



NATIONAL AGRICULTURAL RESEARCH ORGANIZATION

**ENVIRONMENTAL AND SOCIAL SAFEGUARDS
STRATEGY
2025/2026-2029/2030**

2025

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PREFACE

The National Agricultural Research Organization (NARO), as Uganda's lead agency for agricultural research, recognizes the strategic necessity of embedding environmental and social safeguards (ESS) within research, development, and innovation processes. Understanding that Uganda's agriculture is deeply reliant on Environment and Natural Resources (ENRs) such as land, water, climate, biodiversity and ecosystems is pivotal; yet these resources are increasingly threatened by human activity, climate change, and socio-economic pressures. Safeguarding these resources is therefore central to achieving food security, environmental sustainability, climate resilience and inclusive agricultural transformation while reducing pressure on the limited resources. In response to these challenges, NARO has instituted an Environmental and Social Safeguards (ESS) Policy and Strategy to provide a structured and proactive framework for managing environmental and social consequences within the agricultural research system.

The ESS Strategy will operationalize the Policy by mainstreaming ESS principles across all research programs, projects, and institutional activities by establishing clear procedures for risk identification, assessment, mitigation, and monitoring, ensuring that research outputs and innovations are not only scientifically sound, but also socially inclusive, environmentally responsible, and sustainable as well as providing tools and guidance for anticipating potential risks, minimizing adverse impacts, and enhancing positive contributions to community wellbeing and ecosystem health.

This Strategy was developed through an inclusive and consultative process with stakeholders, reflecting a shared vision of environmental sustainability, inclusivity and accountability in agricultural development. It underscores NARO's commitments to advancing agricultural research that is aligned with National development priorities such as the National Development Plan (NDP-IV Chapter, 12) and Vision

2040 (Sections 5.7 and 5.8) as well as regional and international commitments including the Sustainable Development Goals (SDGs) and African Union Agenda 2063 among others.

The ESS Strategy will guide researchers, project managers, policymakers, and partners in applying safeguards at every stage of the research and innovation cycle. It will also serve as a monitoring and accountability instrument, enabling NARO to demonstrate its contribution to sustainable innovation, social equity, and ecological integrity. Through this Strategy, NARO reaffirms its commitment to responsible agricultural research that balances productivity with sustainability, innovation with inclusivity, and national priorities with global standards

For God and My Country



Dr. Yona Baguma

DIRECTOR GENERAL

FOREWORD

The National Agricultural Research Organization (NARO), mandated to coordinate, supervise and guide agricultural research in Uganda, recognizes that Environment and Natural Resources (ENRs) are the foundation upon which sustainable agricultural development depends. These resources are central to countries' socio-economic transformation, resilience, and food security. To safeguard them, NARO acknowledges the need for a deliberate balance between advancing agricultural research and innovation, and sustainable management of ecosystems and the wellbeing of society. Uganda's agricultural production systems and rural livelihoods are increasingly threatened by challenges such as pollution, climate change, biodiversity loss, natural resource degradation, and social inequities. These pressures undermine productivity and hinder socio-economic transformation.

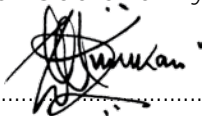
As the custodian of agricultural research, NARO is strategically committed to addressing these challenges by embedding responsible, inclusive, and sustainable practices within her research processes and outputs. It is within this vision that the Environmental and Social Safeguards (ESS) Policy and Strategy has been developed. The Strategy provides roadmap for identifying, assessing, and mitigating environmental and social risks in all research programs, projects, and activities ensuring that agricultural research outcomes are scientifically sound, socially responsive, and environmentally sustainable.

The formulation of this Strategy was informed by a participatory and consultative process that engaged stakeholders from a diverse spectrum which reflects our commitment to collaborative governance and shared responsibility in advancing agricultural research and resource sustainability.

This Strategy therefore, is both a practical guide and an accountability tool for researchers, managers, and partners and other stakeholders to fully integrate ESS principles

and standards into research work to ensure that agricultural technologies, products and services contributes positively to sustainable natural resource use, environmental integrity, and social welfare. Through the ESS Strategy, NARO reaffirms agricultural research that delivers sustainable, inclusive, and transformative research outcomes for Uganda and beyond.

For God and My Country



Dr. William Olaho-Mukani

CHAIRPERSON, NARO GOVERNING COUNCIL

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Several individuals have been instrumental in the development of this Strategic document. Dr. Yona Baguma (Director General) highly supported and provided technical guidance to the process of developing this Strategy. Heartfelt gratitude to Dr. Swidiq Mugerwa (Deputy Director General - Research Coordination) for the supervisory role provided to the distinguished ESS strategy development team.

