







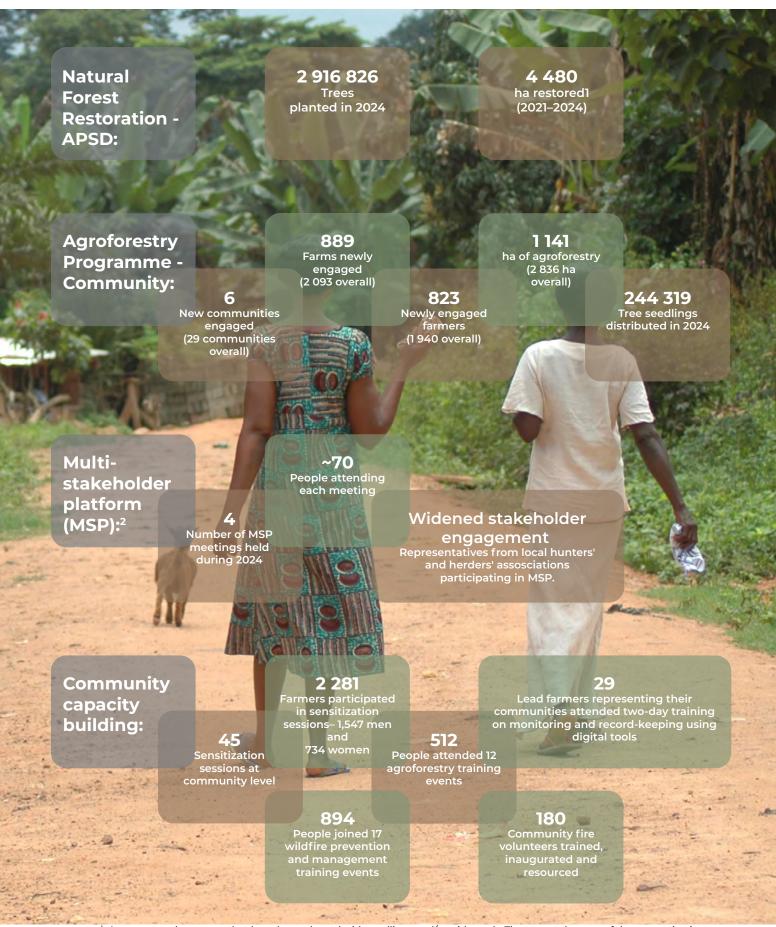




2024 ANNUAL REPORT FEBRUARY 2025



Atebubu and Wiase FLR in Numbers



Areas restored are areas that have been planted with seedlings and/or with seeds. They are at the start of the restoration journey.

² Multistakeholder platform (MSP) and community engagement



iNovaland Statement

2024 was a successful year for the project with six new communities and 823 new farmers. In addition, we were audited by the European Forestry Institute and secured additional investment from AstraZeneca to expand the project. We have expanded the local team in Atebubu, and have recruited Andrews Asante as a data management and GIS manager.

An unexpected dry period from June to September created challenges for farmers, with harvesting delayed and tree establishment compromised. But some of the agroforestry trees planted in 2022 have produced their first cashews, and the natural forest restoration areas are becoming well established, with some trees now above the surrounding elephant grass and creating shade for other species. These visible outcomes give confidence to all project partners, but we are all aware that we need to continue to work together to better manage fire, and provide ongoing technical support to our partners and the communities we serve. We are growing a sustainable future; a future where thriving ecosystems coexist with prosperous livelihoods and communities.

Andrew Heald, iNovaland COO

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Community feedback



Elambo Francis Lead farmer from Kofidjan

"As a lead farmer, this project has benefited me immensely from the capacity building initiatives. I have acquired hands-on practical skills pertaining to agroforestry and good agronomic practices because of the series of trainings organized by the project. This has built my confidence to serve as role model in disseminating the knowledge to farmers in my community. I have also been exposed to digital means of collecting data and information using electronic gadgets such as phones and tablets. These sets of skills will not only benefit the project but also have built me into a person of value for any future roles and responsibilities in my career."



