all the information at key nodes will be recorded on the chain with a timestamp, creating a complete and tamper-proof supply chain life cycle file.

Blockchain financial platform products

Our product consists of four main parts:

Front-end applications (Dapps) provide asset issuers with a no-code user interface to install applications, perform tokenization processes, and perform on-chain operations on the client side

The front-end application (CEX Purchase Process) provides asset purchasers with a no-code user interface for buying, selling and viewing RWA tokenized by the asset issuer, which can be hosted on the issuer's own website

The Node.js/Express server that connects the Dapp front end to the underlying database infrastructure (back end)

Database and cache infrastructure that can be deployed on AWS or GCP

The software is designed to provide a wizard-like user experience that guides issuers through the tokenization process step by step and recommends appropriate applications based on the specific asset type to be tokenized. These tokenized assets include:

Physical assets requiring warehouse management and logistics, such as timber, tilapia, etc. Restricted securities with filed cash generation assets for on-chain dividend distribution access can only be sold to qualified investors.

To accommodate the diversity of different tokenized assets, we adopted an app store model that allows issuers to install modular applications to meet their specific tokenization needs.

Buy/sell: The process of transferring US dollar proceeds to the blockchain for token holders and cashing out earnings from on-chain sales. Going forward, we will also implement monitoring and sanctions measures to ensure compliance with Anti-Money Laundering (AML) regulations.

Primary issue and secondary trading: Asset purchasers need to be allowed to trade their assets on the secondary market

ATS (Alternative Trading System) integration: The need to allow asset purchasers to trade their assets on the ATS as a subset of the secondary market.

Agreements and patterns on the chain

Our technical solution is a tightly collaborative "smart contract protocol stack", with each layer serving a specific function.

Smart contract "four-layer cake" model

The Asset Identity Layer) -ERC-3525/ERC-721

Function: The unique on-chain identity of an entity asset is the root of ownership.

Implementation Details: When an audited and legally encapsulated asset package (e.g., "50 metric tons of Panamanian tilapia produced in Q42025") is confirmed, the platform will mint an ERC-3525 Stable Fractional Token (SFT). The SFT's slot represents the asset category, id denotes the unique batch, and value indicates the share quantity (e.g., 50,000 units, with each unit representing 1 kilogram). Compared to ERC-721, ERC-3525 offers investors the flexibility to easily divide a 5-ton SFT into 10 smaller tokens each representing 500 kilograms, significantly enhancing transactional agility.

Example of raw data (JSON):

codeJSON


```
{
"name": "Chilean Salmon Batch #CS25-Q4-A",
"description": "Forward contract for 50 metric tons of Grade A Chilean Salmon, harvest expected in Q4 2025.",
"asset_spv": "BayaFarm_Salmon_SPV_003_AG",
"insurance_policy": "Lloyds-POL-89A3C4",
"auditor_report": "ipfs://QmWt...aFpU",
"iot_data_endpoint": "api.bayafarm.io/asset/CS25Q4A/metrics",
"realtime_metrics": {
"water_temp": "8.5°C",
"biomass_estimate": "48.2 Tons",
"last_update": "2025-09-29T13:30:00Z"
  }
}
```


Liquidity Aggregation Layer (The Liquidity Aggregation Layer) -ERC-4626

Function: Convert non-standard, low liquidity SFT into standard, high liquidity ERC-20 tokens.

Implementation Details: We develop an ERC-4626 treasury smart contract for each asset class (or portfolio with similar risk/reward profiles). When investors deposit their SFT through the deposit() function, the treasury calculates the value of the deposited SFT (via oracle pricing) and mints a proportional amount of vToken to investors through the mint() function. Conversely, investors can redeem their vToken via the redeem() function to reclaim the underlying SFT. This mechanism serves as the critical hub enabling liquidity.

Cashflow Distribution Layer (The Cashflow Distribution Layer) -ERC-2222

Function: to achieve automated, low-cost and transparent income distribution.

Implementation Details: When offline physical assets generate sales revenue, BAYA FARM converts fiat currency earnings into USDC or other stablecoins. These funds are transferred to a capital distribution contract linked to the ERC-4626 vault (compliant with ERC-2222 standards). The contract automatically pushes USDC to each holder's wallet address in proportion based on the current snapshot of vToken holders, eliminating manual collection and significantly enhancing user experience.