Sincere appreciation for the invaluable support from Dr. Stevens Kisaka (Director – Corporate Services) and the contributions from NARO Governing Council, NARO Management and Staff, whose efforts were instrumental in shaping the Strategy. Additionally, we acknowledge and value the feedback and suggestions received from various stakeholders which enriched the ESS Strategy.

Finally, special thanks to Mr. Basaliza Edigar, Senior Environment and Social Safeguards Officer, for his technical expertise and administrative support in driving the development of this Strategy.

ACRONYMS

CBD	Convention on Biological Diversity
DRC	Directorate of Research Coordination
EIA	Environmental Impact Assessment
ESCA s	Environmental and Social Compliance Audits
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and social management plans
ESS	Environmental and Social Safeguards
GDD	Gender Disaggregated Data
GHG	Greenhouse Gases
IFC	International Finance Cooperation
ISO	International Organization for Standardization
KPIs	Key Performance Indicators
MDAs	Ministries, Departments and Agencies
NARO	National Agricultural Research Organization
NEMA	National Environment Management Authority
NGO	Non-Governmental Organization
OHS	Occupational Health and Safety
PARI	Public Agricultural Research Institute
PPE	Personal Protective Equipment
SDGs	Sustainable Development Goals
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
UNFCCC	United Nations Framework Convention on Climate Change
ZARDI	Zonal Agricultural Research and Development Institute

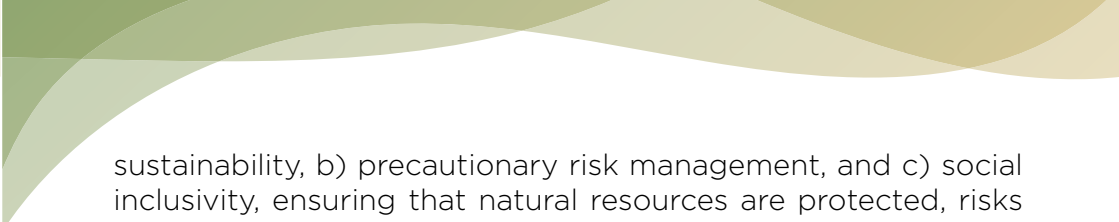
EXECUTIVE SUMMARY

The National Agricultural Research Organization (NARO) recognizes that sustainable agricultural transformation requires both scientific innovation and the integration of environmental sustainability and social inclusion across its research agenda. To this end, NARO has developed the Environmental and Social Safeguards (ESS) Strategy (2025/26–2029/30), a framework for identifying, managing, and monitoring environmental and social risks and opportunities in agricultural research. The Strategy aligns with the institutional mandate and strategic development objectives (NARO strategic plan 2025/2026–2029/2030), National Development Priorities (Vision 2040; National Development Plan IV) and global environmental and social commitments, ensuring that research outcomes are not only technically sound but also socially just and environmentally sustainable.

The Strategy's overall goal is to embed sustainability and equity principles into all NARO research programs, projects, and activities. It is guided by six strategic objectives: i) ensuring compliance with relevant policies and standards; ii) promoting sustainable practices in research; iii) strengthening institutional capacity for implementation and monitoring; iv) advancing gender equality, equity, and community participation; v) mobilizing resources for ESS; and vi) operationalizing an Environmental and Social Management System (ESMS).

Formulated through broad stakeholder consultations, the Strategy builds on NARO's strengths such as an established ESS Unit, multidisciplinary expertise, while addressing weaknesses. It leverages opportunities from supportive national and global policy environments, donor partnerships, while proactively responding to threats including climate change, environmental degradation, and the marginalization of vulnerable groups.

The Strategy is underpinned by three broad guiding principles supported by multiple standards: a) environmental



sustainability, b) precautionary risk management, and c) social inclusivity, ensuring that natural resources are protected, risks are mitigated before they occur, and vulnerable groups benefit research interventions equitably. With an estimated budget of UGX 4.24 billion over five years, to be financed through institutional allocations, donor contributions among others, the Strategy includes robust implementation plan and monitoring and evaluation mechanisms, with a mid-term review and a final evaluation at the end of the 5-year cycle.

By adopting this Strategy, NARO commits to advancing agricultural research that strengthens climate resilience, protects ecosystems, promotes equity, and contributes to Uganda's national development priorities and the Sustainable Development agendas.

