

White Paper of Aquilaria RWA Project: Singapore-Hainan Cross-Border Biological Asset Tokenization Agreement

——A Global Aquilaria Asset Digital Token Agreement Based on the Dual-Cycle Anchoring Model

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Singapore-Hainan Cross-Border Biological Asset Tokenization Agreement

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I. Main Body

Issuer: Aquilaria RWA Group (Singapore)

Exchange: JuCoin Exchange (a compliant licensed platform)

Underlying Asset Provider: Oriental Aquilaria Group (owns 150,000 "Reke No.2" Aquilaria trees in Hainan, China)

II. Core Architecture Design

Dual-Cycle Asset Anchoring Model

1. Basic-Level Assets (Current Value Support)

1. **Anchored Assets:** 20,000 "Reke No.2" Aquilaria trees with an 8-year age (currently 7 years old, with real-time IoT data of the plantation provided by Oriental Aquilaria Group).

2. **Current Valuation Logic:** A single 8-year-old tree can produce 800 grams of high-quality *Aquilaria crassna* (certified data by Chinese Academy of Tropical Agricultural Sciences). Based on the current market price, the total value is approximately USD 448 million (800g/tree × 20,000 trees × USD 28/g *Aquilaria crassna*).

2. Extended-Level Assets (Forward Value Expectation)

1. **Commitment to Maintenance:** The project party will continue to maintain the trees for 22 years until they reach 30 years of age.
2. **Forward Output:** A single tree is expected to produce 3,000 grams of *Aquilaria* (sunken grade).
3. **Increase in Anchored Assets:** The anchored assets will be increased to 60,000 "Reke No.2" *Aquilaria* trees, with an annual increase of 20,000 trees for 2 consecutive years, and a maintenance period of 30 years.

III. Token Economic Model

Parameter	Value	Anchoring Logic Explanation
Total Issuance	840,000 tokens	Upper limit set by smart contract
Issuance Price	\$25 per token	Total financing amount: USD 210 million
<i>Aquilaria</i> Quantity anchored per Token	Approximately 21 grams of <i>Aquilaria</i> (sunken grade)	(Total <i>Aquilaria</i> quantity of basic-level + extended-level assets) ÷ Total token quantity
Special Rights of Original Tokens	1% of each transaction amount	After original token holders sell their tokens, they can still obtain benefits from each subsequent transaction of this token
Current Value Support Ratio	2.13	Current assets of USD 448 million ÷ USD 210 million
Forward Value Support Ratio	171	Forward assets of USD 36 billion ÷ USD 210 million

IV. Technical Implementation: Dynamic Valuation and Cross-Chain Compliance

(I) Dual Verification of Blockchain and IoT

1. Adopt the IoT solution of Ant Chain + Hainan Aquilaria Tree Traceability Platform to collect real-time tree growth data (survival rate, pest and disease index), automatically calculate the current valuation and upload it to the chain.
2. Access the Singapore XDI Agarwood Price Index through Chainlink Oracles to dynamically adjust the token's NAV (Net Asset Value).

(II) Singapore-Hainan Dual Compliance Architecture

1. **Legal Carrier:** Singapore Aquilaria RWA Group holds the digital assets of Aquilaria trees to achieve asset segregation.
2. **Trading Compliance:** Tokens are issued on JuCoin Exchange, with restrictions on purchases by non-qualified investors.
3. **Cross-Border Rights Confirmation:** Hainan International Arbitration Court confirms the property rights of Oriental Aquilaria Group and maps them to on-chain NFT certificates.

V. Risk Hedging and Yield Enhancement Mechanisms

(I) Risk Mitigation Matrix

Risk Type	Response Measures
Biological Cultivation Risk	Introduce qualified insurance companies for coverage and monthly reports by third-party forestry supervision
Price Fluctuation Risk	Establish a \$20 million price hedge fund pool, linked to the Singapore Agarwood Futures Index
Fund Misappropriation Risk	The annual maintenance budget of \$1 million is supervised by Hainan International Arbitration Court
Technology Substitution Risk	Jointly establish a R&D center with Chinese Academy of Tropical

	Agricultural Sciences to upgrade the tree species' disease resistance and agarwood formation efficiency every 5 years
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(II) Structured Design of Return

A [Obtain Tokens] --> B [Return Options]

B [Return Options] --> C [Trading, Delivery, Holding]

C [Trading] --> D [Cash Redemption]

C [Delivery] --> E [Agarwood Delivery]

C [Holding] --> E [Long-Term Appreciation]

(III) Market Exit Paths

1. **Trading Exit:** Exit by selling on JuCoin Exchange.
2. **Current Exit:** After holding for 3 years, *Aquilaria crassna* can be redeemed (21 grams of current-period agarwood per token according to the token ratio).
3. **Forward Exit:** After the trees reach 30 years of age, investors can choose to redeem sinking agarwood or be repurchased by the issuer at a minimum of 50% of the market price.

VI. Compliance Disclosure and Asset Audit

(I) Valuation Methodology

1. **Market Comparison Method for Current Assets:** Refer to the agarwood spot quotation of Hainan International Commodity Exchange (2025 average price: \$200/g) and the agarwood futures index of Singapore Exchange (USD 500/g).
2. **DCF Model for Forward Assets:** Discount rate of 12% (including 6% biological risk premium and 6% capital cost).

(II) Audit and Transparency

1. **Quarterly Audit by KPMG:** Verify the authenticity of off-chain assets and the use of maintenance funds.
2. **On-Chain Proof-of-Reserve:** Publicize the asset reserve status daily through Zero-Knowledge Proof (ZK).

VII. Social Benefits: Rural Revitalization and Carbon Finance

(I) Common Prosperity Plan: The issuer will distribute 40% of the asset token proceeds to the provider of the anchored assets, shortening the profit cycle to 1 year (the traditional model takes 5 years) to empower the rural revitalization of Hainan.

(II) Carbon Asset Development: 60,000 Aquilaria trees are expected to sequester 14,400 tons of carbon annually, and carbon sink tokens (CARBON-001) can be generated in the future.

Conclusion

This project, through the "current cash flow + forward appreciation right" dual-anchoring model, realizes the integration of long-cycle biological assets and on-chain liquidity for the first time. Relying on the compliance of Singapore RWA and the scarcity of Hainan's agarwood industry, it provides global investors with a hedge asset allocation option that can navigate economic cycles, while promoting the global release of the value of China's local resources.

Appendix

- **Technical Certification:** Identification Report of "Reke No.2" Tree Species by Chinese Academy of Tropical Agricultural Sciences (No. CNHK2021-002)
- **Audit Institution:** KPMG Singapore Asset Custody Special Audit Process V3.1

This white paper is jointly released by Aquilaria RWA Group and Oriental Aquilaria Group. All terms shall be subject to the finally signed legal agreement.