Inclusive Landscape Management Plan for the Transformation of the Agrifood System in Ahafo Ano Southwest District of Ghana

October 2023

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Citation

Atampugre, G.; Tilahun, S. A.; Owireko, I. O.; Owusu-Amofah, S. B.; Amponsah, A. K.; Cofie, O.; Adusei-Gyamfi, J.; Boateng, E. 2023. *Inclusive landscape management plan for the transformation of agrifood systems in Ahafo Ano Southwest District of Ghana.* Colombo, Sri Lanka: International Water Management Institute (IWMI). CGIAR Initiative on West and Central African Food Systems Transformation. 34p.

CGIAR Initiative on West and Central African Agri-Food Systems Transformation

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Summary

Inclusive landscape management (ILM) is a holistic approach to managing landscapes that considers the needs of all stakeholders, including local communities, indigenous peoples, and marginalized groups. This Inclusive Landscape Management Plan (ILMP) seeks to provide a framework for the sustainable management and development of landscapes in the Ahafo Ano Southwest District (AASWD) of Ghana. The ILMP is designed to address the increasing pressure on landscapes in West and Central Africa under TAFS-WCA initiative (from deforestation, land degradation, poor water management, unsustainable mining, wildlife poaching, and climate change). The ILMP emphasizes the integration of social and ecological systems, local participation, and sustainable resource use and management within landscapes. It is a response to 'top-down' approaches to sustainable development, in which power and decision-making are in the hands of external development professionals. Instead, the ILMP is based on shared ownership of decision-making and the full participation of all stakeholders.

This ILMP is a product of a collaborative effort between the International Water Management Institute (IWMI), the AASWD, and local stakeholders from the Mankran micro-watershed of Ghana. The ILMP was developed through a participatory process that involved stakeholders from all sectors, including government, civil society, and the private sector. The process began with the creation of a narrative that served as a broad objective for promoting inclusive landscape management in the Mankran micro-watershed. The research team then worked with local stakeholders to assess the current state of the landscape and identify key challenges and opportunities. Based on the assessment, the research team and stakeholders co-developed a set of management strategies and interventions that are designed to address the key challenges and achieve the desired outcomes. The ILMP was designed with a shared vision for the landscape: "*To sustainably co-harness landscape resources in a transparent and accountable manner to engender resilient communities and healthy ecosystems in the Ahafo Ano Southwest District.* Based on the vision and identified challenges, stakeholders proposed various response strategies that included: Increased irrigation efficiency through adaptive and inclusive management; mechanisms to reduce postharvest losses; mechanism for profit or benefit sharing from mining and forestry; Enhanced gender and youth involvement in decision-making; Improved income and livelihood diversification opportunities; Improved adoption of sustainable land/forest/water management practices; Increased food safety through reduced contamination from pesticides and *galamsey* (illegal small-scale mining) the strengthening of local/traditional institutions for natural resources management. The ILMP also includes a monitoring and evaluation framework to track progress and ensure that the interventions are having the desired impact. It is critical to note that the ILMP is a living document that should be updated on a regular basis to reflect changes in the landscape and the needs of the stakeholders. It is hoped that the ILMP would serve as a blueprint for sustainable and inclusive landscape management in the AASWD and beyond.

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Acronyms

AASWD	Ahafo Ano Southwest District
CSIR	The Council for Scientific & Industrial Research
CREMAs	Community Resource Management Areas
CRI	Crop Research Institute
DA	District Assembly
ECG	Electricity Company of Ghana
ES	Ecosystem Services
FGDs	Focal Group Discussions
FORIG	Forest Research Institute of Ghana
GCFRP	Ghana's Cocoa Forest REDD+ Programme
GESI	Gender Equality and Social Inclusion
GLDN	Ghana's Land degradation Neutrality
HIA	Hotspot Intervention Area
ILMP	Inclusive landscape management plan
IAP	Investment Action Plan
IPM	Integrated Pest Management
IWMI	International Water Management Institute
KNUST	Kwame Nkrumah University of Science and Technology
LPG	Liquefied Petroleum Gas
MEL	Monitoring, Evaluation and Learning
MOFA	Ministry of Food and Agriculture
MTDPs	Medium Term Development Plans
NGOs	Non-Governmental Organizations
PA	Public Address
PES	Payment for Ecosystem Services
SDGs	Sustainable Development Goals
SEL	Social Ecological Landscape
SRI	Soil Research Institute
UCC	University of Cape Coast
WRC	Water Resource Commission

1.0   Introduction

Landscape management in West and Central Africa faces increasing pressure from deforestation, land degradation, poor water management, unsustainable mining, wildlife poaching, and climate change. The upsurge in unsustainable land use practices has resulted in ongoing environmental degradation, with implications for the growing demand for food in terms of both quantity and quality, competition for productive land, urban expansion, demand for forest resources, demand for water resources, wildfires, soil health (indicated by lower nutrient status and organic content), forest ecosystems, and water resources. Coupled with the mounting impacts of anthropogenic climate change, this trend is projected to exacerbate exposure and vulnerability of production and livelihoods in this agrifood system, threatening its resilience.

The above context justifies the urgent need for a sustainable and inclusive approach to landscape management. Inclusive landscape management plans (ILMP) emphasize the integration of social and ecological systems, local participation, and sustainable resource use and management within landscapes (Albert et al. 2014). The approach focuses on ensuring the inclusivity of decision-making processes, valuing diverse perspectives, and addressing power imbalances among stakeholders. The inclusive approach is based on shared ownership of decision-making. It is a response to 'top-down' approaches to sustainable development, in which power and decision-making is in the hands of external development professionals. Participation is key in advancing sustainable development and considering the social context. Sustainable development allows for the improvement of everyone's quality of life while preserving and developing the natural resources on which life depends. Because problems involving unsustainable resource use are often complex and frequently need compromises and trade-offs, processes that involve full participation from all stakeholders typically yield the best and most lasting results. Consequently, success stories of inclusive landscape management depict large-scale initiatives comprising stakeholders implementing coordinated interventions across a variety of land uses for a desired effect and impact.

