

# CRYPTOECONOMIC AND MATHEMATICAL MODEL OF HANUMAN WATER TOKENIZATION

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# Utilitarian and Regenerative Token from Chapada dos Veadeiros



**T**he Hanuman Water Token (HWT) is a utility token developed on blockchain, ensuring access to 1 liter of multimillennial hyperthermal mineral water from the Hanuman Deposit<sup>1</sup>, a non-volcanic, with secure transactions via smart contracts. Unlike speculative tokens, the HWT grants exclusive rights to this exceptional resource.

The Annual Exploitable Reserve (AExR) of the deposit, located in Chapada dos Veadeiros, is estimated at 3.77 million cubic meters, corresponding to approximately 10,328 m<sup>3</sup> per day or 430 m<sup>3</sup> per hour. This volume represents about 5% of the Total Permanent Reserve (RPT) and establishes a conservative limit for sustainable extraction, serving as a safe parameter for commercial pumping.

This estimate is part of an in-depth study<sup>2</sup>, currently under publication, which complements the previous work

published by Elsevier in January 2022 in the journal “Groundwater for Sustainable Development”. Titled “Hydrochemical and age constraints of the Chapada dos Veadeiros”<sup>3</sup>, the study was conducted by geologists and professors from the Institute of Geosciences at the University of Brasília (IG-UnB). In it, the deposit is identified as belonging to the hydrogeological basin of Group 3.

The first commercial well of the deposit, the Hanuman I Well/Source, has a tested flow rate of 95 m<sup>3</sup>/h, operating 14 hours per day—resulting in a daily production of 1,335 m<sup>3</sup> (485,000 m<sup>3</sup>/year).

In the HWT pre-sale, scheduled for the end of May 2025, 100 million tokens will be offered, each backed by 1 liter of water. This represents 100,000 m<sup>3</sup>, equivalent to only 20.6% of the annual production of the Hanuman I well—a conservatively proposed volume that ensures sustainable scalability and a safe margin for operational expansion.

Quick Reference Table			
Parameter	Total Volume	Pre-Sale Volume	Percentage
Annual Production (Hanuman I Well)	485,000 m <sup>3</sup> /year	100,000 m <sup>3</sup>	20,6%
Hanuman Deposit - Group III	3,77 milhões m <sup>3</sup> /ano (RExA)	100.000 m <sup>3</sup>	2,65%
Total Permanent Reserve	75,4 milhões m <sup>3</sup>	100.000 m3	0,13%

# Circular Economy and Sustainability

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**T**he model adopts principles of the New Distributive Economy, integrating local productive chains in the Cerrado biome, such as cosmeceuticals, natural beverages, and integrative medicine. Partnerships with Public Interest Civil Society Organizations (OS-CIPs) and productive arrangements in the Chapada dos Veadeiros region enhance the socio-environmental impact, promoting shared value and ecosystem conservation.

## Future Outlook: Technology, Real Asset Markets, and Sustainability

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**T**he market for tokenization of real-world assets (RWA)<sup>4</sup> is on the rise, with PwC projections indicating a potential value of US\$ 16 trillion by 2030, driven by transparency, liquidity, and socio-environmental impact. The HWT positions itself as a pioneer in the tokenization of water resources, combining the natural scarcity of thermal water with blockchain security, attracting investors aligned with ESG criteria and crypto enthusiasts.

## Integration with Emerging Technologies

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**I**n addition to allocating pre-sale HWT proceeds to infrastructure and facilities targeting premium beverage, cosmeceutical, thermalist, and integrative medicine markets, Hanuman Minas will invest part of these resources in cutting-edge research, in partnership with universities and technology centers, to

explore the unique properties detected in empirical tests and observed in the hyperthermal water of the deposit.

Priority studies include:

- Quantum neuroscience: Effects of water structured by piezoelectric minerals (quartz, beryl) on the modulation of brain synapses and human bioelectricity



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- Clean technologies: Potential of water as a conductive medium for cooling qubits in quantum computing, leveraging its thermal stability, electroconductive properties, and brain-computing quantum interactions.
- Molecular memory: Analysis of water structuring after 9,000 years of interaction with crystals, using techniques such as Raman spectroscopy, nuclear magnetic resonance, etc.

