



ANNUAL PROGRESS REPORT

Livelihood Activities Component

Japan Fund for Global Environment (JFGE) Project

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| Project Title | Preserving Traditional Land Use through New Livelihood Methods in Zunheboto, Nagaland, India: Satoyama Approach |
| Reporting Period: | April 2025- March 2026 |
| Project Site: | Zunheboto, Nagaland, India |
| Prepared By: | The Energy and Resources Institute (TERI) |
| Date of Report: | 18th March 2026 |

1. Inception Meeting

An inception meeting was conducted on 22 August 2025 at Sukhai Village, Zunheboto district, Nagaland, with 14 participants consisting of community members of Sukhai, Kivikhu, and Ghukhuyi villages. The primary objective of the meeting was to formally introduce the Japan Fund for Global Environment (JFGE) project, its key objectives, and major components, including livelihood diversification through agroforestry, documentation of Traditional Ecological Knowledge (TEK), and quantification of forest carbon stock in *jhum* (shifting cultivation) landscapes. The session also aimed to establish a foundation for collaborative environmental management and to communicate the project timeline to the stakeholders. To ensure effective communication and foster community engagement, the introductory remarks and project overview were delivered by Mr. Ivan Zhimoni in the local Sumi language, with key concepts translated and discussed to enhance understanding and participation.

A central emphasis of the meeting was to demonstrate the continuity and complementarity between ongoing and proposed initiatives. It was clearly articulated that the JFGE project will build upon and strengthen the existing REDD+ efforts in the region by expanding alternative livelihood opportunities and reinforcing shared sustainability goals. Additionally, experiences from previous JFGE-supported projects were shared, highlighting tangible benefits to communities, including improved livelihood options, enhanced capacity, and strengthened community-based resource management practices.

The meeting concluded with a shared commitment to continued collaboration between the project team and the community. It was agreed that a detailed need assessment will be conducted in the subsequent phase with active participation of community members to identify priority interventions. Based on the selected activities, comprehensive capacity-building and training



programs will be organized to ensure effective implementation and sustainability of outcomes. The detailed agenda and attendance of the inception meeting is attached in the Appendix.



Figure 1: Inception Meet

2. Needs Assessment

A Participatory Rural Appraisal (PRA) session was conducted at the community center in Sukhai village, Zunheboto district, Nagaland, to understand the local agricultural value chain and identify areas for sustainable intervention. The exercise actively engaged community elders, women, and youth, enabling the collection of detailed ground-level information on key agricultural produce. This included parameters such as importance ranking, source of production (jhum land, agroforestry systems, and home gardens), pricing, harvest season, processing status, funding sources, and market destinations (including Zunheboto, Kohima, and Dimapur). In addition, comprehensive data was gathered on the list of produce, prevailing price trends, existing market conditions and linkages, as well as current resources and community capabilities related to production and value addition.

The PRA exercise successfully mapped existing agricultural patterns and value chains, while also identifying critical systemic gaps, particularly in supply chain efficiency, seasonal storage infrastructure, and access to wider markets. It was observed that the consumer base remains largely limited to local and district-level markets. The assessment also highlighted limited processing and value addition practices, which further restrict income generation potential for the community. Importantly, the community expressed a strong interest in expanding sustainable agricultural practices and strengthening livelihood opportunities. The attendance details for the exercise are attached in the appendix.