This ILMP seeks to provide a framework for the inclusive participation of stakeholders in the sustainable management and development of landscapes in the Ahafo Ano Southwest District (AASWD) for socio-economic and environmental benefits (See Figure 1 for map of AASWD). By prioritizing inclusivity, this landscape management plan aims to create a more harmonious and sustainable relationship between communities, ecosystems, and development, fostering resilience and equitable benefits for all. This strategic plan defines a broader shared vision, objectives, and a road map that would aid all stakeholders and institutions to contribute to the effective and sustainable management of natural resources in the AASWD. This would also guide the AASWD to prepare their own investment action plans towards achieving the overall vision. The landscape management strategy would also provide a strategic framework that Medium Term Development Plans (MTDPs) of the district could link up to achieve their climate change and environmental/natural resources management obligations as provided by the National Development Planning Commission Guidelines for the preparation of MTDP. There is also the Ghana Cocoa Forest REDD+ Programme (GCFRP), which represents an innovative, unique, and highly ambitious programme to reduce deforestation and degradation in a sub-national landscape of approximately 5.9 million ha in Ghana. Given that the AASWD landscape falls within the area earmarked for the implementation of this programme, this ILMP also explores opportunities for building synergies and models the target landscape around the Hotspot Intervention Area (HIA) concept to benefit from the programme. The shared landscape vision and the elements of this ILMP are also in line with Sustainable Development Goals (SDGs), which are the global blueprint to achieve a better and more sustainable future for all.
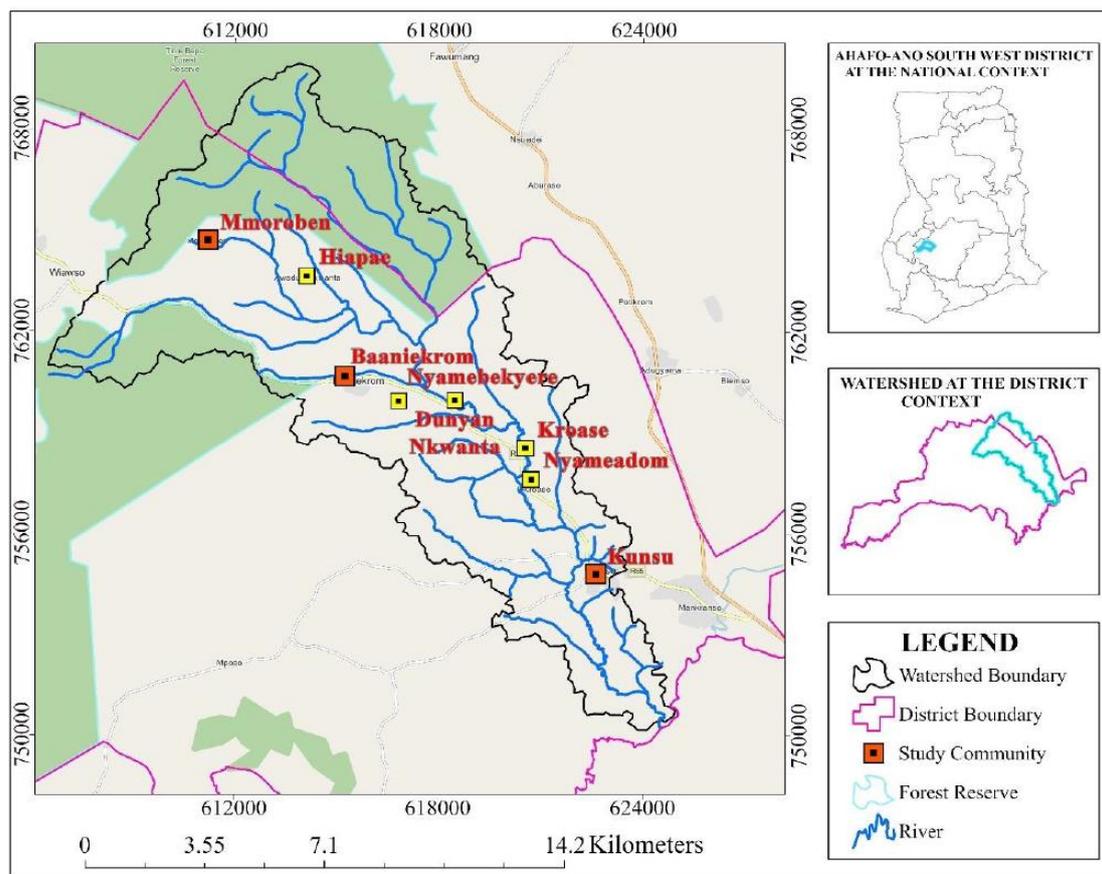
Figure 1: Map of the study landscape in AASWD
Source: Atampugre et al. (2022a)

2.0   Methodology

The ILMP for AASWD prescribes an inclusive, action-oriented, and collaborative process targeted at delivering on the aspiration of stakeholders towards a future of social and economic progress under a robust natural resource management system. These principles also reflect in the Medium-Term Development Plans (MTDPs) of the AASWD, Ghana's Land degradation Neutrality (LDN) targets, and national sustainable development priorities and targets. The key elements of this ILMP include:
- Shared or agreed management objectives that encompass multiple benefits from the landscape
- Field, farm, and forest practices designed to contribute to multiple objectives, including human well-being, food production, climate change mitigation, and conservation of biodiversity and ecosystem services.
- Ecological, social, and economic interactions among various parts of the landscape are managed to realize positive synergies among interests and actors or to mitigate negative trade-offs
- Collaborative, community-engaged processes for dialogue, planning, negotiating and monitoring decisions are in place.
- Markets and public policies are contextualized to achieve the diverse set of landscape objectives and institutional requirements.

The ILMP development followed the iterative and non-linear inclusive planning framework (See Tilahun et al. 2023; Atampugre et al. 2023) that involves the following key components (See Figure 2 for a simplified illustration):
- Definition of goals and objectives.

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- Stakeholders mapping and identification of key challenges and demand driven intervention practices.
- Conduct workshops and iterative planning to co-design options of landscape management plans,
- Assessment of and recommendations for gender equality and social inclusion (GESI).
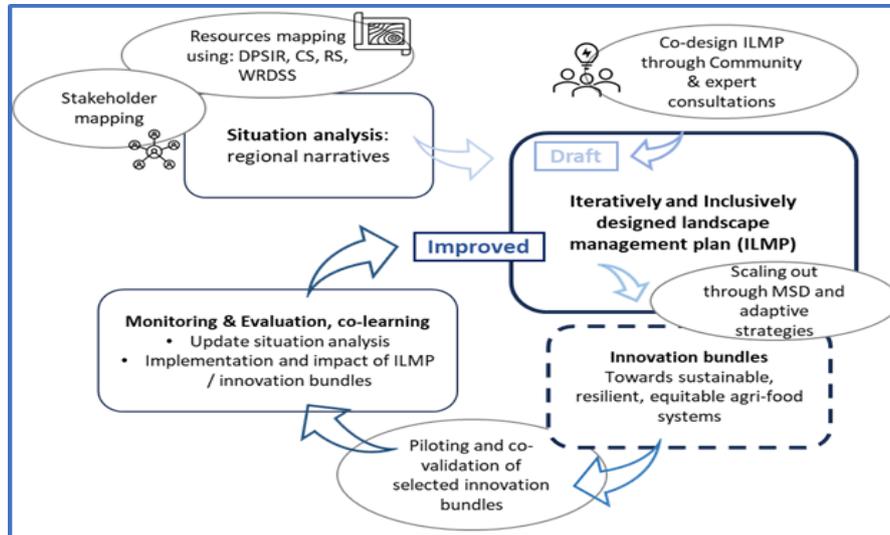
Figure 2: Iterative inclusive landscape management planning (ILMP) process.
Source: Tilahun et al. (2023)

Step 1: Narrative development

The initial step of co-developing the Inclusive Landscape Management Plan (ILMP) was to create a narrative that served as a broad objective for promoting inclusive landscape management to enhance the current landscape state. A research team from the International Water Management Institute (IWMI) together with identified regional and local stakeholders evaluated the social ecological sustainability of the social ecological landscape and envisioned future strategies. To initiate this process, a suitable micro-watershed for action was identified and this involved local stakeholders in areas facing socio-ecological challenges. This local involvement was essential for addressing issues related to land and water resource management, aiming to improve food security, income, and nutrition. The AASWD played a crucial role in integrating these efforts into their plans, so their involvement in this first step was fundamental. Key stakeholders collaborated to define a target landscape that aligns with the narrative's goals. Accordingly, a micro-watershed in the Mankran watershed was co-identified (Figure 3).

