



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Light Paper

“Do it right.. Make a Difference! For the rest of us who need light”

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## The Blockchain Network

Setheum is a DeFi operating system, liquidity exchange provider, and financial system that resolves the issues of liquidity and stablecoin reliability issues mostly raised by centralised stablecoins by creating algorithmic elastic stablecoins stabilised by pristine crypto assets and managed by the network's democratic governance system that gives back all upturn elasticity returns and market growth to the community. Setheum is built with the Substrate modular interoperable blockchain framework and is based on the Nominated Proof of Stake (NPoS) consensus algorithm. In Setheum, one can pay for transaction fees in any token currency without having to hold Setheum's native token. Setheum implements a free and fair economic system that pursues equality of opportunity and the maximisation of public utility in the crypto-economy.

## Inspiration

The Inspiration behind Setheum was initially to provide an alternative payment system to the current FinTech atmosphere. To create a system that is bipartisan and open to the public providing an easy to use remittance network that is also easy to onboard, attractive for day-to-day spending and transparent. Something I could build an ecommerce platform on and use as the main payment option and a bridge between traditional finance and cryptocurrency in both low-level and high-level endpoints, especially in the less developed and developing parts of the world.

## Motivation

The motivation is to make it easier for the free-flow of capital internationally and intersystematically (interoperability between distinct systems/networks), to maximise capitalization and economic growth, realising that this is the solution for many of the problems challenging communities around the world, inequality in capital distribution and discrepancies in the free flow of capital between equality of opportunities and systematic fairness in capital distribution. Equality of opportunities cannot be achieved without the free-flow of capital, while there is no systematic fairness in the distribution of capital there can be no free-flow of capital in the hands of the public. In Setheum, the capital will be directed to the public for the public utility in the Setheum economy through various mechanisms including CashDrops, to be discussed further below, and the Setheum Public Fund also to be discussed further below.

## Principles and Core Values

Setheum has a set of Principles and core values that shall not change or get corrupted in its underlying governance. Setheum is following the Islamic Finance principles and core values in compliance to the Shari'ah in respect to Economics and Financial applications.

This simply means in its basics that Setheum as a system will and shall not implement any products in its core system modules that supports, builds or implements non-halal financial products, mainly interest-based loans and related interest-bearing products as a network. The stablecoin system in Setheum also does not support interest and usury. Setheum is an interest-free financial system. This does not mean however that products built on or integrating to Setheum have to abide by these principles, rules and values. They do not have to. These laws are only pertaining to the system modules of Setheum as a network system and the entirety of the Setheum blockchain core under its governance system. Smart contracts build and deployed on the Setheum Network for example on the Setheum EVM (SEVM) can implement and build whatever they want however they want to do what they want, as long as this has nothing to do with changing the values of what Setheum stands for and the governance of the network. These laws, values and principles are the core pillars of Setheum so they cannot ever change and should not ever change. You can build outside of these laws on Setheum, as long as they are not built-in to the code of Setheum as a blockchain network.

## Setheum Foundation, the SPF

**The Setheum Foundation** is the non-profit organisation that supports development and growth in the Setheum ecosystem. It supports projects and teams building on Setheum with financial grants, technical support, community partnerships and community support.

The Setheum Foundation stewards the **Setheum Public Fund (SPF)** that supports humanitarian and environmental causes to help the needy and underprivileged communities, minorities, orphans, physically challenged, the sick, refugees, and animals around the world.

It focuses on funding **NGOs**, Public Health and Research Institutions around the world and communities in need to lessen the suffering felt by all kinds of people, communities, animals around the world and even ecological problems. The Setheum Foundation also supports R&D in blockchain tech, cryptography and computing for the common good of the public.

### The Funds review:

1. **Setheum Treasury:** Supports the Network & Community et al. [OnChain]
2. **Setheum Foundation Fund:** Supports the Network, Project, Foundation & Community et al. [OffChain]

3. **Setheum Public Fund:** Supports communities in poverty, sickness, orphans, refugees, underprivileged communities, health research institutions, public good organisations, humanitarian NGOs, ecological research projects, history preservation projects, et al. [OffChain - by Setheum Foundation]

## Setheum EVM (SEVM)

The Setheum EVM (**SEVM**) enables Solidity smart contracts to be deployed on the Setheum blockchain with minimum changes. It also offers many distinct features such as "**bring your own gas**" (paying fees in any tokens other than Setheum's native token), and an **on-chain automatic scheduler** that enables use cases like subscription and recurring payments, **microgas** (paying very miniscule gas fees) etc.

## Setheum Elastic Reserve Protocol (SERP)

The Setheum Elastic Reserve Protocol (SERP) is the backbone of the Setheum Economy, it is the stablecoin financial system of Setheum first of its kind and unique to Setheum.