Robert ManuCashew farmer from
Menkor

"I am very happy to see some of my cashew fruiting in just three years because I will be getting my first income from it. What I also observed during the flowering and fruiting stages of the cashew was the constant visitations of insects, notably bees and butterflies, and I have been planning to get some beehives under the cashew trees to trap these bees for honey. This way I can get multiple sustainable income streams to improve my standard of living."



Abena Salomey Mango farmer from Akenten

"Seeing our seedlings affected by drought and fire sometimes makes me want to give up after the efforts of carrying and planting because it entails energy and time. However, your persistent engagement on improved good agronomic practices and fire prevention initiatives gives me the hope and energy to continue because I know the beginning of everything is always not easy but with hard work and perseverance, you can overcome the difficulties. So, since you have not given up on us, I will continue to follow your guidance to achieve the needed results."



Project overview

Atebubu and Wiase Forest Landscape Restoration (FLR) project:

"A 'Living Lab' for Community and Ecological Resilience" is a ten-year community-led project located in the Bono East region of Central Ghana.

Living Labs are an initiative established by the Circular Bioeconomy Alliance (CBA), created by His Majesty King Charles III under the Sustainable Markets Initiative. CBA aims to catalyse investments for creating resilient landscapes and sustainable markets powered by nature. The Atebubu and Wiase project was the world's first CBA Living Lab, and is funded by AstraZeneca.

The project seeks to address issues of land degradation, declining soil fertility, low agriculture productivity, deforestation, nature loss, unemployment and climate change.

To build community and ecological resilience through forest landscape restoration, the initial targets set in 2021 have been revised and the project adapted towards the year so that in 2026:

- **Natural forest restoration:**
 - 10,000 hectares of restoration in degraded areas
- Agroforestry programme:

5,580 hectares of agroforestry and regenerative agriculture to reduce pressure on natural forests, improve land productivity and boost incomes for smallholder farmers.

A total of 12.9 million trees will be planted.

- Natural Forest: 11.6 million trees
- Agroforestry and Woodlots: 1.3 million trees

This is made possible by working with project partners and the Multi-Stakeholder Platform (MSP).













Forest Landscape Restoration Project

Building a Sustainable Future Together



Alignment with Circular Bioeconomy Alliance principles

The Atebubu and Wiase FLR project was the first "Living Lab" to be developed as part of the Circular Bioeconomy Alliance (CBA) and is aligned with **CBA's principles for regenerative landscapes**. The project is focused on the long-term sustainability of all parties involved and the surrounding ecosystems. It aims to ensure social-ecological resilience by enabling people to create better livelihoods in harmony with nature and harnessing local knowledge to promote landscape regeneration.

Principles	Alignment
1. Natural environment Design for environmental sustainability, reverse nature's degradation and support ecosystem health.	 Focus on environmental sustainability and ecosystem health. Restoration guided by local expertise (Nature and Development Foundation, APSD, Forest Research Institute of Ghana, Crops Research Institute, Ministry of Food and Agriculture. Reforestation with native species (e.g., ceiba, mahogany, papao) for biodiversity and shade. Addressing wood fuel demand with cassia for sustainable charcoal production. Increasing wildfire resilience and reducing fire use by farmers.
2. Social well-being Inclusive design aiming for equity, human health and happiness.	 Inclusive, community-driven design (e.g., quarterly MSP meetings). Training farmers to grow diverse food and cash crops. Enhancing food security while increasing carbon removals. Regular engagement with local communities to ensure equitable outcomes. Knowledge sharing on organic compost and sustainable practices.
3. Economic prosperity Design in support of the circular bioeconomy and target sustainable creation of wealth	 Employing 500+ local people in forest restoration activities. Supporting market access and higher-value sales through cooperatives and partnerships. Exploring value chain improvements (e.g., cooperatives, cashew roasting facilities). Promoting agroforestry models for long-term economic resilience.