Figure 3: Participants co-developing landscape narrative
Photo credit: IWMI/Gerald Atampugre

Step 2: Resource unit assessment

Once the Mankran micro-watershed was identified, the next step was to map competing resource units and establish local expert groups to represent these resource systems. The research team guided the local experts in co-creating inventories of critical elements related to land use and ecosystem services within the landscape. They also co-identified site-specific indicators for landscape situational analysis (See Atampugre et al. 2022a) and the assessments of future landscape performance. Citizen scientists were employed to conduct hydrological and water quality assessments different land use categories, i.e., forest, agriculture, and degraded areas (See Figure 4).

Figure 4: Citizen scientists presenting findings (a) and citizen scientists installing rain gauge (b)
Photo credit: IWMI/Gerald Atampugre

Step 3: Co-design, visualization, and documentation of ILMP

The third step of the process was to develop a mid-term ILMP for the AASWD. This involved three workshops with the regional and community expert groups (involving 67 participants, See Figure 5), focusing on landscape challenges and vision, with emphasis on management strategies, resource allocation, assigning responsibilities, and financial considerations. The workshops began with a briefing on the current landscape challenges in plenary. The FGDs were organised based on gender to ensure equal participation and promote freedom of expression (considering the cultural setup in communities). Issues

related to GESI were duly considered to enhance inclusivity. Resource users and other stakeholders then co-defined a common landscape vision and specific objectives with associated strategies. The final plan was generated by integrating various stakeholders' perspectives (Appendix A and B for detailed workshop plan).

Figure 5: Participants (a-b) mapping out and (c-d) presenting landscape challenges and vision
Photo credit: IWMI/Gerald Atampugre

Considering that this is a living ILMP, there will several follow-up activities involving piloting and testing of certain technology and innovation bundles that were identified during the co-design phase (Step 3). As part of this will be an extensive co-validation process to evaluate the suitability and efficacy of the strategies. There will also be activities related to impact evaluation of ILMP interventions using the SI framework to measure improvements in social-ecological landscape objectives/goals. This is to facilitate ongoing learning and communication among stakeholders involved in landscape management. It is also expected that there will be an effort to scaling out ILMP process and its interventions to Greater Ahafo Ano area. The goal is to create an inclusive and sustainable development plan that ensures the ongoing maintenance of landscapes and provides guidance for accommodating recent changes driven by social, economic, and environmental processes. The scaling out strategies include, but not limited to, the following key elements:

- Involving Local Government: Engaging the local government as a facilitator right from the beginning of the process.
- Continuous Stakeholder Engagement: Maintaining ongoing engagement with key stakeholders.
- Presentation at Local and National Levels: Sharing the co-design process at both local and national levels to gain broader support.

To scale any intervention bundles from the plan, various existing approaches may be used: participatory innovation platforms, adaptive scaling strategies, multi-sectoral platforms, and food system accelerator challenge. These strategies must be tailored to specific interventions being scaled to ensure their successful integration into the broader productive landscape.

3.0   Landscape Situational Analysis in Ahafo Ano Southwest District

Using the DPSIR-SEL framework (See Atampugre et al. 2022b), a mix of methods, and the micro-watershed in the Mankran watershed in the Ahafo Ano Southwest District (AASWD) as a case, the research team conducted landscape situational analysis (LSA). The LSA aimed at giving an overview of how drivers and pressures combine to delineate the Social Ecological Landscape (SEL) state and impacts, highlighting the institutional responses. The driving forces behind the pressures that define the state of and impacts on the landscape are local, albeit a few national and global drivers (Figure 6 for a summary of the LSA findings). The LSA showed that unregulated small-scale mining, large-scale wood exploitation, and the conversion of forest ecosystems into farms and plantations are growing threats to the health and function of the landscape (Figure 5). These activities are driven by poverty, limited livelihood alternatives, and high demand for ecological resources. The impacts of these activities include food insecurity, biodiversity loss, livelihood destruction, and ecosystem degradation. The research found that human activities are destroying the landscape and livelihoods, and this is leading to poverty, food insecurity, and environmental degradation. People are increasingly dependent on outside sources of food and water, and wild foods are becoming scarce. The river is polluted, and the forest is fragmented.
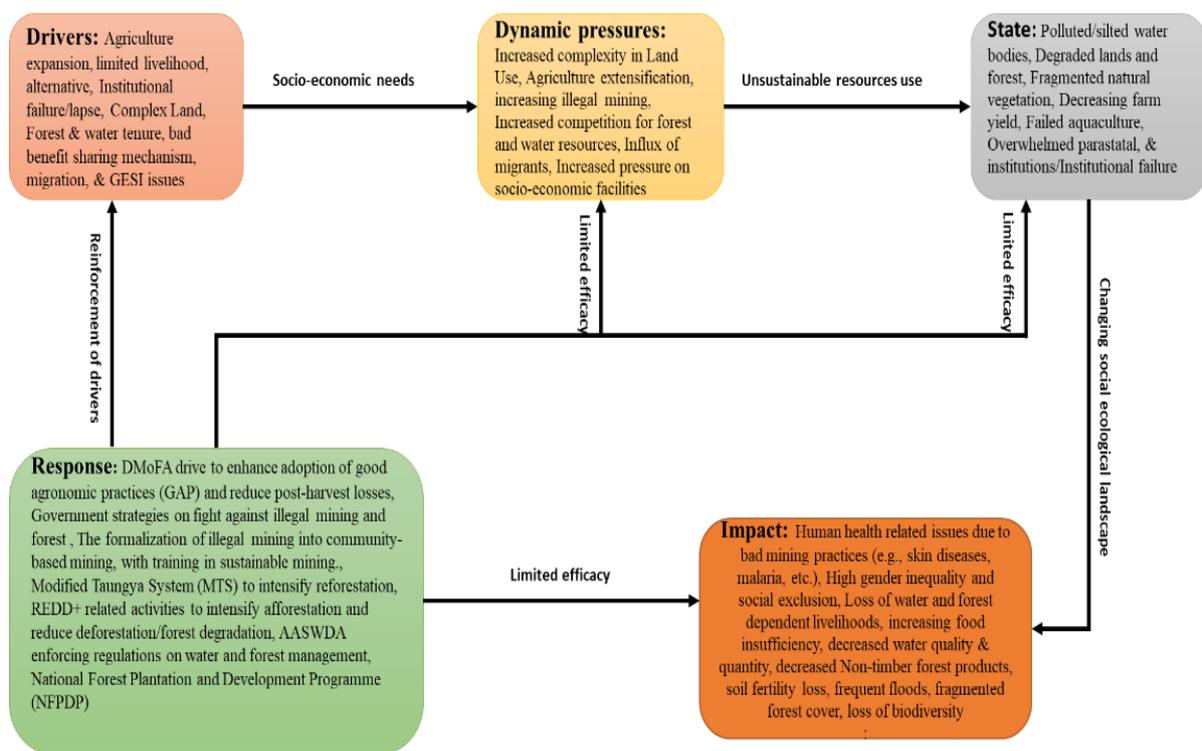
Figure 6: Results from landscape situational analysis based on DPSIR framework.
Source: Atampugre et al. (2022a)

