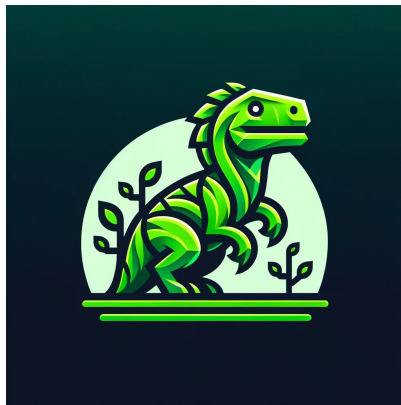




verichains

*SECURITY AUDIT OF*

# **NATUREREX TOKEN**



**Public Report**

*June 04, 2024*

## **Verichains Lab**

[info@verichains.io](mailto:info@verichains.io)

<https://www.verichains.io>

*Driving Technology > Forward*



## ABBREVIATIONS

Name	Description
<b>Ether (ETH)</b>	A cryptocurrency whose blockchain is generated by the Ethereum platform. Ether is used for payment of transactions and computing services in the Ethereum network.
<b>Ethereum</b>	An open source platform based on blockchain technology to create and distribute smart contracts and decentralized applications.
<b>Smart contract</b>	A computer protocol intended to digitally facilitate, verify or enforce the negotiation or performance of a contract.
<b>Solidity</b>	A contract-oriented, high-level language for implementing smart contracts for the Ethereum platform.
<b>Solc</b>	A compiler for Solidity.
<b>ERC20</b>	ERC20 (BEP20 in Binance Smart Chain or xRP20 in other chains) tokens are blockchain-based assets that have value and can be sent and received. The primary difference with the primary coin is that instead of running on their own blockchain, ERC20 tokens are issued on a network that supports smart contracts such as Ethereum or Binance Smart Chain.

## Report for NatureRex

### Security Audit – NatureRex Token

Version: 1.1 - Public Report

Date: June 04, 2024



---

## EXECUTIVE SUMMARY

This Security Audit Report was prepared by Verichains Lab on June 04, 2024. We would like to thank the NatureRex for trusting Verichains Lab in auditing smart contracts. Delivering high-quality audits is always our top priority.

This audit focused on identifying security flaws in code and the design of the NatureRex Token. The scope of the audit is limited to the source code files provided to Verichains. Verichains Lab completed the assessment using manual, static, and dynamic analysis techniques.

During the audit process, the audit team did not identify vulnerable issue in the contract code.



---

## TABLE OF CONTENTS

<b>1. MANAGEMENT SUMMARY</b> .....	<b>5</b>
<b>1.1. About NatureRex Token</b> .....	<b>5</b>
<b>1.2. Audit scope</b> .....	<b>5</b>
<b>1.3. Audit methodology</b> .....	<b>5</b>
<b>1.4. Disclaimer</b> .....	<b>6</b>
<b>1.5. Acceptance Minute</b> .....	<b>7</b>
<b>2. AUDIT RESULT</b> .....	<b>8</b>
<b>2.1. Overview</b> .....	<b>8</b>
<b>2.2. Findings</b> .....	<b>10</b>
2.2.1. [INFORMATIVE] The fee on transfer is enabled by default, but there's no way to disable it. .	10
<b>3. VERSION HISTORY</b> .....	<b>12</b>



## 1. MANAGEMENT SUMMARY

### 1.1. About NatureRex Token

Launched on June 5th, World Environment Day, NatureRex is a revolutionary cryptocurrency that merges the realms of finance, environmental conservation, and the vibrant spirit of internet culture.

NatureRex is dedicated to supporting ecological charities, using a portion of transaction fees to fund projects that protect our environment. This approach not only makes financial transactions beneficial for users but also for the planet.

NatureRex is not just a cryptocurrency; it's a beacon for how digital currencies can be a force for good.

By investing in NatureRex, you are not just participating in the digital economy; you're engaging in a creative and sustainable movement that makes it fun and beneficial for the planet, helping to shape a future where financial innovation supports ecological preservation.

### 1.2. Audit scope

This audit focused on identifying security flaws in code and the design of the NatureRex Token.

It was conducted on the smart contract address [0xA41c4047b36a6c2A34AF37DD3EB81Bb779Dcb160](#) of the Sepolia Testnet.

## UPDATES

The team has been acknowledged and updated with our recommendations. The latest version of the code was deployed on the address [0xCD520E4Cf88Fb962459E78bcECF6E3A1A06f9488](#)

### 1.3. Audit methodology

Our security audit process for smart contract includes two steps:

- Smart contract codes are scanned/tested for commonly known and more specific vulnerabilities using public and RK87, our in-house smart contract security analysis tool.
- Manual audit of the codes for security issues. The contracts are manually analyzed to look for any potential problems.

