BigWater Protocol: Clean Air, Clean Water, Rewards

1. Executive Summary

BigWater Protocol is the world's first Proof of Impact Protocol that rewards sustainable actions with real-world outcomes in Clean Air and Clean Water. By leveraging DePIN (Decentralized Physical Infrastructure Networks), BigData, DeSci, and Blockchain, it empowers individuals and institutions to drive measurable environmental change. Through a rewards program that incentivizes individuals and organisations to act sustainably, the BigWater Protocol aims to build the world's largest ecosystem of do-gooders and accelerate Climate Change transition. BigWater is creating a circular ecosystem where every action toward sustainability is tracked, rewarded, and transparently verifiable on-chain.

2. Problem Statement

Access to Clean Water remains elusive for 4.4 billion people across 135 countries. Meanwhile, 90% of the global population breathes polluted air. These twin crises threaten public health, worsen inequality, and hinder sustainable development. Traditional infrastructure models are slow, costly, and opaque. A decentralized, transparent, data-driven model is urgently needed. While all sustainable actions and projects would qualify for integration into the BigWater Protocol, the singular objective is to support Clean Water initiatives and interventions thus making "Right to Water" a reality in the world.

2A. Legacy & Foundation: JanaJal

BigWater Protocol builds on the decade-long experience of **JanaJal**, a pioneering organization founded by Dr. Parag Agarwal in 2013 to solve India's clean water crisis. JanaJal has been at the forefront of deploying IoT-enabled Water ATMs and mobile delivery vehicles ("JJWOWs") across 7 Indian states.

Proven Track Record:

- **200M+ litres** of Clean Water dispensed
- **30M+ users served** across urban and rural India
- **2M+ subscribers** to date
- **109M single-use plastic bottles** eliminated
- **1B+ data points** collected over 10 years
- **Real-time IoT + blockchain-enabled monitoring** via patented **JJSUITE** platform
- **Selected** by Government of India for **Jal Jeevan Mission** and **AMRUT 2.0** under Ministry of Jal Shakti as one of 5 innovative technologies for decentralized distribution of clean water in urban, peri-urban and rural areas.
- **Technology Patent granted** for integrated Water Management tech platform by Government of India.
- **Design Patent granted** for three-wheeler Electric Vehicles by Government of India.

JanaJal's award-winning innovative technology platform, IOT-enabled three-wheeler vehicles and smart water treatment plants, form the physical backbone of the BigWater DePIN network. The infrastructure, operational learnings, and verified impact metrics of JanaJal are now being expanded through the BigWater Protocol, bringing transparency, traceability and incentives to the global stage.

Transition to BigWater:

- From local centralized ops to a global decentralized, tokenized model
- Leveraging Web3 to eliminate donor dependency
- Enable global participation via staking, device ownership, and NFT-based clean water credits
- Institutionalize "Circular CSR" by monetizing verified Impact data
- Integrating verified Clean Air and Clean Water Impact into ESG portfolios for corporates

This foundation ensures that BigWater is not starting from zero. It scales a decade of real-world impact through tokenization, offering a rare blend of proven execution and future-facing decentralization. BigWater Protocol builds on the decade-long experience of **JanaJal**, a pioneering organization founded by Dr. Parag Agarwal in 2013 to solve India's safe drinking water crisis. JanaJal has been at the forefront of deploying IoT-enabled Water ATMs and mobile delivery vehicles ("JJWOWs") across 7 Indian states in collaboration with global organisations such as USAID, UKAID, GSMA Innovation Fund, Safe Water Network and various States, Corporates and Charitable Foundations in India and globally.

3. Solution Overview

BigWater combines Real World Asset (RWA) tokenization, DePIN infrastructure, and AI-powered BigData analytics. In a first of its kind, BigWater has developed Smart Air Purifiers as its DePIN device that connects to the BigWater mobile app and shares indoor air quality and other metrics pertaining to environmental data. For every 20 hours that this device is operated, the user triggers rewards in the form of $BIGW tokens that are directly issued to their wallet. The biggest contribution that the user enables is 1000 litres of clean water for underserved communities. For this, the user receives a verified NFT to their account that serves as a Water Credit that has an independent value and utility in the future.