The study also showed that most of the governance/management responses in the AASWD operate at multiple scales and are led by multiple actors and stakeholders. Scales of operation are at district, regional, and national levels, with few management platforms at the community level. Actors in this context include local people at the community level, unit committees, non-governmental organizations (NGOs), local governments (district assembly), national government agencies and departments, and international agencies. Predominant stakeholders within the AASWD (and, by extension, the Offin sub-basin SEL) were local people (resource users) represented by unit committees, local government authorities (AAWSDA and its departments and units) and government ministries and agencies (water resources commission, forestry commission, Community water and sanitation, etc.). NGOs and international institutions/agencies had a

limited presence in the area. The analysis showed that there is extremely limited coordination between/among these actors, resulting in counter-productive management initiatives. Production sectors in the district operate in isolation, which inhibits integrated management of production systems and the natural resources that underpin ecosystem services needed for all the sectors. The results also showed that low institutional capacity, including inadequate human and financial capacity, limited access to information about natural resources/ecosystem services for proper planning, and the lack of tools and approaches for mapping, assessing, monitoring, and practically integrating ecosystem services (ES) to support planning, tend to hinder integrated landscape management in the AASWD.

4.0   Shared landscape vision, co-defined objectives, and strategies

From the situational analysis, as presented above, the AASWD needs a common vision on Inclusive landscape management, which they currently lack. There are several institutions such as Governmental, Traditional Authorities, Farmers, Civil Society Organizations, including Development Partners and the Private Sector, who can play various roles in achieving a common vision. There are also existing strategies, policies and regulations that could guide effective landscape management if well implemented through effective coordination by the local government authorities. Thus, a common landscape vision was discussed after members were presented with what they considered as the existing landscape situation in the district. After careful and lengthy deliberations, the stakeholders agreed to have the following as a common landscape vision:

> "*To sustainably co-harness landscape resources in a transparent and accountable manner to engender resilient communities and healthy ecosystems in the Ahafo Ano South West District*."

Five domains were conceptualized to aid in achieving the common vision. These domains were production, socio-economic, human, and crosscutting, environment, and institutional. Based on these domains, stakeholders were asked to prioritize two to six specific objectives in the context of co-identified landscape challenges (Table 1). These served as a guide in co-developing these inclusive landscape management strategies (See Section 5.0 and Appendix A). Under Section 5.0 below, these specific strategies are categorized into sustainable agricultural interventions; sustainable forestry management strategies; sustainable water resources management strategies; sustainable mining strategies; transformational decision-making and governance; empowerment and livelihood enhancement strategies; collaborative partnerships and resource mobilization; crosscutting issues; and communication and awareness creation.

Table 1: Specific strategic objectives based on co-identified landscape challenges.

Domain	Identified challenges	Specific strategic objective
Agriculture Productivity	• Failure of irrigation infrastructures • Declining crop productivity • Increasing postharvest losses	• Enhance crop diversification. • Increase adoption of mixed farming innovations • Increase irrigation efficiency through adaptive and inclusive management. • Identify mechanisms to reduce postharvest losses
Socio-economic	• Limited livelihood and income diversification opportunities • Lack of benefit sharing form mining and forestry	• Improve income and livelihood diversification opportunities. • Establish efficient mechanism for profit or benefit sharing from mining and forestry. • Increase access to timely credit/loans. • improve socio-economic infrastructure.

	• Low gender equality and social inclusion (Low GESI)	• Enhance gender equality and social inclusion, e.g., gender and youths in decision-making. • Improve collective action, e.g., through cooperatives and associations
Environmental	• Lack of environmental monitoring • Floods during rainy periods • Degraded lands/soil fertility loss • Polluted/silted water bodies and rivers become perineal. • Forest and bush fires	• Enhance fire prevention and control • Establish effective monitoring and surveillance • Improve water conservation and efficiency (e.g., water use efficiency, water bodies restoration, sediment control) • Reduce flood risk. • Improve adoption of sustainable land/forest/water management practices
Human and cross-cutting	• Reduced food self-sufficiency (including reduced wild foods e.g., mushroom, bush meat) • Contaminated food production from pesticides • Health issues related to contamination of water.	• Enhance food security, e.g., food availability/accessibility. • Increase food safety, e.g., reduce contamination from pesticides and illegal mining (known as *galamsey* in Ghana). • Enhance food safety, e.g., reduce contamination from pesticides and *galamsey*. • Increase capacity to adopt One Health Sensitive innovations
Institutional	• Limited parastatal institutional capacity • Institutional failures/lapses • Lack of coordination during planning and implementation among stakeholders in the district • Lack of capacity and empowerment among multi-stakeholder platforms (i.e., youth groups, women associations, farmer associations, traditional authorities, etc.) • Lack of financial sources for implementation	• Strengthen local institution. • Empower local institution. • Enhance proper coordination during planning and implementation among stakeholders in the district. • Improve the acquisition of funds

4.1 Mapping shared landscape vision and strategies

As part of developing the inclusive landscape management plan for Ahafo Ano Southwest District (AASWD), stakeholders, including chiefs, heads of district assembly departments and units, community members and experts from FORIG, WRC, Forestry Department, CSIR-SRI, CSIR-CRI, KNUST, UCC, were mixed up and put into five groups for participatory mapping exercises. The participatory mapping exercises were in two phases. The initial participatory mapping exercise began with participants mapping the district's current state using a legend they co-developed. They were provided with a base map of the

district and a guide on the landscape components to map. The groups were made to present their maps for validation in plenary. To promote the mapping of the shared vision, goals and strategies, a similar approach was used in the second phase of the participatory mapping exercise, where the groups were tasked to map how they wanted their landscape to be in future. This was based on the inclusive landscape development plan discussed and co-developed earlier. The outputs were generated into two maps (Figures 7 and 8). Figure 7 aggregates all the current landscape elements believed to be present in Ahafo Ano South West by each of the five stakeholder groups. It was revealed that mining activities have expanded all over the district and are found in communities such as Mankranso, Kunsu and Nyameadom. The participants indicated some forest reserves have been degraded in the district's northern part. In addition, some of the areas in the north were mapped as fire-prone areas. Other lands east of the district were also mapped to be degraded.
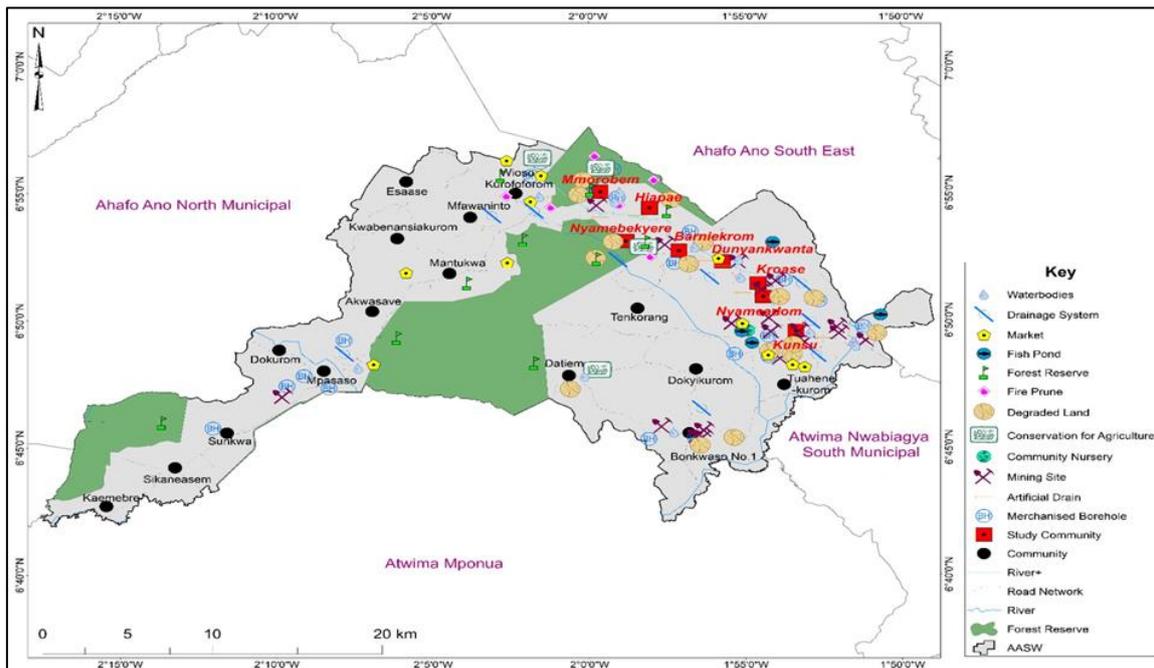
Figure 7: Stakeholders' visualization of the current landscape state
Source: Authors' construct