Following is the list of commonly known vulnerabilities that were considered during the audit of the smart contract:

- Integer Overflow and Underflow



- Timestamp Dependence
- Race Conditions
- Transaction-Ordering Dependence
- DoS with (Unexpected) revert
- DoS with Block Gas Limit
- Gas Usage, Gas Limit and Loops
- Redundant fallback function
- Unsafe type Inference
- Reentrancy
- Explicit visibility of functions state variables (external, internal, private and public)
- Logic Flaws

For vulnerabilities, we categorize the findings into categories as listed in table below, depending on their severity level:

SEVERITY LEVEL	DESCRIPTION
<b>CRITICAL</b>	A vulnerability that can disrupt the contract functioning; creates a critical risk to the contract; required to be fixed immediately.
<b>HIGH</b>	A vulnerability that could affect the desired outcome of executing the contract with high impact; needs to be fixed with high priority.
<b>MEDIUM</b>	A vulnerability that could affect the desired outcome of executing the contract with medium impact in a specific scenario; needs to be fixed.
<b>LOW</b>	An issue that does not have a significant impact, can be considered as less important.

Table 1. Severity levels

#### 1.4. Disclaimer

NatureRex acknowledges that the security services provided by Verichains, are conducted to the best of their professional abilities but cannot guarantee 100% coverage of all security vulnerabilities. NatureRex understands and accepts that despite rigorous auditing, certain vulnerabilities may remain undetected. Therefore, NatureRex agrees that Verichains shall not be held responsible or liable, and shall not be charged for any hacking incidents that occur due to security vulnerabilities not identified during the audit process.

## Report for NatureRex

### Security Audit – NatureRex Token

Version: 1.1 - Public Report

Date: June 04, 2024

---



### 1.5. Acceptance Minute

This final report served by Verichains to the NatureRex will be considered an Acceptance Minute. Within 7 days, if no any further responses or reports is received from the NatureRex, the final report will be considered fully accepted by the NatureRex without the signature.



## 2. AUDIT RESULT

### 2.1. Overview

The NatureRex Token was written in `Solidity` language, with the required version to be `>=0.8.23`. The contract inherits the `Pausable` and `Ownable` contracts from the `Openzeppelin` library, allowing the contract to `pause` or `unpause` activities. The `Ownable` attribute is used to manage contract ownership.

When users transfer tokens, the contract will charge them a fee. This fee will be sent to the fund addresses of `marketing` and `ecoFunds` as set by the `owner`.

The contract does not renounce ownership of the contract. The ownership can be transferred to another address by using the `transferOwnership` function.

The table below lists some properties of the audited NatureRex Token (as of the report writing time).

PROPERTY	VALUE
<b>Name</b>	NatureRex
<b>Symbol</b>	REXN
<b>Decimals</b>	18
<b>Total Supply</b>	65,000,000,000,000 (x10 <sup>18</sup> ) Note: The number of decimals is 18, so the total representation token will be 65,000,000,000,000 or 65,000 billion.
<b>Marketing Fee</b>	1% of total supply
<b>ecoFunds Fee</b>	5% of total supply
<b>Owner Address</b>	0x95c5d7C967B82EEb04ff61f9b1D6d49B34129C41
<b>Owner Owned</b>	60%, exactly 39,000,000,000,000 tokens
<b>Marketing Address</b>	0xECc666029728Be1509AC5a4dD8b8E8DFc38BedB6
<b>Marketing Owned</b>	8%, exactly 5,200,000,000,000 tokens



## Report for NatureRex

### Security Audit – NatureRex Token

Version: 1.1 – Public Report

Date: June 04, 2024



PROPERTY	VALUE
<b>EcoFunds Address</b>	0x055a91A9f843Efe95eb3d09D49C37e4ffD463F0B
<b>EcoFunds Owned</b>	6%, exactly 3,900,000,000,000 tokens
<b>Community Address</b>	0x95c5d7C967B82EEb04ff61f9b1D6d49B34129C41
<b>Community Owned</b>	9%, exactly 5,850,000,000,000 tokens
<b>CexReserve Address</b>	0x95c5d7C967B82EEb04ff61f9b1D6d49B34129C41
<b>CexReserve Owned</b>	10%, exactly 6,500,000,000,000 tokens
<b>ReserveFund Address</b>	0x95c5d7C967B82EEb04ff61f9b1D6d49B34129C41
<b>ReserveFund Owned</b>	7%, exactly 4,550,000,000,000 tokens

Table 2. The NatureRex Token properties

For the ERC20 token, the security audit team has the following checklist of centralization standards:

Checklist	Passed
<b>No Upgradeable</b>	✓
<b>No Fee on transfer</b>	✗
<b>No Mintable</b>	✓
<b>No Burnable</b>	✓



Checklist	Passed
No Pausable	✗
No Trading cooldown	✓
No Blacklist	✓
No Whitelist	✓
Renounced Ownership	✗

Table 3. The decentralization checklist

## 2.2. Findings

During the audit process, the audit team did not identify a vulnerable issue in the contract code. But we have some recommendations to improve the contract code. The following is a list of the recommendations:

### 2.2.1. [INFORMATIVE] The fee on transfer is enabled by default, but there's no way to disable it.

The fee on the contract checks the state `feesEnabled` whenever users transfer their tokens. The `feesEnabled` state is set to `true` by default.