The Serp implements algorithmically stabilised stablecoins that are serped or stabilised algorithmically with the Serp Reserve Assets called the "Serp and Dinar" which are a Tier-1 token class (free-floating cryptocurrency) on Setheum, sort of like the gold-standard but superior in technology and system utility, **bilateral-backing (with SERP & DNAR)** and a lot more. The SETR is automatically adjusted by the SERP-TES, while the SETUSD is adjusted by the SERP-SetMint based on CDPs (Collateralized Debt Positions).

When a Setheum StableCurrency goes higher than its peg in price (higher demand than supply), then that height in demand is injected into the economy to stabilise the price of that stablecurrency, we call that a SerpUp, the opposite is done for a SerpDown to Serp down the supply.

The supply injected into the economy during upturns/serpups of a stablecurrency is distributed as such **75% to buy back the Serp Reserve Assets for burning, and 25% to the "CashDrop Pool" for users to claim.**

The SERP also issues a per period inflation rate balance for the Setheum stable currencies, the inflation rate can be adjusted through the governance under the Setheum Shura Council with a democratically voted approval by the members of the Shura Council. The Governance is discussed further below.

The injected inflation balance will be distributed as such in the table below:

BuyBack DNAR	BuyBack SERP	BuyBack SETM	CashDrop Pool
25%	25%	25%	25%

## Stablecoin CDP Loans (**SetMint**)

Inspired by MakerDAO Protocol, the CDP (Collateralized Debt Position) protocol on Ethereum. The Setheum CDP has zero interest rates, zero stability fees, and is fully halal and collateralized. This differentiates SetMint from any other CDP Protocol, making it by far the only halal loan protocol in the entire industry. And it is **Multi-Collateral**.

Just reserve some collateral to mint some **SETUSD**, when returning the loan just return exactly what was loaned and unreserve the collateral with no fees and no interest.

This lets the muslim world also participate in the industry and take part in trading and yield making strategies that are within their dome of principles, for me this is a gamechanger that I wished was there for me, therefore I am building it for people like me who need it but haven't been given the chance to be pleased by it, and also non-muslims that want to break-free from the interest-based alternatives to a more efficient system based on truth, fairness and equality. Collaterals currently are **SETM, SERP, DNAR, SETR**. More collaterals could be added through runtime upgrades by system governance. The collateral parameters are as below:

Collateral	Liquidation Rate	Liquidation Penalty Rate	Required Liquidation Rate	Max. Debit Value
SETM	105%	5%	110%	25,800,000 SETUSD
SERP	105%	5%	110%	25,800,000 SETUSD
DNAR	105%	5%	110%	25,800,000 SETUSD
SETR	103%	3%	106%	33,000,000 SETUSD

## CashDrops

CashDrops are essentially cashback given (from the CashDropFund, so it's not unlimited) to the users of the SetCurrencies whenever they claim on their transactions. So, each transaction has a toggle button that says "claim cashdrop" before the transaction is sent (transfers "to" only). Below is the CashDrop claims minimum transfer amounts that can claim and cashdrop rates per currency of claim (these parameters can be updated via network runtime upgrade with the approval of the governance council of Setheum):

Currency	Min. Claimable Transfer	Max. Claimable Transfer	Claim Rate
SETR	10 SETR (\$1)	10_000_000 SETR (\$1m)	4%
SETUSD	4 SETUSD	700_000 SETUSD	2%

## Tokens & Stablecoins

There are two classes of currencies, free-floating tokens (what I like to call the "Tier-1 Tokens" (T1)), and stable-currencies (what I like to call "Tier-2 Tokens" (T2) OR simply "SetCurrencies") in Setheum. They are explained in the table below with initial details and characterizations.

Ticker	Name	Class	Initial Supply	Price	Init Market Cap (Ecosystem = \$4,630,133,000.03)
DNAR	The Dinar	T1	70,000,000 (small sup)	\$0.5	\$35,000,000 (nano cap)
SERP	Serp	T1	258,000,000 (medium sup)	\$0.5	\$129,000,000 (micro cap)
SETM	Setheum	T1	33,313,300,003 (large sup)	\$0.01	\$333,133,000.03 (small cap)
SETR	Setter	T2	10,000,000,000 (large sup)	\$0.1 (stablecoin)	\$1,000,000,000 (small cap)
SETUSD	SetDollar	T2	3,133,000,000 (large sup)	\$1 (stablecoin)	\$3,133,000,000 (medium cap)

## Initial Token Allocations

Currencies	Treasury	SPF	DEX Offering	Foundation	Team	Advisors and Partners	CashDrop Pool
SETM	10%	10%	Approx. 20%	20%	32%	8%	-
SERP	-	10%	Approx. 30%	20%	32%	8%	-
DNAR	-	10%	Approx. 30%	20%	32%	8%	-
SETR	-	10%	Approx. 20%	20%	32%	8%	10%
SETUSD	-	10%	Approx. 20%	20%	32%	8%	10%

