



# GESIA

## Security Assessment

CertiK Assessed on Dec 5th, 2024





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**GESIA**

The security assessment was prepared by Certik, the leader in Web3.0 security.

**Executive Summary**

## TYPES

DeFi

## ECOSYSTEM

EVM Compatible

## METHODS

Formal Verification, Manual Review, Static Analysis

## LANGUAGE

Solidity

## TIMELINE

Delivered on 12/05/2024

## KEY COMPONENTS

N/A

## CODEBASE


<https://github.com/gesia-platform/Net-Zero-Climate-Token/blob/main/contracts/NZC.sol>

View All in Codebase Page

## COMMITTS

e36da869dc5d9e6acc6aecf9f44f500c8be4f354

View All in Codebase Page

**Highlighted Centralization Risks** Initial owner token share is 100%**Vulnerability Summary**

1

Total Findings

0

Resolved

0

Mitigated

0

Partially Resolved

1

Acknowledged

0

Declined

 0 Critical

Critical risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.

 1 Major

1 Acknowledged

Major risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.

 0 Medium

Medium risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform.

 0 Minor

Minor risks can be any of the above, but on a smaller scale. They generally do not compromise the overall integrity of the project, but they may be less efficient than other solutions.

 0 Informational

Informational errors are often recommendations to improve the style of the code or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

# TABLE OF CONTENTS | GESIA

## **I Summary**

Executive Summary

Vulnerability Summary

Codebase

Audit Scope

Approach & Methods

## **I Findings**

NZC-01 : Initial Token Distribution

## **I Appendix**

## **I Disclaimer**

# CODEBASE | GESIA

## Repository


<https://github.com/gesia-platform/Net-Zero-Climate-Token/blob/main/contracts/NZC.sol>

## Commit

e36da869dc5d9e6acc6aecf9f44f500c8be4f354

# AUDIT SCOPE | GESIA

1 file audited ● 1 file with Acknowledged findings

ID	Repo	File	SHA256 Checksum
● NZC	gesia- platform/Net- Zero-Climate- Token	 contracts/NZC.sol	369606ef7b1c242eec634f0e910438c74cdf24 656c33ec20af0ed99b624ebcaa

## APPROACH & METHODS | GESIA

This report has been prepared for GESIA to discover issues and vulnerabilities in the source code of the GESIA project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Formal Verification, Manual Review, and Static Analysis techniques.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

The security assessment resulted in findings that ranged from critical to informational. We recommend addressing these findings to ensure a high level of security standards and industry practices. We suggest recommendations that could better serve the project from the security perspective:

- Testing the smart contracts against both common and uncommon attack vectors;
- Enhance general coding practices for better structures of source codes;
- Add enough unit tests to cover the possible use cases;
- Provide more comments per each function for readability, especially contracts that are verified in public;
- Provide more transparency on privileged activities once the protocol is live.

# FINDINGS | GESIA

**1**

Total Findings

**0**

Critical

**1**

Major

**0**

Medium

**0**

Minor

**0**

Informational

This report has been prepared to discover issues and vulnerabilities for GESIA. Through this audit, we have uncovered 1 issues ranging from different severity levels. Utilizing the techniques of Formal Verification, Manual Review & Static Analysis to complement rigorous manual code reviews, we discovered the following findings:

ID	Title	Category	Severity	Status
NZC-01	Initial Token Distribution	Centralization	Major	● Acknowledged

## NZC-01 | INITIAL TOKEN DISTRIBUTION

Category	Severity	Location	Status
Centralization	● Major	contracts/NZC.sol: 274~275, 316~317, 463~464	● Acknowledged

### Description

All of the NZC tokens are sent to the contract deployer on deployment. This is a centralization risk because the deployer or the owner(s) of the EOAs can distribute tokens without obtaining the consensus of the community. Any compromise to these addresses may allow a hacker to steal and sell tokens on the market, resulting in severe damage to the project.

### Recommendation

It is recommended that the team be transparent regarding the initial token distribution process. The token distribution plan should be published in a public location that the community can access. The team should make efforts to restrict access to the private keys of the deployer account or EOAs. A multi-signature ( $\frac{2}{3}$ ,  $\frac{3}{5}$ ) wallet can be used to prevent a single point of failure due to a private key compromise. Additionally, the team can lock up a portion of tokens, release them with a vesting schedule for long-term success, and deanonymize the project team with a third-party KYC provider to create greater accountability.

### Alleviation

[Gesia Team, 12/04/2024]: Link to the token distribution plan:

<https://docs-en.gesia.io/tokenomics>

Ecosystem Reserve

0x16fF5d088E7C582259e17ddB278ACE2bB2b161CE

Founder & Team

0x2126931A32341A5e9ecA37aA2B21D1126C2C6a27

Marketing

0x2Cace67268ee6c8f8315f2CeabF6b7b24A22FE8c

Partnership

0xA8030aE0F4215d2A71302041fe9dC2BCD20fCB7A

Foundation & Ecosystem Operations

0xaaFF1D86a9f7ff9D2606EFF53C415291318Cd6e6



Advisor

0x2277F659e09ea3bA14A85779cd406Bb15EdB7cec

Token Sales

0x9eFd49f8EaE80f73f404D850b31573b27BE162d

## APPENDIX | GESIA

### Finding Categories

Categories	Description
Centralization	Centralization findings detail the design choices of designating privileged roles or other centralized controls over the code.

### Checksum Calculation Method

The "Checksum" field in the "Audit Scope" section is calculated as the SHA-256 (Secure Hash Algorithm 2 with digest size of 256 bits) digest of the content of each file hosted in the listed source repository under the specified commit.

The result is hexadecimal encoded and is the same as the output of the Linux "sha256sum" command against the target file.

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