Principles	Alignment
4. Diversity Manage risks by diversifying species, products and markets.	 Diversifying species, products and landscapes. Agroforestry includes mango, cashew, coconut, mahogany and cassia. Restoration uses native species like ceiba, mahogany and ofram. Promoting ecological succession to enhance biodiversity and reduce fire risks. Inclusion of native tree crops like shea for added value.
5. Connectivity Promote connectivity and collective impacts among nature and people.	 Connecting 1,500+ farmers across 29 communities. Creating biodiversity corridors and reducing fires. Expanding MSP meetings to improve accessibility and inclusion. Enhancing community fire management and landscape connectivity.
6. Adaptive capacity Act for the long term based on monitoring and learning, keeping the social-ecological system flexible and adapted to upcoming challenges.	 Annual updates to strategies based on monitoring and feedback. Training on advanced agroforestry and bushfire management. Reducing fire recurrence and improving resilience to climate variability. Long-term goals include sustaining forests until 2052 with carbon finance income. Monitoring social, economic, biodiversity and carbon impacts regularly.
7. Harmony Understand and embrace the local context, respecting laws and customary rights, including traditional knowledge, and finding balance between interests.	 Respecting local customs, laws and traditional knowledge. Engaging community leaders and councils for alignment with local contexts. Promoting sensitization meetings to gather feedback. Addressing climate change impacts to prevent land degradation and migration pressures. Leveraging local knowledge and research for project implementation.



Progress and achievements in 2024

In 2024, over **3 million** trees were planted on circa **3,500** hectares of degraded forest land and farmland in the Atebubu-Amantin and Sene West districts.

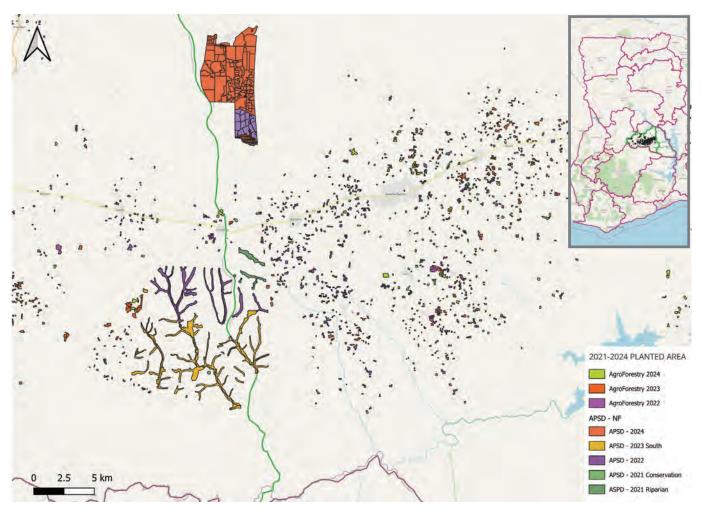


Figure 1. Areas planted in 2021, 2022, 2023 and 2024.

In the agroforestry programme, **244,319** trees (*189,540* fruit trees and *54,779* timber trees) were distributed and planted in 2024 across a total of **1,141** hectares. Initial survival rates for mango, cashew and timber trees were 88%, 81% and 65%, respectively.

In the natural forest restoration **2,916,826** trees were planted trees on **2,333** hectares in 2024. Initial assessments in mid-December showed an average survival rate of 81.4%.

During the year, four MSP meetings were led by the Nature and Development Foundation (NDF). and in addition iNovaland's community liaison officers led 45 engagements at the community level. Overall, 277 participants attended to discuss several issues (Table 3 – Issues raised by participants at MSP meetings) More balanced representation is one of the main topics being addressed, and many efforts have been made to increase young people's and women's participation in the project. Only 12% of attendees at MSP meetings are women, and this number needs to be increased. When community engagement meetings are held in directly in communities, women's participation increases to around 25% in comparison with MSP meetings.

Table 1. Issues raised by participants at MSP Meetings⁵

Issue
Communication
Better gender representation
Farmer representatives
Land tenure
Low participation of migrant farmers
Balance between arable crops and tree crops
Bushfire management and control
Disturbance by wild hunters and Fulani herdsmen ⁵

⁵ Full MSP reports are available at the project's website.