For the proposed common landscape vision for Ahafo Ano Southwest, the participants indicated they needed mechanized boreholes for every community. In addition, they proposed the reforestation of degraded forests and plantations. Other proposed infrastructures were community tree nurseries, artificial dams, fishponds, dump sites, safe grazing areas, conservation agricultural and agroforestry areas, markets, drainage systems, and water buffers.
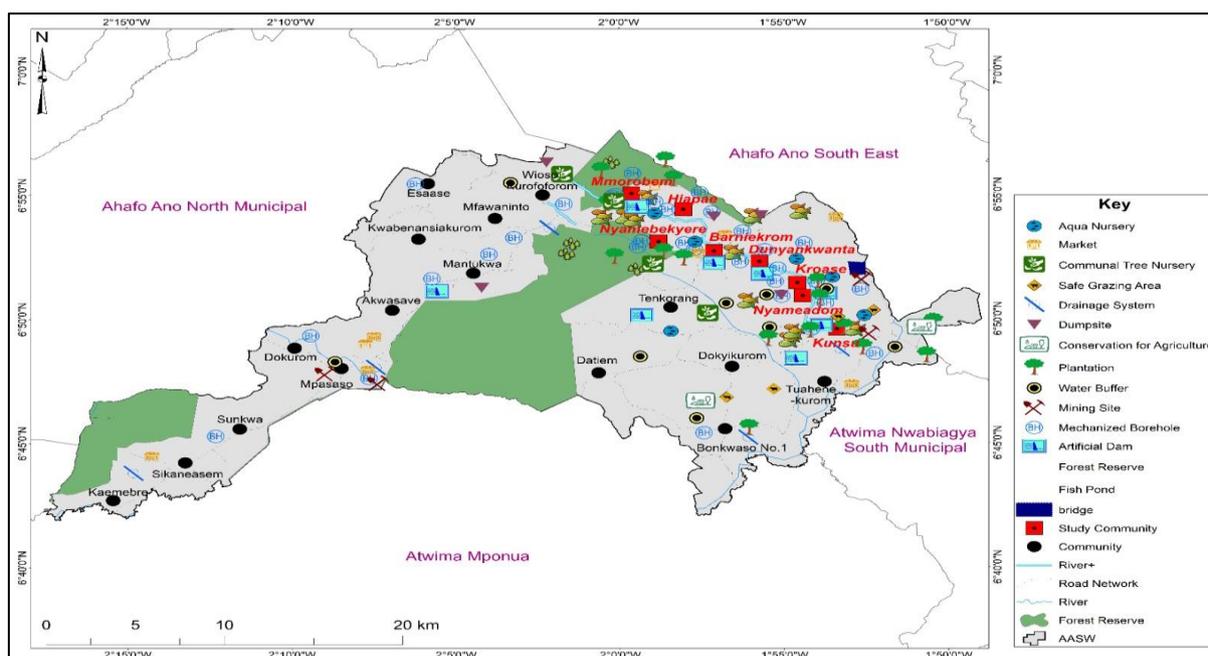
Figure 8: Stakeholders' visualization of shared landscape vision 2024-2028
Source: Authors' construct

5.0   Inclusive landscape resource management strategies

Participants of the FGDs identified key strategies or activities for addressing the prioritized challenges and issues in the landscape. All Stakeholders subsequently validated the strategies in plenary sessions. These proposed strategies aim at achieving the specific objectives enumerated in Table 1 above. As earlier stated, these goals/objectives and specific strategies are captured under nine broad sustainable interventions: agriculture, forestry management, water resources management, mining practices, transformative institutions and governance strategies, empowerment and livelihood Enhancement, Human and Cross-cutting issues, Collaborative Partnerships and Resource Mobilization, and Communication and Awareness.

5.1   Sustainable agricultural interventions

	Goals	Strategies	Source of needed resources	Responsibility	Time frame
Sustainable agricultural interventions	5.1.1 Revitalization of essential food crop production to ensure household food security and income generation	- Crop diversification: Introduce drought-resistant and locally adapted varieties, intercropping, and crop rotation to increase resilience and yields. - Integrated crop-animal systems: Promote systems like integrated rice-fish farming to diversify household food and incomes. - Integrated soil fertility management (ISFM): Promote	- Private and public investment (in Districts national budget allocation and IGF) - Subsidies - Timely credit/loans	GOG-MoFA, AASWDA, DMoFA, DAEOs, Famers and their associations, NGOs, Multilateral/ Bilateral donors	2024-2028

		the use of organic matter (compost, manure), biofertilizers, and targeted mineral fertilizers to improve soil health and nutrient availability. - Conservation agriculture: Promote the use of practices like reduced tillage, mulching, and cover cropping to minimize soil erosion and water loss. - Improved irrigation infrastructure and water use efficiency through adaptive management. - Precision agriculture: Promote the use of technologies like soil sensors and drones for targeted input application and data-driven decision making. - Strengthen Crop Advisory Systems (e.g., building capacity of DAEOs) - Establish/strengthen farmer-led multistakeholder platforms for peer interaction.	- Donor funding		17
5.1.2 Improved access to agriculture inputs	- Enhance availability and accessibility to basic farm equipment and essentials. - Provision of incentives and subsidies - Prohibition of political influence in distribution of subsidized inputs			
5.1.3 Enhanced Animal Productivity	- Vaccination and disease control programs: Ensure animal health and minimize losses. - Improved feeding practices: Promote the utilization of locally available forages and concentrates for balanced nutrition. - Revitalize the aquaculture sector in the district through in sensitization and incentivization. - Strengthening Livestock and Aquaculture Advisory			

	Goals	Strategies	Needed resources	Responsibility	Time frame
		Systems (e.g., building capacity of District Veterinary Officers)			18
	5.1.4 Reduction of Postharvest loss	- Proper harvesting techniques: Minimize damage during harvest. - Drying and storage facilities: Promote the use of solar dryers, hermetic bags, and ventilated storage to prevent spoilage. - Transportation and marketing infrastructure: Invest in refrigerated trucks, market access, and value addition initiatives. - Strengthen capacity of farmers on new technologies.			
	5.1.5 Climate adaptation and mitigation: Integrate climate-resilient practices into all interventions	- Drought-resistant crop varieties and water management techniques. - Agroforestry systems: Enhance biodiversity and soil carbon sequestration. - Early warning systems and climate information services.			