DEFINITION OF TERMS

Biodiversity: The variety and variability of living organisms in a specific area, including plants, animals, and microorganisms, as well as the ecosystems they occupy.

Climate Change: Long-term changes in temperature, precipitation, and other atmospheric conditions resulting from natural variability or human activities, particularly due to greenhouse gas emissions.

Ecosystem Services: The direct and indirect economic, social and environmental benefits obtained from the correct functioning of ecosystems, including watershed regulation, maintenance of biodiversity and carbon sequestration, for human well-being;

Environment: refers to: (a) the physical factors of the surroundings of human beings, including land, water, air, atmosphere, climate, sound, odour and taste; (b) the biological factors of animals and plants; and (c) the social factors of aesthetics, health, safety and wellbeing of people, and includes human interaction with both the natural and the built environment.

Environmental and Social Assessment: A procedure that ensures that the environmental and social impacts, risks or other concerns of a given project are taken into account in approving a project for implementation.

Environmental and Social Impact Assessment (ESIA): means an analytical process that systematically examines the likely environmental and social impacts of a proposed project, evaluates alternatives and designs appropriate mitigation, management and monitoring measures, taking into account interrelated socio-economic, cultural and human health impacts, both beneficial and adverse.

ESS principles: means the fundamental norms, values, and guiding standards that underpin the formulation, implementation, and monitoring of Environmental and Social Safeguards (ESS) within NARO. Applicable to this strategy, they include precautionary, sustainability, social inclusivity.

ESS Strategy: The structured framework that guides in identifying, managing, and monitoring environmental and social risks and opportunities across its research programs and operations. It sets out the principles, objectives, arrangements, and implementation mechanisms necessary to ensure that agricultural research and innovations are environmentally sustainable, socially inclusive, and compliant with national policies and international best practices.

ESS Policy: The institutional commitment that outlines guiding rules and standards for integrating environmental sustainability and social inclusion into all research and operational activities.

Environmental and Social Impact Study: means a study conducted to determine the possible environmental and associated health and socio-economic impacts of a proposed project, to assess the potential alternative options and proposed mitigation measures;

Environmental and Social Safeguards (ESS): Measures and procedures implemented to prevent, mitigate, and manage the potential adverse environmental and social impacts associated with agricultural research projects, activities, and programs.

Environmental and Social Screening: The procedure of identifying potential environmental and social impacts and risks associated with agricultural research projects, programs and activities.

Environmental Audit: means a systematic, documented, periodic evaluation used to determine how well specified research projects or the research team's EMS, facilities and equipment are performing in conserving the environment and its resources and conform to the requirements of the Act, these Regulations and any other applicable law;

Environmental Impact: The effect or change that an agricultural research project, activity, or action has on the environment, including the air, water, land, ecosystems, and biodiversity.

Environmental Risk Assessment means a systematic process for identifying and estimating the likelihood or probability of an adverse or hazardous outcome or event and its consequence on human health or the environment.

Gender and Equity: explained as fairness in rights, access and opportunities without discrimination on the basis of gender and addressing the imbalances in the benefits or opportunities due to gender. **Sex:** Refers to physical and psychological aspects of human beings.

Gender equality: is a state in which all genders have equal rights, access and opportunities.

Gender Disaggregated data (GDD): Gender disaggregated data represents gender issues and concerns in society according to sex variables. Not all the data disaggregated by sex will necessarily raise gender issues. The GDD builds on SDD and reflects the status of all socio-economic groups in community, samples or target populations. It identifies disparity in gender roles, identifies the gender concerns and their implications to the projects and programs by identifying the causes of imbalances and raise consciousness on the issues in the society.

Gender mainstreaming: Refers to the process of assessing the implications of women and men of any planned of action including legislation, making women's as well as men's concerns and experiences integral dimensions in the designing, implementation, monitoring and evaluation of policies and programs in all political, economic and social spheres so that men and women benefit equally.

Laboratory Waste: Any waste generated from laboratory activities, which may include hazardous and non-hazardous substances, chemicals, and biological materials, requiring special handling and disposal.

Marginalized and Vulnerable Groups: Groups that experience social, economic, or political disadvantages, which may include women and girls, children, indigenous people, internally

displaced people, refugees, persons with disabilities, the elderly, people living with HIV/AIDS, and ethnic minorities. These groups are often more vulnerable to project impacts.

Mitigation Measures: Actions taken to reduce or eliminate adverse environmental and social impacts resulting from an agricultural research project or activity.