As part of the community engagement, multiple training events on agroforestry (before the planting season) and fire management (postplanting and pre-dry season) took place at the community level. Also in 2024, in Kwame Danso and Atebubu, 29 lead farmers and two nursery operators spent two days learning how to keep proper records and to monitor and collect data using digital tools (QField and Kobo Toolbox). The fire management training is part of a broader strategy to reduce the impact of fire on the landscape and protect all planted trees. This has been developed from within the MSP and with the support of the project Advisory Board (Table 1), resulting in a broader management plan that includes the creation and training of fire brigades at the community level.

Three highlights in 2024 were:

i. Following the 2023 community engagement workshop on forests, carbon and co-benefits, during the first quarter of 2024, benefit sharing agreements with communities were concluded, paving the way for longterm financing of the project.

ii. The biodiversity monitoring framework was developed with researchers from Kwame Nkrumah University of Science and Technology in Kumasi (see box 1). This collaborative milestone is a key step in establishing and strengthening the ability to assess and protect biodiversity in the project landscape, ensuring data-driven decisions for sustainable biodiversity management.

iii. Green Ghana Day 2024, with the presence of AstraZeneca Ghana, was another opportunity to strengthen collaboration with partners and local communities in a joint commitment to restoring degraded ecosystems.



Figure 2. Lead farmers' training at Moderna Hotel in Atebubu.



Figure 3. Total area planted in 2024 of natural forest restoration: 2,333 hectares.



Figure 4. Moro Seidu from the iNovaland field team collecting aquatic eDNA samples in September 2024, at the end of the rainy season.

BOX 1. Biodiversity assessment report

To support the positive impacts of ongoing habitat restoration efforts, a comprehensive biodiversity assessment was conducted in the APSD forest concession and the project's agroforestry farmlands between June and September 2024. The assessment used diverse methods to survey the vegetation (trees, shrubs and herbs) and fauna, including aquatic macroinvertebrates, dragonflies, butterflies, birds, bats, reptiles (snakes and crocodiles), amphibians and mammals.

Plants of national and global conservation concern were found, including *Pterocarpus erinaceus, Khaya senegalensis, Afzelia africana and Vitellaria paradoxa*. The study also found the landscape to harbour a rich and diverse array of wildlife, including species of both national and global conservation concern. Notable species included the Critically Endangered hooded vulture, the Near Threatened patas monkey, and the African civet. Additionally, the APSD forest concession may serve as a key stronghold for crocodile populations in Ghana, potentially hosting all three crocodile species found in the country Further eDNA analysis is being undertaken to confirm this.



Indicators - tree targets

The revised target for 2024 (following the project expansion announcement in May 2023) was to plant **1,690,982** trees with **1,306,290** surviving. Following discussion with project partners, the planting programmes for 2024 and 2025 were combined. By the end of the 2024 planting season, **2,916,826** trees had been planted in natural forest restoration within the APSD concession, and **189,540** fruit trees and **54,779** timber trees had been distributed and planted by local farmers under the agroforestry programme.

In natural forest restoration areas, initial monitoring shows an 81.4% survival rate. Natural forest and fruit tree survival rates are within expected boundaries at this stage of the year, which is still early in the dry season. However, the unexpected drought during the rainy season has dried both soils and vegetation earlier than usual, increasing the risk of wildfire across the landscape during early 2025.

Survival rates will be reassessed after the dry season (end of March 2025).

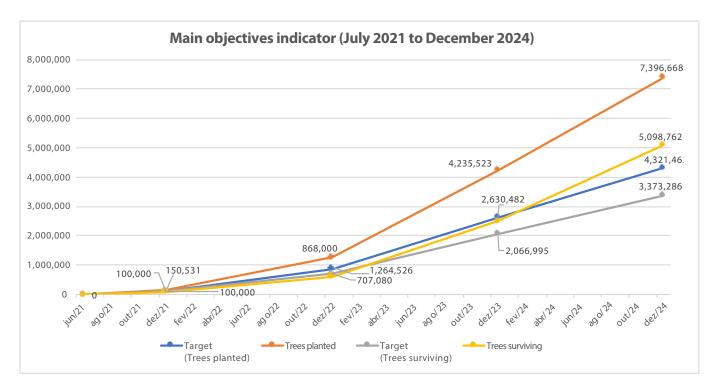


Figure 5. Comparison between targets and actual results of trees planted and trees surviving until December 2024.