One of the greatest and oldest scientific method of improving air quality, reducing AQI and abating CO2 emissions is planting trees. The BigWater Protocol is supporting the Government of India's Net Zero target by 2070 announced by Prime Minister Narendra Modi during COP26 in Glasgow in 2021. Various activities and initiatives such as large-scale Afforestation, Biodiversity Conservation and Ecosystem Restoration will now be integrated into the BigWater Protocol with the aim to incentivize and reward citizens to protect and preserve the environment through their sustainable actions. The Green India Initiative has been named Mission LiFE – Lifestyle for Environment. These include:

- Monitoring and evaluation of Plantations and Afforestation
- Drone-based monitoring and intelligence data gathering for sustainable projects
- Development and deployment of advanced conservation technologies of natural

resources and data-driven solutions.
- Ocean Cleanups

Actions in this direction aim to deliver the following outcomes:

- Voluntary tree plantation drives
- Green Credits
- Build Ecological Profile of every citizen through a BigWater Score
- Water Credits

The BigWater Protocol has already executed a Memorandum of Understanding with the world's largest voluntary program for citizens initiated in India by the Ministry of Environment, Forest and Climate Change, Government of India on their flagship project; LiFE – Lifestyle for Environment. The core components of this program are as under:

- Geospatial Mapping & Monitoring: Use of satellite imagery, drones, and GIS for real-time tracking of plantations, water bodies, and ecological interventions.
- AI/ML-Based Analytics: Advanced analytics for monitoring plantation health, carbon sequestration, and environmental trends.
- Digital Field Platforms: Mobile/web apps for plantation data entry, image uploading, geo-tagging, and QR-code-based plant tracking.

As the first step, BigWater will be integrating 33 million geo-tagged trees having on-chain Proof of Existence planted by one million verified users that would also be responsible for upkeep and maintenance of these trees. Data of quarterly growth monitoring and digital update of every tree by the user will receive additional rewards. Every user will be incentivised with Clean Water Credits equivalent to 3 Imperial Gallons over 12 months that would be delivered to underserved communities. Therefore, the BigWater Protocol has already committed nearly 100 million Imperial Gallons of Clean Water over the next 12 months. This project is expected to achieve the following milestones:

- Total 100 million verified trees with 6 million users with KYC by December 2025.
- Total 500 million verified trees with 30 million users with KYC by December 2026.
- Total 1 billion verified trees with 50 million users with KYC by December 2027.
- Total 10 billion verified trees with 250 million users with KYC by December 2030.

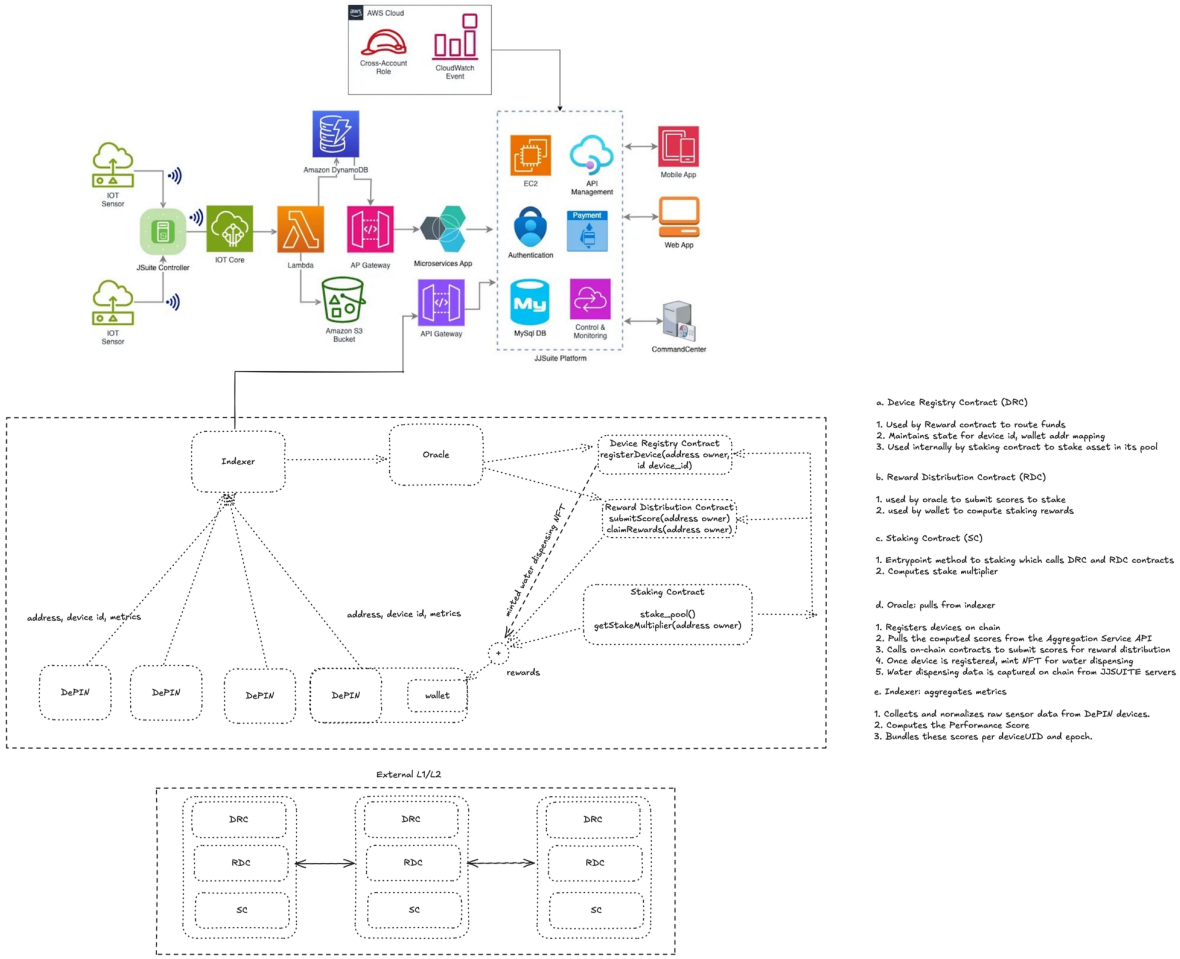
BigWater Protocol is also working with its partner Foundations to extend the rewards program and encourage geotagged Afforestation and Reforestation initiatives across in South East Asia and Latin America with particular focus on the Amazon Rainforests.