5.2. Sustainable Forestry Management

	Goals	Strategies	Needed resources	Responsibility	Time frame
Sustainable forest management strategies	5.2.1 Enhanced Forest productivity	- Stakeholder engagements to enhance mechanisms for benefit sharing from forestry. - Part of revenue from forestry much go to communities for development. - Establish bush fire volunteer groups in forest-fringe communities. - Capacity building for communities on inclusive and sustainable forest management	- Private and public investment - Districts IGF - Community proceeds from common resources (contributions to communities from mining and forestry)	GOG-Forest Commission; GoG-Minerals Commission; AASWDA, DMoFA; Famers' associations, association of chain saw operators, association community miners; security agencies (e.g., police, fire services, etc.); NGOs and CSOs	2024-2028

		- Co-develop and implement Afforestation/reforestation programs. This includes reviewing existing programs to adapt to new context	- Donor funding	Multilateral/Bilateral donors	
	5.2.2 Re-zoning	- Establish CREMAS - Re-zoning of degraded forests through mining and reclaim for other land use (e.g., plantation agriculture - Re-zoning of deforested areas for Modified Taungya farming system (MTS) - Co-develop New by-laws that allow traditional/community leaders to manage licensed and illegal chain saw operations and mining in forest - Enforcement of existing national laws/regulation			

5.3   Sustainable water resources management

	Goals	Strategies	Needed resources	Responsibility	Time frame
Sustainable water resources management	5.3.1 Improved water availability	- One community one mechanized borehole - Ban on the diversion of rivers/streams for *galamsey* - Silted water bodies must be dredged and restored to its natural state. - Co-development and implementation of by-laws to protect buffer zones around rivers, allowing communities and their leaders to be at the center stage of producing these laws.	- Private and public investment - Districts IGF - Community proceeds from common resources (contributions to communities from mining and forestry)	GOG-Water Commission; GoG-Minerals Commission; AASWDA, DMoFA; Famers' associations, association of chain saw operators, association community miners; security agencies (e.g., police, fire services, etc.); NGOs and CSOs	2024-2028

	Goals	Strategies	Needed resources	Responsibility	Time frame
		- Enforcement of existing laws and regulations - Promote rainwater harvesting innovations. - Public education/sensitization on water conservation	- Donor funding	Multilateral/Bilateral donors	20
	5.3.2 Flood risk reduction	- Community sensitization on human causes of floods and preventive measures - Enforcement of laws and regulations - Improve drainage infrastructure			
	5.3.3 Reduced water pollution	- Promote adoption of Good Agriculture Practices - Ban galamsey in water catchments. - Community sensitization on quality preservation/monitoring			

5.4 Sustainable mining practices

	Goals	Strategies	Needed resources	Responsibility	Time frame
Sustainable mining practices	5.4.1 Strict Zoning	- Develop a spatial plan allocating lands for mining activities - Classify degraded lands for restoration projects in the district - Develop bye-laws prohibiting mining in or close to water bodies and in forest reserves - "See Something-Say Something" (citizen vigilante), citizens empowered to support law enforcement agencies.	- District Common Fund - Subsides - IGF - Private sector investment - Donor funding - PPP	GoG-Minerals Commission; GOG-Forest Commission; GoG-WRC; AASWDA,; Traditional Authorities; Opinion leaders; Miner associations; NGOs; CSOs	2024 - 2028

	5.4.2 Land reclamation	- Degraded lands restored and given to women and youth for agroforestry. - Local communities and stakeholders should actively engage in afforestation and reforestation projects. - Establish evidence-based land reclamation reporting guideline for licensed mining organizations in the district - Develop a strategic afforestation plan for the district - Segregation of waste, and organic components dumped on degraded mine sites to regenerate soil fertility.			21

5.5 Transformational decision-making and governance

	Goals	Strategies	Needed resources	Responsibility	Timeframe
Transformational decision –making and governance strategies	5.5.1 Capacity building for local government departments and agencies	- Strengthen institutional capacity by enlisting highly resource personnel in environmental management and conflict resolution. - Mobilize financial resource for internal operations of AASWDA - Intensify collaboration with existing organizations - Improve transparency and accountability in financial management as it is critical to building trust among stakeholders	- District Common Fund - IGF - Private sector investment - PPP - Donor funding	GoG-Minerals Commission; GOG-Forest Commission; GoG-WRC; AASWDA; CSOs;NGOs; Traditional authorities,	2024 - 2028
	5.5.2 Establish inclusive steering committee for effective coordination, planning and implementation	- Prioritize inclusivity of diverse groups of stakeholders in institutional plan by setting quota for women, youth, marginalized groups and persons with disability.			

		- Facilitate effective coordination among multistakeholder groups for planning programs and interventions in the district. - Provide conducive environment that accommodate and respect the values and principles of diverse groups of stakeholder for planning and implementing projects.			22
	5.5.3 Build the capacity of communities and social groups	- Establish community-based natural resource management institutions (e.g., CREMAs) - Conduct regular training and educational programs for stakeholders in the communities - Facilitate the effective dissemination of information to all groups in the district - Mechanism for engagement: Create platforms and mechanisms that facilitate meaningful participation.			
	5.5.4 Promote mechanisms that ensure equitable distribution of benefits from ecosystem services	- Develop and implement benefit-sharing mechanisms that allocate the benefits of ecosystem services fairly among stakeholders - Promote incentive and award schemes for conservation efforts in the district - Ensure benefit-sharing agreements are enforced and - Ensure transparency in resources benefit sharing by establishing monitoring systems to track the distribution of benefits			

5.6   Empowerment and livelihood enhancement for inclusive landscape management

	Goals	Strategies	Needed resources	Responsibility	Time frame
Empowerment and livelihood enhancement for inclusive landscape management	5.6.1 Youth and women training through entrepreneurship	- Develop series of programs on entrepreneurship for youth and women in the community to boost economic empowerment in the district. - Establish an incubation center for skills enhance and strategic business development among the youth and women - Develop a business financing mechanism in the district such as SME loan facilities and seed capitals for the young startups that are trailed to technical enhancement.	- GoG - Parliament allocated funds - GETFund - District Common Fund - Cooperate social responsibility levy - AASWD IGF - Private sector investment	AASWDA Unit committee CSOs NGOs Youth clubs	2024 - 2028
	5.6.2 Enhanced support for marginalized groups	- Conduct quarterly outreach programs targeting marginalized groups and individual in the district on alternative livelihood development - Establish a financial support mechanism for marginalized groups and individual in the district			
	5.6.3 Promotion of sustainable livelihood alternatives	- Conduct trainings on alternative livelihood interventions in the district such as Bee keeping and aquaculture to promote income diversification by the people. - Facilitate access to markets for products and services generated through sustainable livelihood activities.			