Figure 2: Need Assessment with community members

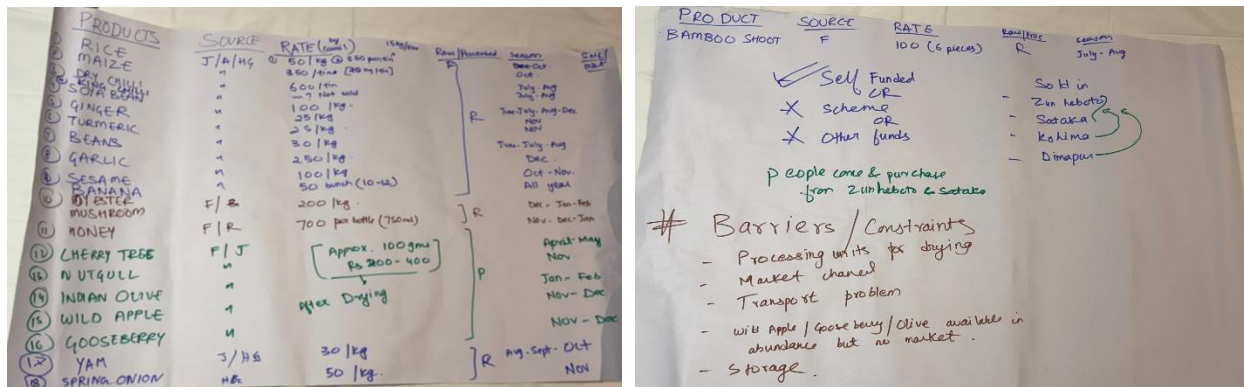


Figure 3: Response from community members during PRA for need assessment

3. ANALYSIS & RESULTS

Based on the findings of the need assessment, participatory consultations, and resource mapping exercises, a systematic evaluation of potential livelihood options was undertaken. The selection of suitable products for value addition and enterprise development was guided by a set of key criteria to ensure feasibility, sustainability, and market viability. The criteria applied are outlined below:

- Geographical Advantage:** The suitability of the local agroclimatic conditions, including temperature, rainfall, elevation, and soil characteristics, was evaluated to ensure that selected products can be cultivated efficiently within the existing landscape. Crops that naturally align with the region’s environmental conditions and existing farming systems were prioritized to minimize risk and input requirements.
- Infrastructure and Resource Availability:** The availability of natural resources (such as land and water), human resources (traditional knowledge and skills), and existing physical infrastructure (processing spaces, basic equipment) was assessed. Preference was given to products that can be initiated using existing resources, with scope for gradual strengthening of infrastructure. This ensures that enterprises can be operationalized without heavy initial investment.



- c) **Uses and Value Addition Potential:** The scope for value addition and product diversification was a key consideration. Products that can be processed into multiple forms, have longer shelf life, and offer higher returns compared to raw produce were prioritized. Ease of processing, existing familiarity with handling practices, and potential for developing marketable products were also taken into account.
- d) **Market Presence:** The assessment examined the existing demand and market visibility of potential products at local and nearby market levels. Products that already have an established demand were given priority, as they present lower entry barriers and higher potential for immediate income generation. Additionally, emerging demand trends were considered to identify opportunities for scaling and diversification.

Outcome of the Selection Process

- ✓ Applying the above criteria, turmeric and coffee emerged as the most suitable products for livelihood intervention and enterprise development. Both products demonstrate strong market presence, with existing demand in local markets and growing recognition beyond the region. The geographical conditions of the area are highly favourable for their cultivation, supporting both yield and quality.
- ✓ In terms of infrastructure and resources, communities already possess basic knowledge of cultivation and initial access to land and traditional systems such as jhum and agroforestry, which will be leveraged for expansion. While infrastructure gaps exist, particularly in processing and storage, these can be addressed progressively through targeted interventions.
- ✓ Furthermore, both turmeric and coffee offer significant potential for value addition. Turmeric can be processed into powder with relatively simple techniques, while coffee can be developed into beans and ground products. These forms not only enhance shelf life but also substantially increase market value compared to raw produce.

Thus, based on a comprehensive evaluation turmeric and coffee have been selected as the focal products for the livelihood management plan, forming the basis for subsequent intervention design and implementation.

Nursery Development

Building the identified resource and capacity requirements, community mobilization efforts have already been initiated to support implementation. In Sukhai Village, Zunheboto, Nagaland, one nursery has been established as a foundational step for strengthening raw material availability. The nursery is managed by a team of eight trained nursery managers under the supervision of two dedicated supervisors, ensuring effective operations and technical oversight. The establishment of this nursery has been supported through **co-financing from Mountains to Mangroves (MTM) project**, reflecting a collaborative approach to resource mobilization and implementation.