4. Market Opportunity

- **Clean Water Market**: Bottled water market expected to reach $565B by 2034
- **Air Purification**: Pollution is the world's single largest universal problem faced by all countries. The TAM is is projected to reach USD 53.66 billion by 2033, growing with a CAGR of 7% during the forecast period (2025–2033)
- **Data Monetization**: Global data analytics market to exceed $250B by 2030

5. Technology Architecture

BigWater is a multi-layered, modular ecosystem integrating Web3 primitives with real-world sustainability infrastructure. Every connected real world asset; whether a geo-tagged tree or a Smart Air Purifier, is considered as a DePIN device supported by verified users having the mobile app integrated with a secure wallet holding $BIGW tokens.



Core Layers:

- **IoT & DePIN**: Air purifiers equipped with sensors (PM2.5, AQI, GPS, humidity, etc.)
- **Geo-tagged Trees:** Supported by Proof of Existence and Growth Tracking
- **Blockchain**: Immutable ledger for Clean Water/Air Proof-of-Delivery and Daily Rewards
- **BigData & AI**: Real-time analytics, predictive maintenance, behavioural forecasting
- **NFT Layer**: Water credits tokenized as proof of impact (minted real-time)
- **DeSci**: Open Climate Impact models aggregating field data

These layers enable a decentralized, transparent, and scalable system aligned with climate goals and SDG mandates.

- **IoT Devices**: Air purifiers with embedded sensors capture AQI, humidity, GPS, PM2.5, etc.
- **Geo-tagged Trees:** Supported by Proof of Existence and Growth Tracking.

- **Blockchain**: Immutable on-chain proof of device, operation and water delivery
- **AI & Predictive Analytics**: Forecasts demand, identifies trends, powers predictive maintenance
- **DeSci Layer**: Open scientific data aggregation for climate change models

6. Protocol Workflow

BigWater Protocol operates as a DePIN-powered Web3 infrastructure layer, where users interact with real-world assets to generate tokenized impact.