NARO Staff: Refers to any person (s) including mainstream, contract and project staff with contractual obligation of executing some undertakings for and on-behalf of NARO

PARI: a Public Agricultural Research Institute established under section 28 of the NAR Act.

Pollution Prevention: Measures taken to reduce, control, or eliminate the release of pollutants into the environment, thereby minimizing harm to the air, water, land, and living organisms.

Precautionary Principle: A guiding approach that encourages taking proactive measures to prevent environmental and social harm even in the absence of complete scientific certainty about potential impacts. Predicting environmental or social harm before it actually happens.

Program: NARO's coordinated set of related projects or initiatives undertaken with the aim of achieving specific long-term goals.

Project: The execution of construction or renovation agricultural research work or other developments, installations, schemes, activities or other interventions in the natural surroundings and landscape which may have an impact on human health and the environment.

Resource Efficiency: The sustainable use of natural resources (such as water, energy, and raw materials) in ways that minimize waste, reduce environmental impacts, and maximize productivity.

Social Impact: The effect of an agricultural research project, activity, or action on the well-being, livelihoods, and social structures of individuals, communities, and society at large.

Stakeholders: Individuals, groups, or organizations with a direct or indirect interest or influence in the agricultural research projects or activities, including affected communities, local governments, non-governmental organizations (NGOs), private sector entities, and development partners.

Sustainability: The practice of conducting research activities in a manner that ensures long-term environmental protection, social well-being, and economic viability, without compromising the ability of future generations to meet their needs.

Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs, balancing economic, social, and environmental objectives.

Technology: Refers to outputs of research both tangible and intangible, including without limitation inventions, discoveries, designs, specifications, developments, methods, modifications, improvements, processes, know-how, show-how, techniques, databases, software, protocols, formulae, trade secrets, management practices and other works.

1. INTRODUCTION

1.1 Background and Context

Agricultural research and innovation are central to Uganda's social economic transformation agenda. As the apex institution for Agricultural Research in Uganda, NARO generates technologies, innovation, knowledge, and interventions that directly influence people's welfare, farming practices, natural resource use, and the resilience of agricultural production systems. While agricultural research outputs have contributed significantly to food security and better livelihoods, they also carry environmental and social consequences that must be carefully managed.

Agricultural production and research operates in a context of accelerating natural resource degradation and climate risks with considerable decline in soil fertility, land fragmentation, loss of vegetative cover, and wetland conversion which continue to undermine productivity and ecological stability. For example, vision 2040 and State of Environment Report, 2025 notes that over 40% of Uganda's land is already degraded, while forest and wetland cover have sharply declined due to expansion of agriculture and unsustainable resource use (NSoER 2025). These production pressures directly affect the agricultural productions sites, systems, and landscapes where agricultural research and innovation is conducted.

Moreover, agricultural research outputs such as improved crop varieties, irrigation systems, livestock breeds, mechanization technologies, and biotechnology innovations have the potential to either mitigate or increase environmental and social challenges. For instance, irrigation technologies can enhance resilience to drought but, if poorly designed, may lead to over-extraction of water resources and energy resources. Similarly, research on livestock intensification can boost production and productivity but may significantly increase greenhouse gas emissions or place additional stress on agricultural production

systems. Such challenges call for systematic examinations for environmental and social safeguards in research design, implementation, and dissemination.

From the social point of view, agricultural research must not only generate innovations for production and productivity gains but must also mitigate uncertainties of exclusion by ensuring that such innovations are accessible to women, youth, vulnerable households, and marginalized communities. Without social safeguards, research innovations may unintentionally widen social inequalities, exclude traditional knowledge systems, not address specific needs or more certainly displace vulnerable groups from access and use of natural resources which are critical to their livelihoods.

Additionally, NARO's commitments under national, regional and international frameworks emphasize that science, technology, and innovation must be deployed in ways that are sustainable, socially acceptable, and climate-resilient. Therefore, aligning agricultural research and innovation with these commitments requires an intentional safeguard framework that guides how agricultural research should be conceptualized, implemented, monitored, and scaled.

Based this background, the Environmental and Social Safeguards (ESS) strategy for NARO has been designed to provide a structured approach for ensuring that agricultural research programs, projects, and activities are fully aligned with established ESS principles and standards that enhance environmental integrity, legal compliance, sustainability, and social acceptance at every stage of research and innovation, thereby promoting responsible practices, strengthening the integral processes that safeguard ecosystems, strengthen community, and contribute to sustainable agricultural development, and generate long-term, inclusive benefits for now and the future generations.