But there is no way to disable this state. It's recommended to add a setter function to disable it or remove the state from the contract.

## UPDATES

*June 4, 2024:* The team updated the contract to include a setter function for turning the fee on or off during the transfer. The function, which is named `setFeesStatus`, is called by the owner.

## APPENDIX

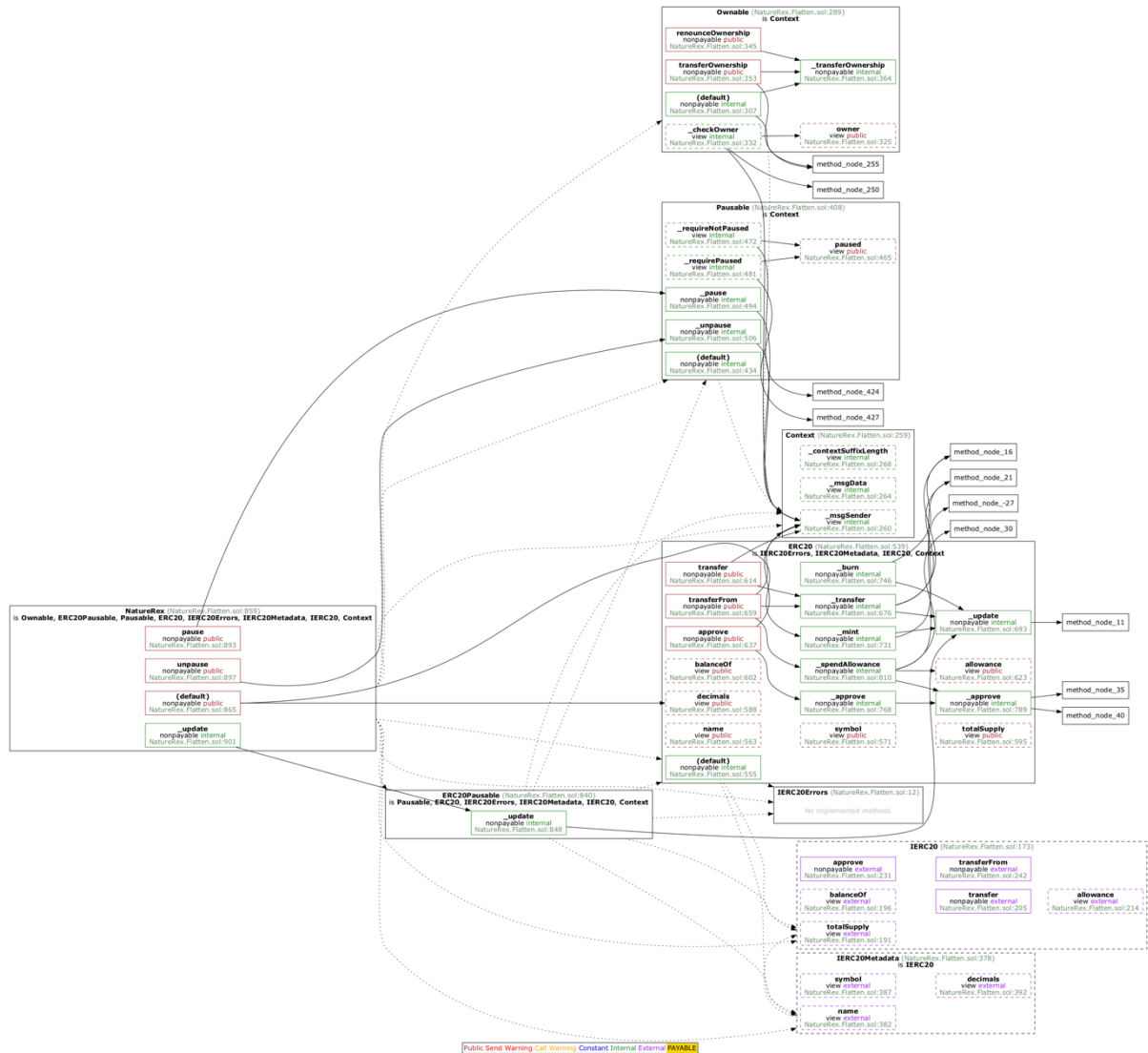


Image 1. NatureRex Token call graph

## Report for NatureRex

### Security Audit – NatureRex Token

Version: 1.1 - Public Report

Date: June 04, 2024



verichains

## 3. VERSION HISTORY

Version	Date	Status/Change	Created by
<b>1.0</b>	<i>May 28, 2024</i>	Public Report	Verichains Lab
<b>1.1</b>	<i>June 4, 2024</i>	Public Report	Verichains Lab

*Table 4. Report versions history*