Workflow Summary:

1. User registers DePIN device via smart contract and completes KYC (linked to DID)
2. Device streams real-time air quality + operational data to oracle nodes
3. Data validated and scored off-chain, submitted on-chain by verifiers
4. NFTs minted as Proof of Water enabled per epoch, tied to device ID (ERC-721)
5. $BIGW rewards distributed via smart contract, can be staked for additional yield multipliers

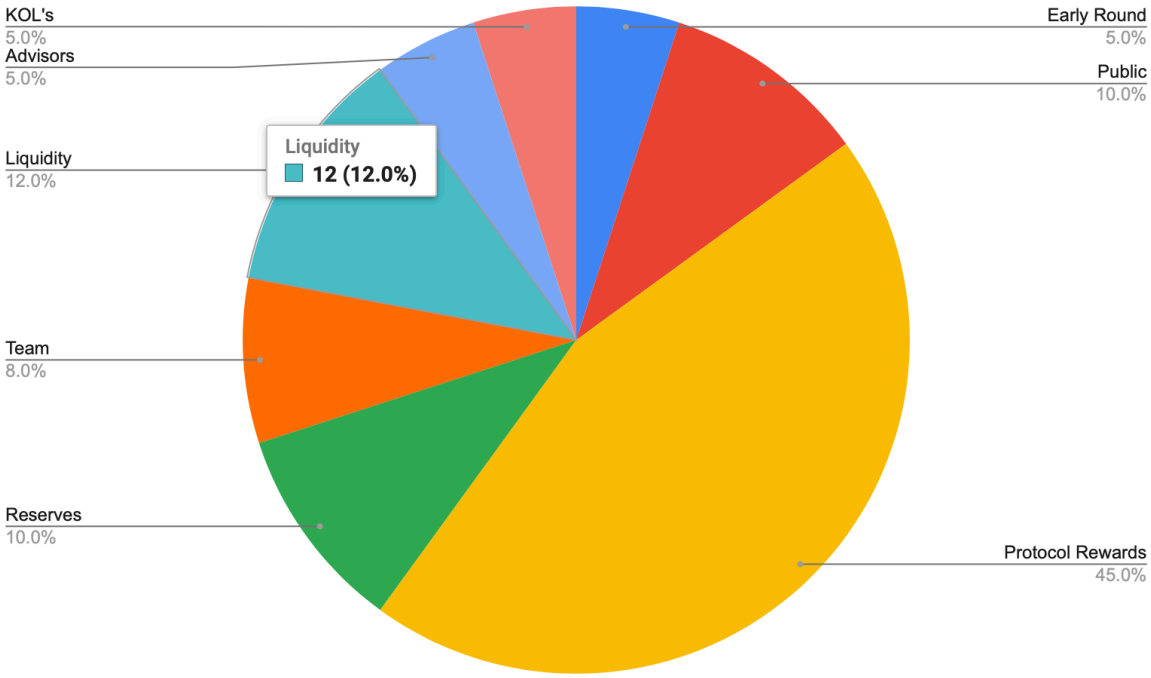
Web3-Native Expansions:

- **Proof-of-Quality Protocol**: Device data is scored by oracle validators in a slashing-enabled reputation model. Tampered or low-quality data leads to lower rewards or deactivation.
- **Epoch-Based Reward Distribution**: All emissions are claimable once per 7-day epoch, aligned with global DePIN reward architecture. Emissions follow a pre-coded decay curve.
- **NFT Utility**: NFTs act as tokenized Water Credits and are tradable via secondary marketplaces. Future utility includes staking, liquidity bootstrapping, and governance voting weight.
- **DAO-Integrated Device Inclusion**: Community governance will control which new device classes can be added into the reward protocol via formal DAO proposals and smart contract upgrades.
- **ZK-based Anonymity Layer (future)**: Exploring zero-knowledge proof integration to preserve user privacy while still verifying sustainability actions.

1. User registers DePIN device and completes KYC
2. Device begins collecting air quality and usage data
3. Data is verified by oracle nodes
4. Rewards in $BIGW are distributed weekly (epoch basis)
5. NFTs minted as proof of Clean Water enabled

7. Tokenomics

BigWater Protocol operates on the $BIGW token — a fixed-supply, utility token powering the Proof-of-Impact economy. It serves as a reward, governance, and access mechanism for stakeholders.