## Vesting Schedule on Allocations

Currencies	Advisors and Partners	SPF	Foundation	Team
SETM	50% for 7 years	50% for 9 years	50% for 23 years	50% for 23 years
SERP, DNAR	52% for 5 years	52% for 7 years	52% for 19 years	52% for 19 years
SETR	30% for 3 years	30% for 3 years	30% for 3 years	30% for 3 years
SETUSD	25% for 2 years	25% for 2 years	25% for 2 years	25% for 2 years

## Built-In Exchange (SetSwap - DEX)

Inspired by Uniswap V2, Setheum has a built-in Decentralised Exchange that I like to call “**SetSwap**” (or **SetheumSwap**). In SetSwap there is what I call the EFE (Exchange Fee Evaluator) that is the first of its kind and unique to Setheum (one of the Setheum originals).

The EFE essentially lets available two types of Exchange fees, one for Tier-2 paired pools (LPs paired with at least one Setheum stablecurrency for example “BTC\_SETUSD\_LP”), then another fee structure for every other pool that is not a “T2-Paired-LP” on the DEX.

## Exchange Fee Evaluator (EFE)

The EFE structure takes less fees from traders that swap with a “T2-Paired-LP” than it takes from a “non-T2-Paired-LP” (i.e. “BTC\_DNAR\_LP”). The difference between these fees is then paid to the pool by the SERP by issuing the T2-token to the pool to balance out the full Exchange Fee. This lets the traders pay less fees while the Liquidity Providers earn more. This in turn attracts more traders, more trading volume, more liquidity, more market attractiveness, more trading opportunities and more natural economic growth based on market drive and demand, which in turn props the market value of the Serp and the Dinar and the entire Setheum tokens which in turn improves overall market performance and economic growth. The initial Exchange Fees are as such, exchange fee is 0.3%, stablecurrency exchange fee is 0.1%, and the EFE (effect/difference) is 0.2%. They can be updated with governance through runtime upgrades.

## Governance

The Governance of Setheum is based on an on-chain governance mechanism that supports reasonable democratic approval processes for network runtime upgrades and on-chain parameter updates through extrinsics with governance approvals. There are 3 chambers, the Shura Council, the Financial Council, and the Technical Committee.

## Staking, Nominating and Validating (NPoS)

Setheum uses a Nominated Proof of Stake (NPoS) mechanism to secure the network. Nominators will nominate validators to be in the active set of validators by staking their Setheum (SETM) with a validator(s). Validators will produce new blocks, validate blocks, and guarantee finality. It is important to note that validators will only earn rewards if they have enough staked SETM to qualify to be in the active set. The active set will update every era, which is **2 hours** on Setheum. Setheum is able to provide strong finality and availability guarantees with much fewer validators. Therefore, Setheum uses NPoS to select validators from a smaller set, letting smaller holders nominate validators to run infrastructure while still claiming the rewards of the system, without running a node of their own. And so with Setheum able to stay alive even when most of the network goes offline, Setheum COULD be able to survive WWII. **The Staking rewards range from a minimum of 2.58% to a maximum of 25.8%, ideal stake of 50%;**

## Initial Airdrop Event (IAE)

Setheum's initial Token Offering will not be a traditional ICO, IEO or IDO. It will instead be an IAE, an Initial Airdrop Event that will take place on our Community Social Media outlets. In this event, we will give away the IAE Allocated tokens as allocated above in the tables, in an airdrop on Setheum to the participants of the IAE. Speaking of which, our user-friendly Mobile Wallet will be available soon.

There will be a referral program in the IAE with a large number of participants. We will not require you to pay anything to join, it is absolutely free to join IAEs and this is also a free IAE.

The DEX Offering will be done as a liquidity provision to the SetSwap (Setheum's built-in DEX), with SETUSD liquidity pairs. Users can buy the Tier-1 tokens (SETM, SERP, DNAR) on the SetSwap with the stablecoins (SETR, SETUSD) they get from the Airdrop Event.

Beware of imposters, we will never ask for your private keys, or to send us anything, or contact you individually or send you links on emails or DMs, and we will certainly not recommend that you use unknown and untrusted wallets.

So, keep in touch and wait for the IAE. We will announce it on our Social Media accounts. Follow us on the accounts on our website <https://setheum.xyz>

## Further Reading

Setheum Papers: <https://github.com/Setheum-Labs/Setheum-Labs-White-Papers>

Setheum Labs Blog: <https://medium.com/setheum-labs>

MakerDAO: <https://makerdao.com/en/whitepaper>

Uniswap V2: <https://uniswap.org/whitepaper.pdf>

Ethereum: <https://ethereum.org/en/whitepaper>

Substrate: <https://www.parity.io/blog/what-is-substrate>

NPoS: <https://research.web3.foundation/en/latest/polkadot/NPoS/index.html>