These studies will follow rigorous scientific protocols, with publication in indexed journals, ensuring transparency and credibility.

In this context, OSCIP Pulsar Vida<sup>5</sup>, a strategic partner of Hanuman Minas, plays a significant role in connecting these technological innovations with sustainable practices and community impact in Chapada dos Veadeiros. Through productive arrangements in cosmeceuticals, natural beverages, and Cerrado crops, it will promote an auditable distributive economy, featuring integrative medicine centers and regenerative tourism, strengthening local communities and conserving the Cerrado biome, in line with the ESG principles of the HWT.

Acquiring the HWT means participating at the frontier of native knowledge, millennial geology, and disruptive inno-



# Sustainability and Governance

The issuance of HWT will be limited by the RExA, with decentralized governance via smart contracts, thus avoiding overexploitation. A real-time monitoring system—integrated with blockchain—will transparently record extracted volumes and piezometric levels. These data will support periodic reviews of the RExA, maintaining a balance between water availability and economic use.

## Comparison with Bitcoin: Similarities and Differences

Aspect	Bitcoin	Hanuman Water Token (HWT)
Nature of the asset	Digital, no physical backing	Utilitarian token backed by Exploitable Reserve
Maximum supply	21 million BTC	Limited to the annual productive wells/sources and potential deposit (AExR – 3,77 million m3)
Primary objective	Store of value, medium of exchange	Guaranteed access to a natural resource
Issuance model	Decreasing mining, fixed algorithm	Issuance based on water sustainability
Transparency and security	Public and decentralized blockchain	Blockchain for traceability and smart contracts
Environmental impact	Debate over energy consumption	Focus on sustainability and regeneration

Bitcoin revolutionized decentralized digital money; the HWT proposes an evolution toward the tokenization of essential natural resources, prioritizing utility, sustainability, and social impact, adapting the concept of scarcity to an environmental context.

# Conclusion

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**T**he Hanuman Water business model represents an innovative convergence of geosciences, cryptoeconomics, and regenerative, sustainable economy. The tokenization of a multimillennial resource, priced initially at US\$2.00 per liter, enables a pre-sale of 100 million HWT, granting exclusive access to 100 million liters of Hanuman Water.

By combining billion-year-old geology, blockchain, and a circular economy, Hanuman Water transforms Chapada dos Veadeiros into the first territory in the world where natural resources become digital assets, redefining wealth as a vital, traceable, and ethical good. The HWT is a smart contract with the Earth: each token ensures access to a vital resource, while its protocol guarantees its endurance for future generations.

HWT is the first project to tokenize a geologically unique hyperthermal aquifer, with scientific validation and auditable ESG impact. Inspired by those who see water as the supreme asset, HWT is the pioneering token of the post-Bitcoin New Economy, for a future where wealth is synonymous with life and sustainability.

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#### Bibliographic References:

1 - The Hanuman Deposit is geologically unique due to its non-volcanic geothermal origin, formed 1.5 billion years ago in the São Joaquim Geological Fault. Its 9,000-year-old water, filtered through piezoelectric minerals like quartz and beryl, exhibits unparalleled purity and hydrochemical properties, as confirmed by scientific studies. <https://www.hanumanwater.com/wp-content/uploads/2025/04/Introduction.pdf> <https://www.hanumanwater.com/wp-content/uploads/2025/04/Introduction.pdf>

2. Moura, C.O. et al. (2025). Estimation of Water Reserves of the São Joaquim Fault Thermal Aquifer System, Chapada dos Veadeiros, State of Goiás, Institute of Geosciences, University of Brasília (In press - Awaiting publication).

3. Junqueira, P.T. et al. (2022). Hydrochemical and age constraints of the Chapada dos Veadeiros geothermal reservoir, central Brazil. Groundwater for Sustainable Development, 17, 100724.

4. PwC (2023). Tokenization of Real World Assets: Opportunities and Challenges, Global Financial Markets Report.

5. [www.pulsarvida.org.br](http://www.pulsarvida.org.br)