- **Total Supply**: 10B BIGW (Fixed)
- **Token Type**: ERC-20 (L2 Compatible)
- **TGE Price**: $0.0030

Allocation:

- 45% - Protocol Rewards
- 10% - Early Round
- 10% - Treasury
- 8% - Team
- 10% - Public Round
- 12% - Liquidity
- 5% - Advisors
- 5% - KOLs

Utility:

- Register DePIN devices
- Earn attractive staking rewards
- Clean Water NFTs
- DAO governance participation
- Buy Environmental data & NFTs

8. Governance

BigWater intends to transition into a DAO in the future. Token holders will:

- Vote on emissions schedules

- Approve new device types
- Decide treasury allocations
- Participate via staking-based governance

9. Roadmap

Phase 1 (0–3 months):

- Launch e-commerce site
- Commence DePIN device sales
- Partner with KOLs, Influencers
- Launch Telegram Community
- Attractive Rewards for first 10,000 device buyers
- SOPs for fulfilment, refunds, consumables
- TGE on CEX on August 1, 2025

Phase 2 (3–6 months):

- Build B2B deployment channels
- Increase ad spend
- Partner with NGOs for wider reach across South East Asia, Africa and Latin America
- NFT issuance for clean water contributions
- Fulfilment of DePIN devices

Phase 3 (6–12 months):

- Target 100,000 device sales
- Target integration of 1 billion trees and 50 million users
- Execute PR and marketing campaigns
- Launch new variants of DePIN devices

2026–2029 Targets:

- Scale to 2.5M devices
- Serve 12.5M beneficiaries
- Dispense 2.5B litres Clean Water
- Integration of 100 billion trees and 250 million users
- Onboarding other sustainable projects and initiatives

10. Impact Metrics

BigWater leverages a dual-impact framework: delivering measurable environmental outcomes (Air and Water) and generating socio-economic value through data, token rewards, and job creation.

Legacy Environmental Impact:

- 109M single-use plastic bottles avoided
- 616,000 tonnes CO2 emissions targeted abatement. This quantum expected to grow exponentially through integration of Afforestation projects in India and globally
- 2.5B litres of clean water planned over 5 years.

Projected Health & Social Impact:

- $26M in potential medical cost savings
- 367,722 waterborne disease cases prevented (5-year goal)
- $29.9M in micro-income to last-mile entrepreneurs, ~40–50% women-led

Digital ESG & Circular CSR:

- NFTs serve as verified **Water Credits** for ESG reporting
- Corporates can offset their Carbon and Water footprint using on-chain Impact data
- Donors and foundations can invest once and benefit from recurring, transparent impact through BigWater's data monetization model

11. Monetization

- Sale of DePIN devices
- License fee from integration of Afforestation projects and other sustainable initiatives
- Subscription to Datasets (Air & Water)
- NFT-backed Water Credits and delivery of Clean Water to underserved communities
- Token-based reward redemption

12. Partnerships

- **JanaJal-JJSUITE – Patented tech platform for Clean Water delivery**
- **Treegens**
- **XDC Network**
- **Foundership, UAE**
- **Global Safe Water Foundation, USA**
- **Orbital Beam, USA**
- **Global Facilities Management Companies**
- **Web3 KOLs & Influencers**
- **Otherdots Foundation, Cambodia**
- **BFT International Network, Australia**
- **UP8 Trust, Pacifica Region (14 countries)**
- **ImpactableX, USA**

13. Team & Advisors

Dr. Parag Agarwal - Founder & CEO
Founder of JanaJal, social entrepreneur, and technologist. Awarded patent by Govt. of India for IoT-powered water tech. Hon. Doctorate in Social Work & Impact. Visionary behind the BigWater ecosystem. LinkedIn | Website

Vikram Bhattacharjee – VP Software Engineering
A Systems Engineer specializing in low-level protocol design; Vikram has worked on Avail's light-client core, ParallelChain's networking layer, and contributed to rust-libp2p, reth, axiom-crypto, Foundry, CosmWasm, and more. GitHub

Tina Dua - Head ESG
Experienced ESG and impact management leader. Drives sustainability strategy and ensures BigWater aligns with UN SDGs. LinkedIn

Shailesh Kunnath - Advisor
Strategic advisor focused on Web3 growth, blockchain go-to-market execution. LinkedIn

Anurag Agarwal - Advisor
Corporate strategy and governance expert, advising across capital and policy domains. LinkedIn

Marcello Mari - Advisor
Prominent blockchain thought leader, founder of SingularityDAO brings Investor and DeSci ecosystem relationships. LinkedIn

Juliet Su – Advisor
Managing Partner and Ecosystem Lead at NewTribe Capital, a leading Venture Capital firm headquartered in Dubai, UAE. Our firm specializes in early-stage investments within the Web3 sector. Linkedin