Compliance & Access Layer (The Compliance & Access Layer) -ERC-3643

Function: Ensure that the platform is operated in compliance with global financial regulatory (e.g. AML/KYC) requirements and pave the way for the introduction of institutional capital.

Implementation Details: Before interacting with the platform, investors must complete identity verification through our partners (e.g., Synaps, Securitize). Upon successful verification, their wallet addresses will be marked as "qualified" by an "identity registration contract". The ERC-3643 protocol examines every transaction involving regulated RWA (particularly initial coin offerings). The canTransfer() function verifies whether both parties' addresses possess valid on-chain investor credentials, blocking non-compliant transactions at the protocol level and enabling the platform to securely serve a broader community of qualified investors.

Cross-chain interoperability: Building a superhighway to liquidity

To capture liquidity and users across the market, we use Chainlink CCIP (Cross-Chain Interoperability Protocol).

How it works: The issuance and core logic of vToken is on a main chain (e.g., Ethereum or Arbitrum), but "encapsulated vToken" can be created on multiple target chains (e.g., Solana, BNB Chain, Polygon) through CCIP.

Benefit for Investors: Solana users can directly trade vARBeef tokens using SOL or USDC on the Radium DEX within their ecosystem, eliminating the need for complex cross-chain bridging. The underlying cross-chain messaging and asset transfers are securely handled by CCIP, delivering a seamless experience identical to single-chain operations. This truly realizes the vision of "one tokenization, network-wide liquidity".

In the tokenization part, in addition to using common token protocols such as ERC-20 and NFT protocol, we will also use a number of token protocols such as ERC-721, ERC-2222, ERC-3525, ERC-3643, ERC-4626 to achieve the final tokenization of RWA.

The upgraded BAYA FARM transcends a basic Reservoir Asset War (RWA) concept, evolving into an advanced financial protocol with multi-layered security mechanisms and deep liquidity, specifically designed for savvy investors. By integrating South America's premium physical agricultural assets with cutting-edge DeFi technology architecture, we've created a groundbreaking asset class: transparent, compliant, high-yield real-world assets that can be traded anytime. This innovation not only introduces revolutionary financing channels to traditional agriculture but also establishes a stable and robust value anchor for the digital asset ecosystem.

Summary

The BAYAFARM project leverages blockchain technology to issue assets and establish DeFi (Decentralized Finance) capabilities through tokenization of physical asset shares. As a standalone system operating independently of the real world, blockchain generates and utilizes data within its own ecosystem. Off-chain assets cannot be directly utilized on the network. Real-world Assets (RWA) are tokens representing tangible assets for transactions, including both regular tokens and NFTs. These assets encompass project investments, loans, contracts, guarantees, and other high-value items used in transactions. Compared to traditional finance, the blockchain-based RWA essentially serves as capital securitization.

Through digital transformation of premium assets, all high-quality assets can undergo RWA conversion on our exchange platform. We are committed to fully digitizing traditional investment banking and securities investment operations. Leveraging our exchange's investment banking license and financial institutions' clearing platforms, we are building a digital financial exchange. By utilizing digital currency as a financing tool and collaborating with third-party service providers including law firms, banks, and auditors, we have established an integrated infrastructure spanning from digital listings to cryptocurrency investments. This initiative aims to meet the financing needs of SMEs and individual entrepreneurs in the Americas through digital listing solutions.

BAYAFARM is committed to becoming a transformative force in the financial sector by tokenizing real-world assets, bridging traditional asset classes with the digital finance world. Through digitizing the value of physical assets and securing them with distributed ledger technology, this initiative aims to democratize investment opportunities while enhancing liquidity and accessibility. From real estate ownership to the tokenization of commodities and environmental assets, blockchain applications are designed to achieve greater efficiency, inclusivity, and transparency. As we continue to advance, tokenization demonstrates immense potential to reshape financial ecosystems, laying the foundation for building a more interconnected and accessible financial market.

In the future, BAYAFARM will not only digitize the high-quality assets in the Americas, but also deeply explore the global high-quality asset resources, break the barriers of traditional investment models, ensure that high-quality

resource assets will no longer encounter financing difficulties, and provide more convenient and efficient investment channels for each investor.