This initiative not only strengthens the supply of planting material, particularly for coffee and turmeric, but also builds local capacity and ownership, thereby reinforcing the long-term sustainability of the proposed livelihood interventions.



| About the Nursery | |
|-------------------|---|
| Location | Sukhai Village, PO/PS Satakha, Zunheboto, Nagaland |
| Geo-coordinates | 25°52'49.75"N, 94°30'16.99"E |
| Nursery | 1 |
| Capacity | 2,00,000 |
| Area | 0.37 ha |
| Facilities | Shade house and irrigation infrastructure |
| Species | Alder (<i>Alnus glutinosa</i>), Oak (<i>Quercus robur</i>), Lalipoma (<i>Dysoxylum excelsum</i>), Hollock (<i>Terminalia myriocarpa</i>), Indian Olive (<i>Olea europaea</i>), Wild Apple (<i>Docynia indica</i>), Gooseberry (<i>Phyllanthus emblica</i>), Neem (<i>Azadirachta indica</i>), Babul (<i>Vachellia nilotica</i>), Cherry (<i>Prunus avium</i>), Pomelo (<i>Citrus maxima</i>), Pomegranate (<i>Punica granatum</i>), and Pine (<i>Pinus roxburghii</i>). |



Figure 4: Nursery established in Sukhai

4. Skill Development

Training on coffee cultivation

A one-day classroom training workshop was organized by TERI in collaboration with the Land Resources Department for 28 farmers from Sukhai, Kivikhu, and Ghukhuyi villages. The session was facilitated by Mr. I. Acato Chishi (District Project Officer, Land Resources Department, Zunheboto), who covered key topics including:

- ✓ Coffee cultivation potential in Nagaland
- ✓ Historical context of coffee in India and the state
- ✓ Available technical guidance and institutional support
- ✓ Fundamentals of coffee cultivation, including land suitability, nursery management, planting, maintenance, harvesting, and processing

An introductory session on the JFGE–TERI Livelihood Project was delivered by Mr. Aniruddh Soni, outlining the project objectives and upcoming training and capacity-building initiatives.



In addition, farmer practitioner Mr. Hekato Assumi shared his practical experience in coffee cultivation, presenting a stepwise overview of the process—from plantation establishment and crop management to drying and post-harvest handling—providing valuable field-based insights to the participants. The attendance of the session is attached in the appendix.



Figure 5: Coffee Training- Classroom session

Exposure visits to coffee farms

Exposure visits were organized for 28 farmers to provide hands-on learning and practical exposure to established coffee plantations. The visits were conducted to:

- Mr. Hekato Assumi's farm in Akuhaito Village
- Coffee farms in Krimitomi Village

These field visits enabled farmers to directly observe and understand best practices in coffee cultivation under real conditions. The sessions were guided by Mr. I. Acato Chishi, who demonstrated key technical aspects such as pruning techniques, plantation maintenance, and crop management across varying terrain conditions.

Farmers were introduced to the importance of shade management in coffee cultivation. It was emphasized that coffee performs best under appropriate shade conditions, particularly beneath evergreen tree species. In contrast, species such as oak and bamboo were not recommended due to their unsuitable canopy structure and competitive effects. Guidance was also provided on maintaining an optimal plant height of approximately 4–5 feet through regular pruning, which helps improve plant health, ease of harvesting, and overall productivity. The attendance sheet of the session is attached in the appendix.

The exposure visits further highlighted the crop cycle of coffee, with farmers learning that coffee plants typically begin bearing fruit after approximately three years of plantation. The harvesting season generally extends from November to March, depending on local conditions.



Figure 6: Coffee training - exposure visits

Commodity Exhibition and Awareness

A commodity exhibition was organized during the Chengu festival, where products such as turmeric, coffee, olive green tea, and wild fruit candies were displayed. The exhibition also featured a dedicated coffee demonstration setup established by the Land Resources Department, showcasing processing techniques and promoting coffee as a viable livelihood option.

This platform was used to:

- Raise awareness among local communities
- Promote alternative livelihood options
- Encourage farmer participation in value-added agriculture
- Demonstrate coffee processing and enterprise potential

The exhibition served as an important interface for community engagement, enabling farmers and stakeholders to explore product diversification and better understand the scope of value addition and market opportunities.



Figure 7: Coffee awareness during Chengu



Panel Discussion

On 20th March 2026, a panel discussion was organized involving experts from various organizations, including TERI, Foundation for Ecological Security (FES), Aboriginal Energy, and local institutions (e.g. TVBCLN).