Challenges and lessons

There is no project without challenges.

What is important is continuous reflective learning to do things better.

Challenges:

1. Long drought in the landscape:

The prolonged drought impacted planting timelines and seedling survival. It also affected communities and farmers who are dependent on the rains. When the rains finally came it was close to the dry season, and some farmers were not able to plant their food crops like maize and cowpea because they were afraid the rains might stop early.

2. Data management and collection;

As the project expands, managing and using data effectively and efficiently becomes increasingly vital, but is also challenging. The project promotes data literacy and capacity building for lead farmers, field staff and community members in data collection and recordkeeping. Measures have been put in place to standardize data collection templates and regularly review and refine data collection methods to minimize errors. The project is also investing in using digital tools and apps (e.g. Kobo Toolbox. ODK) to streamline data capture in the field, facilitating data integration across platforms, and using secure systems to protect sensitive data.

Lessons:

1. Establishing community seedling distribution points.

Many seedlings die even before they are planted, because of the shocks they experience during handling and transportation from supplier to farmer. Establishing community distribution points, where seedlings can be stored carefully and kept watered, will give seedlings the chance to recover from these shocks. The community distribution will also enable farmers to plant early, immediately after the rains set in.

2. Abandonment of farms.

Monitoring shows some farmers have abandoned their farms. Key reasons include frequent fires and cattle destroying seedlings. To address these issues, we have collaborated with some communities and their local authorities to establish community fire volunteer programmes. Volunteers help reduce incidences of fire in the communities by assisting farmers to create fire belts and to control burning when they want to prepare their lands for yam cultivation, for instance. In addition, cattle herder representatives have been invited to and attended MSP meetings, and improved dialogue and understanding should help to minimize damage caused by grazing.



Communications

The project partners have developed a communications strategy, which is reviewed annually for local and international purposes. This aims to:

- Develop impactful communication materials to achieve the project objectives.
- Share and showcase success stories, good practices and lessons
- Increase the intended audiences' awareness of the project and project partners
- Encourage and facilitate the active participation of diverse stakeholders and policymakers and pose calls to action.
- Secure the commitment of stakeholders to the project objectives.

CBA launch event in London

On 22 November, there was a major event at St James's Palace in London to mark the UK launch of the Circular Bioeconomy Alliance, focused on how communities, and industries such as fashion, food and pharmaceuticals can embrace new nature-based approaches. The Atebubu and Wiase project was highlighted during the event as one of the most advanced.



Figure 6. His Majesty King Charles III talking with Andrew Heald (iNovaland) and John Atkinson (AstraZeneca) about the Atebubu and Wiase Forest Landscape Restoration project during the CBA launch event.

Video from RE:TV

A video produced by RE:TV features the project as a good examples of agroforestry practices in restoration projects:

www.re-tv.org/articles/agroforestry

Green Ghana Day

Green Ghana Day is an annual event promoted by the Government of Ghana to raise awareness of the need for more tree planting and management. This year, it was held on June 6. iNovaland's team organized a local planting event and agroforestry training to mark the day and highlight the project's contributions to its goals. AstraZeneca's team in Ghana visited project sites in Bantama to mark the occasion.



Figure 7. Green Ghana Day event with the AZ Ghana team, including Marbel Frempong Mensah (Ghanan Country Lead) and Dr Abdulai Baba Issah (Sustainability Champion for Ghana).

Website

The project's website was updated regularly during 2024. Project documents and achievements are available in a simple and clear format to promote transparency to the community and other stakeholders. See:

https://atebubu.inovaland.earth

Social media

Many notes about the project were posted on **iNovaland's LinkedIn** page.