	Goals	Strategies	Needed resources	Responsibility	Time frame
	5.6.4 Capacity-building and skill development programs	- Provide targeted training programs such as sustainable agriculture, forestry management, water resource conservation, and eco-friendly practices to develop essential skills for sustainable livelihoods in the district			24
	5.6.5 Fostering leadership and community ownership	- Develop community leadership programs, targeting youth and women to empower them in decision-making for landscape management.			
	5.6.6 Education scholarships for youth	- Mobilize and deploy funds from mining related activities to provide scholarships for brilliant but needy students in the districts. - Promote environmental education within scholarship programs to instill a sense of environmental stewardship and sustainability in the younger generation.			

5.7   Collaborative partnerships and resource mobilization

	Goals	Strategies	Needed resources	Responsibility	Time frame
Collaborative partnership and resource mobilization strategies	5.7.1 Identify and engage key stakeholders	- Develop a district registry/ repository/ database for identifying and profiling of relevant stakeholders and institute crucial for the strategic development agenda of the district. - Promote stakeholder consultations in review and implementation of the plan to foster inclusivity	- AASWDA IGFs - District Common Fund - Private sector investment	AASWDA Unit committee CSOs NGOs	2024 - 2028
	5.7.2 Facilitate multi-	- Conduct series of fora and multistakeholder workshops in the district to create collective			

stakeholder platforms	awareness and information sharing of the management plan. - Promote transparency, accountability and easy access to information for stakeholders at all levels to increase institution trust with relevant stakeholders in the district.				
5.7.3 Leverage existing networks and alliances	- Strengthen collaboration with existing networks, alliances, and partnerships that align with your landscape management goals. - Promote partnership and leveraging on global and regional programs and initiatives to accelerate landscape management plan.				
5.7.4 Resource mobilization and funding strategies	- Develop an Investment Action Plan within the timeline on the management plan to galvanize financial resources for the implementation of the plan. - Organize fundraising mechanisms and events to mobilize funds towards the implementation of the plan. - Promote diversification on financial pools such as payment for ecosystem services (PES) schemes or green bonds to generate revenue for inclusive landscape management.				
5.7.5 Build capacity for proposal development	- Build institutional capacities to strategically allocate and pulling of resource streams such as grants and project funds for stakeholder skills and knowledge enhancement. - Intensify collaboration with partners to co-design projects within the communities tailored to the needs of the people. - Leverage on existing resources and infrastructure to attract donor partners and non-profit organization to promote the plan.				

5.8 Cross-cutting issues

	Goals	Strategies	Needed resources	Responsibility	Time frame
Crosscutting issues	5.8.1 Expand electrification of the district	- Increase electricity connectivity in the district by 40% - Promote investment into renewable energy sources such as solar energy	- GoG - Parliament allocated funds - GETFund - District Assembly Common Fund - AASWD IGF - Subsides - Private sector investment - Donor funding	GoG AASWDA CSOs NGOs Multilateral and bilateral institutions	2024-2028
	5.8.2 Promote the use of liquefied petroleum gas and sustainable cook stoves	- Promote the installation of at least on Gas filling station in each community to reduce dependency on charcoal - Subsidize the cost LPG cylinders at the community level to increase the use of LPG - Support communities with sustainable cook stoves			
	5.8.3 Enhance community healthcare systems	- Improve accessibility in every community to reduce health risk associated with long distance health access. - Equip health facilities to boost emergence health service - Enhance testing and laboratories facilities at the hospitals and clinics to support proactive health response. - Promote accessibility of emergency drugs and blood at all health facilities			
	5.8.4 Socio-economic infrastructure	- Provide affordable housing infrastructure for service personnel's in the district to attract and increase commitment of civil servants. - Improve road networks, dams and bridges to enhance mobility in the district - Construct sale points and markets in each community to promote trade activities			
	5.8.5 Education	- Expand school infrastructure in the district to accommodate the rapid growing population - Increase access to sanitation infrastructure at each school to reduce the spread of communicable diseases			

| | | - Provide learning materials and reading desks to schools in each community to promote quality education at all level | | | | 27 |

5.9   Communication and awareness creation

	Goals	Strategies	Needed resources	Responsi bility	Time frame
Communication and awareness creation	5.9.1 Continuous community engagement	- Conduct quarterly meeting with stakeholders on the progress of the plan implementation - Promote the gender equality and social inclusion in meetings and planning	- District Assembly Common Fund - AASWD IGF - Subsides - Private sector investment - Donor funding	AASWD A Unit committe e NGOs, CSOs	2024 - 2028
	5.9.2 Continuous awareness campaigns and knowledge dissemination	- Enhance rapid information sharing through PA systems and posters - Promote awareness campaign the clean-up exercises, community walks and organized events - Conduct workshops, training and seminars within the communities to build resilience - Increase district visibility leveraging on social media			

6.0   Monitoring, evaluation, and learning

It was recommended that the AASWDA develops a comprehensive monitoring, evaluation, and learning (MEL) plan that can police and ensure the successful implementation of the ILMP. This would help the assembly to plan activities in a manner that will promote efficiency at all levels, utilize resources in a transparent and accountable manner and promote social auditing. The MEL strategy should focus on four principal areas: monitoring targets, results, changes, and challenges.

6.1   Establishment of monitoring and evaluation framework and teams

A critical stage in the MEL cycle is MEL planning where stakeholders and target communities' collaboration is needed to decide the main MEL activities. Part of these activities were agreed during the multi-stakeholder dialogue to develop the ILMP and have been presented in section 4.0. However, measurable and observable indicators are essential to assess the progress of each proposed intervention and the implementation of the entire ILMP. The MEL framework below could be used as guide by the AASWDA (Table 2). During the implementation of the ILMP, monitoring should be an ongoing process. The assembly should include MEL activities in the staff work schedule and independently go to the ground to ensure that monitoring is taking place. Mid-term evaluation can be conducted to identify shortfalls and allow for resolution before the project ends. There could be regular assessment of progress and measurement of impact through field visits, periodic review of meetings with stakeholders, organization of annual progress review workshops, preparation of annual progress report, and the dissemination of MEL

information. Information gathered from the monitoring and evaluation stages should be used at periodic project reviews to inform decision-making. A final evaluation should be conducted at the end of the ILMP timeline, and the lessons learned documented. These lessons can be used as input for replicating similar ILMP in other districts.