Key discussion points included:

- Livelihood diversification strategies
- Biodiversity conservation
- Carbon finance, REDD+ mechanisms, and importance of alternative livelihood
- Importance of community consultation and FPIC
- Land governance systems and additionality in carbon projects

The discussion emphasized integrating livelihood improvement with conservation and climate finance opportunities.



Figure 8: Panel discussion during Chengu

Training on nursery management

The session on nursery management was conducted on 23 March 2026 by Mrs. Edenly Chishi, Chief Technical Officer (Horticulture), and Mrs. Naropongla, Senior Technical Officer from KVK Zunheboto, with the participation of 11 community members. The session covered a comprehensive range of nursery practices for crops such as coffee and turmeric.

Participants were trained in seedbed preparation, including soil composition, bed formation, drainage arrangements, and pathway design to ensure efficient water management. Detailed instruction was provided on germination practices, mulching techniques, timing of transplantation, and the process of hardening seedlings before field transfer. The session also included practical guidance on maintaining optimal nursery conditions to improve survival rates and plant vigor.

Additional key aspects of nursery management discussed during the session included:

- Selection of healthy and disease-free seeds/planting material



- Preparation and use of organic inputs such as vermicompost and farmyard manure
- Regular watering practices and moisture management without waterlogging
- Shade management for young seedlings to prevent stress and improve growth
- Pest and disease monitoring with emphasis on early detection and control using eco-friendly methods
- Proper spacing within nursery beds to ensure healthy root and shoot development

In addition to this the KVK resource persons provided on-ground observations and recommendations. Specific suggestions were given to improve drainage systems and optimize pathway layout to enhance water flow and accessibility within the nursery. This hands-on engagement further strengthened the practical understanding of participants and supported improvements in the existing nursery setup. Attendance is attached in the appendix.



Figure 9: Nursery management training in Sukhai

Training in Vermicomposting

A key component of the nursery management session was hands-on training in vermicomposting. This included demonstration of unit setup, layering techniques, and selection of appropriate organic materials, such as sun-dried cow dung and biodegradable waste. Participants were informed about materials to include and avoid in the composting unit, along with appropriate quantities and ratios. The process of compost maturation, harvesting, and application was explained in detail, including recommended dosages and methods of applying vermicompost to fields. Additionally, training was provided on the preparation and application of organic manure, further promoting sustainable and low-input agricultural practices.

The training programme was designed to build technical capacity among community members by combining theoretical knowledge with practical demonstrations, thereby strengthening their ability to adopt improved nursery and plantation management practices.



Figure 10: Vermicomposting training in Sukhai

Sowing Coffee seeds

Sowing of coffee seeds in the nursery was undertaken with technical support and input provision from the Land Resources Department (LRD). A comprehensive hands-on training programme was facilitated by Mr. Qhenito from the LRD Division, focusing on scientific coffee cultivation practices. The session covered the complete lifecycle of coffee plantation management, including seasonal care requirements during winter and summer, appropriate plantation periods, and irrigation scheduling. Participants were trained on effective moisture management practices, particularly strategies to address dry spells and irregular rainfall conditions.

Detailed guidance was provided on seed germination techniques, early-stage seedling care, and the critical “butterfly stage,” which indicates readiness for transplantation. The training also included practical demonstration of polybag preparation, covering soil mixture composition, filling methods, and careful handling of seedlings to prevent root damage during transfer. Emphasis was placed on proper plantation techniques, spacing, and post-transplantation care to ensure healthy establishment and growth of coffee plants.

As part of this initiative, the Land Resources Department provided selected Arabica S-13 variety seeds for nursery development. A total of 2.5 kg of seeds were supplied for sowing in the nursery beds. It is estimated that approximately 4,500 seedlings can be raised from 1 kg of seeds, with an expected survival rate of around 90%. This input support ensures adequate planting material for subsequent plantation activities while strengthening the foundation for long-term coffee cultivation in the project area.



Figure 11: Coffee seed sowing at nursery in Sukhai

Livelihood Management Plan

The Livelihood Management Plan has also been developed, building on the findings of the need assessment, participatory consultations, and resource mapping exercises. The plan outlines a structured, community-led approach for promoting turmeric and coffee-based enterprises, covering key components such as capacity building, resource mobilization, value addition, and market linkage. It provides a clear roadmap for phased implementation, aligned with local resources, community preferences, and emerging market opportunities.