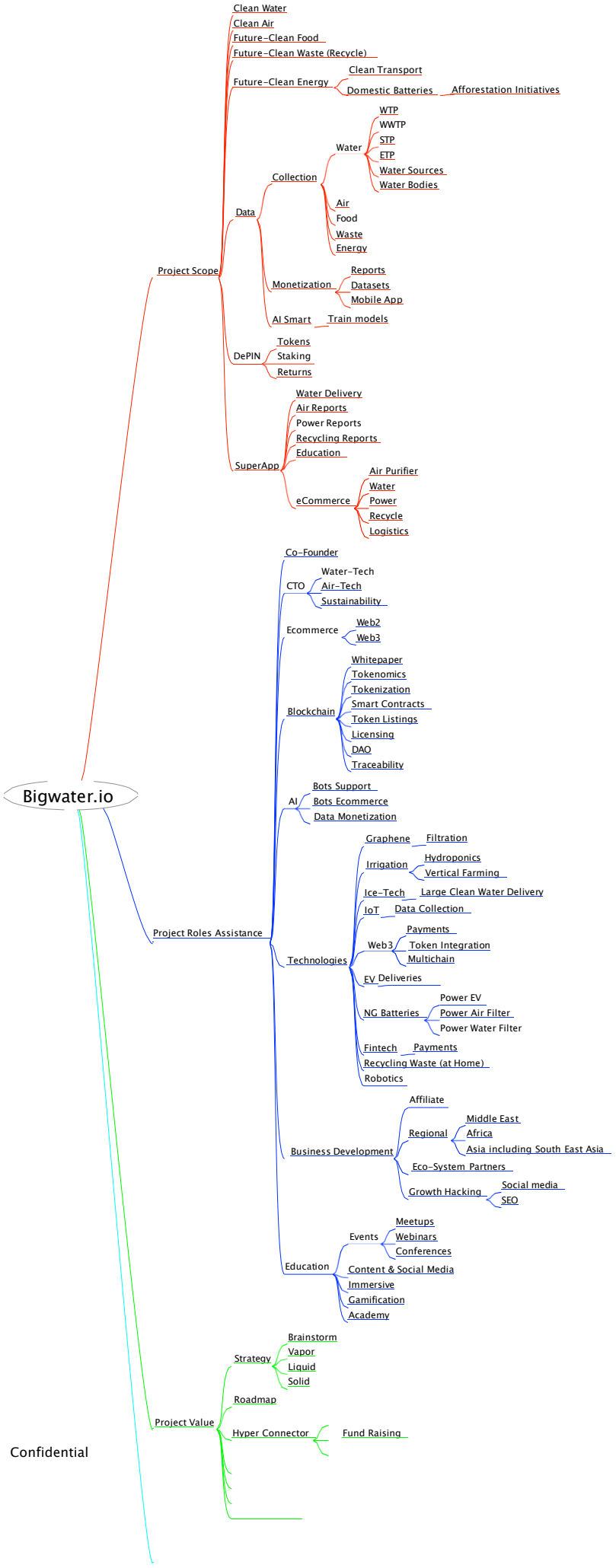
14. Legal & Risk

- **Jurisdiction**: British Virgin Islands
- Token is a utility token under preliminary review
- KYC & Anti-Sybil protection active at device & wallet level
- Legal Partners to be disclosed
- Smart Contract Auditors – Quill Audits
- Risks: IoT adoption, regulatory changes, hardware maintenance, Web3 volatility

15. Appendix

- Glossary: DePIN, DeSci, RWA, Boond, NFT, AQI
- Citations: WHO, WaterAid, Niti Aayog, UN SDGs
- Smart Contracts Audit - Completed
- **$BIGW Mind map**: This mind map outlines the end-to-end vision for BigWater, from token-powered utilities to partnerships across DeFi, IoT, ESG, and eCommerce.

The BigWater Protocol turns climate action into a quantifiable, rewarding, and data-backed experience. It is more than a token – it's a movement to democratize environmental justice.



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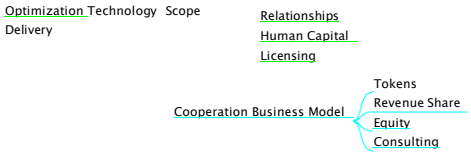

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