Table 2: Proposed MEL Framework for Inclusive Landscape Management

Objective	Activities	Indicators	Outputs	Means of verification
Promote sustainable agriculture and increase productivity	▪ Promote sustainable agricultural practices. ▪ Improve irrigation infrastructure ▪ Capacity development for farmer groups ▪ Transparent accessibility and availability of farm inputs ▪ Reduction strategies for post-harvest loss	▪ Percentage of farms within the landscape practicing smart agriculture ▪ Number of artificial dams constructed. ▪ Number of training and capacity support offered for farmer groups within a period ▪ Transparent distribution of subsidized farm inputs and equipment ▪ Percentage of harvest preserved or sold compared to percentage loss.	Increase in crop yield and productivity	DMOFA report
Sustainable management of forest resources	▪ Enhance transparent and equitable distribution of forest resources ▪ Resourcing fire brigade to combat forest fires ▪ Rezoning of degraded forest lands for other uses ▪ Enactment and enforcement of by-laws for forest management	▪ Accountability of proceeds from forest resources ▪ Specific community developmental projects funded from forest resources. ▪ Number of forest fire incidences reported and the extent of damage. ▪ Percentage of forest lands conserved, degraded lands reforested, and culprits punished	Cordiality and trust between forest communities and management.	Annual reports of the forestry commission Qualitative survey
Sustainable management of water resources and regulation of mining activates	▪ Increase in water availability and accessibility ▪ Reduced incidence of floods ▪ Enforcement of laws and regulations protecting water resources and mining practices. ▪ Reclamation of mining degraded lands	▪ Number of boreholes drilled for domestic and irrigation purposes ▪ Number of prosecutions of offenders of laws governing water resources and mining ▪ Number of flood incidence recorded and the extent of devastation ▪ Percentage of degraded mine sites reclaimed.	▪ Increase in water quality and quantity ▪ Resilient communities to flooding ▪ Reclaimed mining sites	Laboratory analysis of water resources Report of WRC
Enhance shared decision making and	▪ Capacity development of district assembly staff, communities and social groups	▪ Number of training and capacity support offered to interest groups ▪ Number and amount of external funds obtained	▪ Trained interest groups ▪ Secured external funding	DA annual report

participatory governance	▪ Solicit for external funding to support implementation of ILMP ▪ Capacity development of community stakeholders to engage in transformational resource management/governance	▪ Transparency and accountability of all funds received		
Socio-economic empowerment	▪ Capacity building and skills development programs for youth, women and marginalized groups ▪ Provision of financial support to interest groups ▪ Promote formal education	▪ Several entrepreneurship programs were implemented, and trainees graduated. ▪ Number of financial supports available and accessible to interest groups ▪ Number of new enrolments and dropouts	▪ Trained interest groups ▪ Beneficiaries of financial support	DA annual report

7.0   Conclusion

This Inclusive Landscape Management Plan (ILMP) provides a framework for sustainable and inclusive landscape management in the Ahafo Ano Southwest District (AASWD) in the Transition Belt of Ghana. The ILMP is designed to address the key challenges facing the landscape and to improve the well-being of ALL residents who depend on landscape resources. The ILMP is based on the following principles:

- Inclusivity: All stakeholders, including marginalized groups, have a voice in decision-making and share in the benefits of landscape management.
- Sustainability: The ILMP promotes sustainable land use practices that protect and restore natural ecosystems, improve food security and income, and build resilience to climate change.
- Equity: The ILMP seeks to ensure that all residents of the landscape have equitable access to natural resources and opportunities.

The ILMP includes a set of management strategies and interventions that are designed to achieve the following objectives:
- Promote sustainable land and water resource management.
- Improve food security, income, and nutrition.
- Enhance the overall well-being of ALL residents.
- Build resilience to climate change.

The plan also includes a monitoring and evaluation framework to track progress and learning for adaptation to ensure that the interventions are having the desired impact. To re-iterate, this ILMP is a living document that will be updated on a regular basis to reflect changes in the landscape and the needs of the stakeholders. It is hoped that the ILMP will serve as a blueprint for sustainable and inclusive landscape management in the AASWD and beyond. The research team and participants in the drafting process call upon all stakeholders to work together to implement the ILMP to achieve the shared vision of a sustainable and inclusive landscape that benefits ALL.

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Appendices

Appendix A: Development of Inclusive Landscape Management Plan (ILMP): Community Level engagement

Day 1: Community engagement (2 FGDs each per community) to develop shared vision and goals/objectives and identify strategic activities to achieve them.

Activity 1: Ranking of Challenges/ Issues (Group Discussions) **(30- 45 Mins)**

Community representatives will be divided into mixed/representative groups depending on the number present. Each group should have a maximum of 8-10 people.

The technical team needs to analyse the gender dynamic in the area. If mixing both men and women in the same groups could cause the women to be shy/afraid to express themselves then it may be prudent to have separate groups for men and women. Having separate groups also ensures that the often-distinct perspectives from these 2 groups are captured.

The identified challenges/issues and objectives from Activity 2 will be quickly collated and written/pasted on flip charts. Participants in each group will then be asked to select the 2 most important challenges/issues and objectives per SI domain. This can be done by using small stickers with different colours to identify the different groups or markers of different colors in case small stickers are not available (everyone in the group votes by sticking a dot on their 2 top challenges and 2 top objectives per SI domain).

Activity 2: Identification of strategies, and responsibilities (Group Discussion)

After the ranking exercise there will be a short break (20mins), the facilitator will quickly collate the prioritized challenges/issues and objectives for each group and present to the group after the break. Participants still in their groups, will then identify key strategies or activities that would enable them to achieve the prioritized objectives.

They will try to fill in the table below by focusing on the prioritized objectives. The main target is to get them to think about strategies and responsibilities. If time permits, they can also explore the resources and timelines. Each group also discusses and agrees on a shared vision which encapsulates the objectives they have prioritized.

Activity 3: Groups Present the results of their discussions to plenary.

Each of the groups present their shared visions and summary tables to plenary for discussion.

At plenary and with the help of facilitator, participants will agree on a shared vision or the key elements they would like to see in a shared vision.

Wrap-up and presentation of next steps to community (30mins).

At the end of the day, the meeting facilitators meet to compile the information for the next meeting date.

Appendix B: Development of Inclusive Landscape Management Plan (ILMP): **District level engagement with expert group and community stakeholders**

Day 2: Workshop with expert group and stakeholder groups from community

Activity 1: Power Point Presentation of Overview of LSA (Plenary)

- Summary of situation analysis including main challenges identified.
- Presentation of consolidated outcome of community engagement from Day 1
- Presentations by citizen scientists

Activity 2: Discuss Summary from Community Engagements and Consolidate shared vision, goals, strategies.

- Participants will be divided into 5 groups according to the landscape planning domains. The groups would be as diverse and multistakeholder as possible. Maximum of 10-12 people in a group.
- Each group would make inputs into the table from the community engagement by fully developing the objectives, strategies, responsibilities, resources, and timelines.
- Each group will then review the vision/ vision elements from the community level and propose a shared vision for the landscape.

Activity 3: Groups Present the results of their discussions to plenary**.**

Each of the groups present their shared visions and summary tables to plenary for discussion. At plenary and with the help of facilitator, participants will agree on **a shared vision**.

Day 3: Workshop with expert/stakeholder groups from community
1. Finalize **Day 2** activities with expert/stakeholder group.
2. Participatory land use mapping/planning

Guide for participatory land use mapping/planning
Based on the vision, goals/objectives and the strategic activities set by communities and validated by experts, the facilitator will engage the 5 stakeholder groups in:
  i. **Zoning and Land Allocation:**
- Collaboratively designate different zones for various land uses, such as residential, agricultural, mining, industrial, conservation, and recreational.
- Determine the appropriate size and location of each zone based on the community's vision, goals, and strategic activities.
 ii. **Locations of any interventions and technologies:**
- indicate in the landscape spatially where any interventions, practices or technologies proposed on the strategies from day 2.
- Present these locations to stakeholders and gather their feedback and preferences.
iii. **Trade-off Analysis:**
- Evaluate the benefits and trade-offs associated with each scenario in terms of environmental, social, and economic aspects.
- Discuss the trade-offs with stakeholders to inform decision-making.