Radio Shows

The project was featured on several radio shows, with appearances from iNovaland's team, community members and other partners, like the Ghana National Fire Services and extension officers from Ministry of Food and Agriculture. They discussed issues including the importance of agroforestry, the impacts of climate change and how restoration initiatives can support communities, reaching a wide regional audience. Radio broadcasts also helped raise awareness about fire management, and an announcement on fire risk was created to be run daily on both local radio stations during the entire dry season. More radio shows are scheduled for 2025.



Figure 8. iNovaland team and local farmers at SENE FM talking about the carbon certification workshop.



Community feedback



Michael Yaw Adaworoma Mango farmer from Drobe

"One of the obstacles to the success of this project is bush fires and as a junior high school teacher and project beneficiary, I have taken it upon myself to constantly leverage on this role to educate my students on bushfire prevention and management. Engaging people at an early stage is important to change their mindset and mentality on the negative usage of fire in the community.

I believe as a community, different stakeholders must play different roles to overcome the challenges and obstacles to the success of the project."



Koo Kumah Mango farmer from Bantama

"As individuals living on this earth, it's important to establish plans or assets to pass down to future generations while also ensuring you can support yourself in later years. I think that getting involved in tree planting is laudable. When I become old and weak, I will rely on the proceeds from selling fruits to help cover my expenses and my children's and grandchildren's educational expenses."



Akwasi WilliamsCashew farmer from
Bantama

''With the support from the Atebubu and Wiase FLR project, such as visiting me at my farm, training us and giving me cashew seedlings, I can now farm smartly to protect the environment and also provide for my family and me in future."



Targets for 2025 and 2026

In 2023, targets have been revised based on the 1st year of implementation. The table below reflects the current project targets for the coming years.

Table 4. Tree and area targets for 2024 to 2025

	Total			Natural Forest		Agroforestry Programme			
	Area (ha)	Trees Planted	Trees Surviving	Area (ha)	Trees Planted	Trees Surviving	Area (ha)	Trees Planted	Trees Surviving
2025	5,689	4,857,082	3,986,670	3,802	4,469,167	3,651,875	1,887	387,915	334,795
2026	3,900	3,716,100	3,152,880	3,000	3,600,000	3,060,000	900	116,100	92,880
Total (2025-26)	9,589	8,573,182	7,139,550	6,802	8,069,167	6,711,875	2,787	504,015	427,675
Total (2021-26)	15,580	12,894,645	10,512,836	10,000	11,625,000	9,403,750	5,580	1,269,645	1,109,086

2025: Targets and Main Activities

This year is another opportunity to showcase the potential of forest landscape restoration in building community and ecological resilience. We will continue supporting the 1,900+ agroforestry farmers to better manage the trees already planted and expand to new farmers within the 29 main communities. Our revised targets are:

- Restore circa 3,802 hectares of degraded natural forest using native tree species.
- Improve food and timber production in circa 1,887 hectares of agricultural lands through smallholder-led agroforestry.
- Continue providing technical, practical and peer-to-peer capacity building for farmers in climate change adaptation, agroforestry, land use and fire management.
- Monitoring, evaluation and learning to ensure better survival rates for planted trees and long-term community impact, and biodiversity protection and enhancement.

Key Dates

- February to May
 Farmers mapping, registering and
- agroforestry trainings: February to May
- April to September Natural forest planting
- June to August Agroforestry tree distribution and planting
- March, June, September and December MSP meetings (4)
- October 2025 to March 2026 Wildfire management

Reflection

A key date in the 2024 calendar was our first audit in October, by the European Forest Institute on behalf of our investors AstraZeneca. Any audit is an opportunity for reflection and for considering how we can improve our processes and practices. As a founder member of the Circular Bioeconomy Alliance, it is also useful to compare ourselves against other similar CBA projects.

In addition to this now annual audit, in 2025 we are expecting an audit to determine our compliance with the Verra Verified Carbon Standard (VCS). Demonstrating alignment with international best practice standards and guidelines is an important part of our overall risk mitigation and helps to ensure successful outcomes for all project partners.

Successful landscape restoration is primarily about people, perspectives and values. To ensure success in the short and long term, we need to ensure that all project partners can see the value in the project, participate in value creation and share in the benefits. Successfully managing wildfires and improving farm yields and profitability is as important to the overall success of the project as the technical aspects of planting and managing trees.