5. Site Selection for Coffee Plantation

Field visits were conducted across multiple locations to identify suitable sites for coffee cultivation, following which two sites were finalized in Sukhai village based on technical and field-level assessments.

Activities undertaken included:

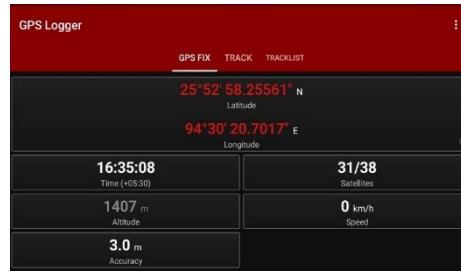
- ✓ GPS coordinate mapping and altitude recording
- ✓ Preliminary suitability assessment of land parcels
- ✓ Consultations with local farmers and community members

The selection of sites was guided by specific criteria, including east-facing slopes to ensure optimal sunlight exposure, suitable elevation range for coffee cultivation, and the presence of adequate shade conditions. Particular attention was given to ensuring balanced exposure to sunlight, as well as the availability of appropriate shade tree cover. Existing vegetation and tree species in the area were also assessed to determine their suitability as shade providers.

Final site selection was carried out based on expert recommendations from the Land Resources Department, who evaluated these parameters and identified the most suitable locations for coffee plantation. Additionally, expert guidance from the department will be used to recommend appropriate coffee species and compatible shade tree species for plantation in the selected sites, ensuring optimal growth conditions and long-term productivity.



Site 1



Site 2



6. EXPOSURE TO TURMERIC PROCESSING

Farmers were introduced to basic turmeric processing techniques through demonstrations and discussions. The session emphasized value addition opportunities, the scope for scaling turmeric production, and the importance of processing, packaging, and market linkage.

In addition, detailed discussions were held with community members regarding turmeric. The existing small-scale processing unit was assessed, and consultations were conducted with farmers to identify gaps and explore pathways for scaling up the unit to improve efficiency, quality, and production capacity.

Sites for turmeric plantation have also been identified in jhum agroforestry areas, leveraging existing land-use practices. These activities are being supported under the co-financing from the Mountain to Mangrove project, ensuring resource convergence and strengthening the overall livelihood intervention.



Figure 12: Existing turmeric processing available in Sukhai



APPENDIX

A1. AGENDA – INCEPTION MEETING



INCEPTION MEET STAKEHOLDER CONSULTATION AND FIELD VISITS

Protect Traditional Land Use through New Livelihood Measures- A Satoyama Approach

Venue: Sukhai Village, Zunheboto district, Nagaland

Date: 22nd August 2025

| Time | Description | Name of Personnel |
|-----------------|--|---|
| 1030 - 1300 hrs | Inception Meet (Stakeholder consultation) <ul style="list-style-type: none"> Welcome Speech Special Remarks Introduction to project Experiences with JFGE projects and benefits to community | Mr. Yoji Natori Mr. Ivan Zhimomi Mr. Aniruddh Soni Mr. Pranjul Chauhan Mr. T Bokato Sema |
| 1030 - 1300 hrs | Enumerator training on using data collection app for household survey (Livelihood assessment) | Mr. Vivasvan Rakesh Mr. Krishanu Hazarika |
| 1300 - 1400 hrs | Lunch Break | |
| 1400 - 1530 hrs | Participatory Rural Appraisal (PRA) – Value Chain of agroforestry produce | Mr. Yoji Natori Mr. Ivan Zhimomi Mr. Aniruddh Soni Mr. Pranjul Chauhan Ms. Ritusmita Mazumdar |



A2. Attendance sheet – Inception meeting and PRA session

| Name | Contact | Position | Sign |
|------------------------------|----------------------------------|--------------|------|
| 1. Kivito - G/B | No - 9612928941 | G. D. Joseph | |
| 2. Nukhuzhe - G/B | 811999882 | " | |
| 3. Hukto | 9366731557 9366731557 | VCC | |
| 4. Hukto | 8730934940 | VCC Member | |
| 5. Pitox | 9862585260 | " | |
| 6. Zheheto | 9612175594 | " | |
| 7. Kughazhe | 8732886911 | " | |
| 8. Phukovi | 9612597212 | " | |
| 9. Lhoskpu | 97816977228 | VD B Secy | |
| 10. S. Kakisla Moku | 9862146579 | TU BCLN | |
| 11. T. Pookato Moku | 9862681713 | TU BCLN | |
| 12. Vivaswan Rakesh (TERI) | 9755129272 | TERI | |
| 13. Ritumita Mazumdar (TERI) | 7086545448 | TERI | |
| 14. Rahul Pati (TERI) | 8355827191 | VNV | |



A3. Attendance sheet – Training on nursery management and vermicomposting.