These external audits give us the time, and the incentive, to pause and consider what's essential to achieve the overall project objectives, and to assess our management against international best practice. It can sometimes be challenging to demonstrate the connections between high-level principles and decision-making on the ground, particularly when working with unseasonal weather and changing socioeconomic conditions.

The most important skills for any auditor, and for our project team, are dialogue and communication. We need to listen to and understand other people's objectives and concerns and share our ideas and requirements. Audits and project delivery aren't about a binary pass or fail; they are about assessing against a wide range of criteria and continuous improvement.

Balancing objectives and requirements can be a bigger challenge as the project continues to expand. But growth, both in area and in the number of partners, also increases the overall resilience of the project, by spreading risk and by increasing diversity. The basic challenges and tasks remain similar: good and early engagement; planting good quality trees at the right time and in the right place; community support and mobilization to minimize fires and maximize successful establishment.

The success of the project is built on a shared vision of all the project partners for more resilient landscapes and communities. That shared vision isn't static but grows and evolves over time, as the project itself grows and evolves. Continual dialogue and constructive communication are what helps that evolution, nurtures that growth and ensures the project meets the needs of local communities and partners.



Figure 10. Engagement at the community level during the audit conducted by the European Forest Institute, September 2024.

Appendix

Table 2. Members of the Advisory Board² at the end of 2024

Name	Entity
Yitagesu Tekle	Circular Bioeconomy Alliance / European Forest Institute (CBA/EFI)
Mustapha Seidu (Chair)	Nature and Development Foundation
Nana Owusu Sarpong	Atebubu Traditional Authority
Bantama Honourable Anthony Owusu	Multistakeholder Platform Chair
Nana Amo Kwasi IV	Wiase Traditional Authority
Yakubu Mohammed	Forestry Commission of Ghana
Prof. Daniel Ofori	Forest Research Institute of Ghana
Mohammed Issiah	Dwan Traditional Authority
Samuel Azuug	Crops Research Institute
Nana Owusu Achiaw II	Kumfia Traditional Authority
Nana Yaw Owusu	Nyomoase Traditional Authority

² The main purpose of the Advisory Board is to provide additional support and input to the project. This support and input could be scientific, cultural, or technical. The Advisory Board has no decision-making power but can give clear recommendations to the Project Board.

Table 3. Members of the Project Board³

Name	Entity
Yitagesu Tekle	Circular Bioeconomy Alliance / European Forest Institute (CBA/EFI)
Mustapha Seidu	Nature and Development Foundation
Andrew Heald	iNovaland
Finn Jacobsen	APSD
John Atkinson	AstraZeneca
Alison Davies	AstraZeneca

³ The main purpose of the Project Board is to a) make high level strategic decisions about the direction of the Project and b) monitor and evaluate progress of the project.

Table 4. Key project people.

Entity	Name	Role in the project
iNovaland	Abraham Yelley	Project Coordinator
iNovaland	Andrew Heald	iNovaland COO
iNovaland	Andrews Asante	GIS and Data Officer
iNovaland	Emmanuel Kwarteng	Community Liaison Officer
iNovaland	Moro Seidu	Community Liaison Officer
iNovaland	Rose Kobusinge	Communications Officer
iNovaland	Rui Barreira	iNovaland NGPTA Director Project Lead
NDF	Mustapha Seidu	MSP facilitator Advisory Board Chair
Community Leader	Bantama's Honourable Anthony Owusu	MSP Chair
APSD	Celestina Nsor	Natural Forest Restoration
APSD	Finn Jacobsen	Natural Forest Restoration

⁴ Full MSP reports are available on the project's website.

⁵ Fulani herdsmen are nomadic or semi-nomadic pastoralists from West Africa, primarily engaged in livestock rearing. Found across the Sahel and semi-arid regions, they have migrated further south into savannah and tropical forest areas due to climate changes.



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■ Astra Zeneca Ethics Helpline
Concerns about the project can be raised via this independent helpline: (Click Here)





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Date: February 2025