ATTENDANCE SHEET

Venue : Sukhoi Village 23/03/2026

TRAINING ON NURSERY MANAGEMENT

| NAME | CONTACT | SIGNATURE |
|------------------------------------|------------------|-------------|
| Ngukani Jimo | 9862222038 | [Signature] |
| OTO Jimo | 9366756280 | [Signature] |
| Ango L. | 9787580776 | [Signature] |
| Akai | 9378161011 | [Signature] |
| Shikali Aholoni | 7085687449 | [Signature] |
| Shimkhal J. Jimo | 8837401968 | [Signature] |
| Kabato Yopko | 7628086573 | [Signature] |
| K. Sukhai | 9867720993 | [Signature] |
| QHENITO PETHO | 9025088965 (LRO) | [Signature] |
| Naro pongla KVK, Lunami | 9612908340 | [Signature] |
| Edenly Chisui (KVK, NU, Lunami) | 8837328960 | [Signature] |
| IVAN Shimom | | |
| TVBELN | 8974860809 | [Signature] |
| Pranjul Chauhan, TERI | 7830944306 | [Signature] |
| Amitudh Soni, TERI | 7077967334 | [Signature] |
| Vivasvan Rakesh, TERI | 9755129277 | [Signature] |
| Tolka Akhemi | 6009134774 | [Signature] |
| Vili Muzou | 7085864511 | [Signature] |

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A4. Attendance sheet – Training on coffee cultivation

21 / 03 / 2026

ATTENDANCE SHEET
 VENUE :- Akihoito Village Council Hall
 TRAINING AND CAPACITY BUILDING WORKSHOP
 ON LIVELIHOOD OPPORTUNITIES

| NAME | VILLAGE | CONTACT | SIGN |
|-----------|----------|------------|--------------------|
| D. Piketo | Ghukhuvi | 8787734336 | <i>[Signature]</i> |
| Nito | Ghukhuvi | 9362354650 | <i>[Signature]</i> |
| Nesuka | Ghukhuvi | 7005783259 | <i>[Signature]</i> |
| D. Peto | Ghukhuvi | 9363904306 | <i>[Signature]</i> |
| Beshuka | Ghukhuvi | 8787342361 | |
| Alkabo | Ghukhuvi | 9366676125 | <i>[Signature]</i> |
| Iphoto | Ghukhuvi | 8924573204 | <i>[Signature]</i> |
| Niuto | Ghukhuvi | 883293023 | |
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| Vikito | Ghukhuvi | 9862361868 | |

21 / 03 / 2026

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| O. HENITO | L.R.D. | 7005088965 | <i>[Signature]</i> |
| Inovi R. | Ghukhuvi | 8416082645 | <i>[Signature]</i> |
| Niuto Aye | Ghukhuvi | 883293023 | <i>[Signature]</i> |
| Murdo Misa | Kivikhu | 8974556775 | <i>[Signature]</i> |
| Nidake Siro | Kivikhu | 8187486388 | <i>[Signature]</i> |
| Zhindiabi A. Pano | Sukhai | 8257401968 | <i>[Signature]</i> |
| Hilob | Kivikhu | 868346565 | <i>[Signature]</i> |
| Himato S. Zhimani | Kivikhu | 8690906777 | <i>[Signature]</i> |
| Hirifo Ghukhuvi | Kivikhu | 7612272529 | <i>[Signature]</i> |
| Hekoto Assumi | Akihoito | 8787100846 | <i>[Signature]</i> |

21 / 03 / 2026

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| Vinayak Rakesh | Gunaboti | 9755129277 | <i>[Signature]</i> |
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