1.2 Purpose of the Policy

The development of the Environmental and Social Safeguards (ESS) Strategy is driven by the urgent need to align NARO's agricultural research and innovation with evolving environmental, social, and economic, institutional and legislative requirements. While agricultural research generates innovations, technologies and practices that enhance production and productivity, it also creates environmental and social risks including but not limited to resource degradation, biodiversity loss, pollution, social and gender exclusion, and inequitable access to innovations that, if unmitigated, may undermine research and innovation objectives and negatively affect ecosystems, communities, and development priorities.

The ESS Strategy provides a structured and proactive framework for embedding environmental and social actions and practices that enhance environmental and social stewardship, legal compliance and meets social needs into overall NAROs' research programs, projects, and innovations. It further addresses institutional gaps through providing systematic management tools and monitoring to environmental and social risks, ensuring that research outputs are both productive, responsible and sustainable. Through this strategy, NARO will strengthen institutional capacity, promote sustainable use of natural resources, enhance stakeholder participation, and deliver agricultural innovations that are transformative, inclusive, and environmentally friendly.

1.3 Policy Objectives

1.3.1 National level

The strategy is hinged on the national, regional and international frameworks.

At the national level, the policy is hinged on: The Constitution of the Republic of Uganda Article 17 and 39 and State policy

XXVII (27); the National Environment Act (2019) Section 2, 4(3), 5, 21, 61 and Section 115 ; the National Agricultural Research Act (2005) especially Section 3(a) and (b), and 4(b); the Land Act (1998) Section 27; the Occupational Safety and Health Act (2006) Section 14, 19, and 21; Equal Opportunities Commission Act (2007) Section 14(1); Prevention of human trafficking act (2019) Section 6; Children's Act (1997) amended 2016 Section 8; the National Environment (Waste Management) Regulations (2020) section 96; Climate Change Act (2021); Gender Policy (2007) Section 5.1; National Child Labour Policy (2006); National Agricultural Research Policy (2003); NARO Grants Policy (2025); the National Agriculture Policy (2013) Section 4.12 and 4.13; NARO Strategic Management Plan (2025/2026/ 2029-30); NARO access and benefit sharing of Genetic Resources Policy; and the NARO Human Resource Manual (2009); The Uganda National Council for Science and Technology Act (2000) Section 4 and Vision 2040 for Uganda Section 5.7 and 5.8, the National Development Plan IV for Uganda Chapter 12, the Green Growth Development Strategy for Uganda 2017/2028-2030/2031 Section 2.3 among others.

1.3.2 Regional and international level

At the regional level, the strategy is hinged on frameworks such as: the East African Community Environmental Policy (EACEP); African Union Agenda 2063 Goal 7; EAC Protocol on Environment and Natural Resources Management; African Convention on the Conservation of Nature and Natural Resources while as at the International level, this Strategy hinges on frameworks such as the UN-SDGs Goals 1, 2, 5, 10, 13 ,14 and 15; the Convention on Biological Diversity (CBD (2011) Article 6, 8, 9, 10 and 12; the Nagoya Protocol (2011) Article 1,6,8,9 and 22); ISO 14001 (2015); SBSTTA article 25; Whistle blower Protection Act 2010 Part -V) section 9 Subsection (1-6) and the World Bank ESS (2016, Green Climate fund guidelines(GCF) 2012; the IFC ESS standards 1-8 and the GFC principles among others.

1.4 Justification for ESS Strategy

This strategy is driven by the need to ensure that agricultural research and innovation contribute to social ecological and economic development while minimizing associated risks to the environment and society. During the process of generating research technologies there are multiple adverse risks that comes along with the processes which requires NARO dual responsibility of promoting innovation while preventing or mitigating potential harms to both people and natural resources. Without a structured safeguard framework, these risks could undermine the ultimate objectives of research innovation and compromise community wellbeing and ecosystem health.

This strategy therefore, provides a comprehensive actionable framework for identifying and evaluating environmental and social impacts of research projects and activities as well as calls for procedures for adopting the mitigation hierarchy to anticipate and avoid or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset negative impacts to workers, communities, and the environment. It also offers a platform that strengthens institutional capacity to anticipate, manage, mitigate, and monitor adverse impacts at all levels of research operations. Thus, the Strategy positions NARO to deliver research outputs that are productive, environmentally responsible, socially inclusive, and that meets the needs of the diverse population.

1.5 The ESS Strategy Scope

The ESS Strategy applies to agricultural research, innovations, technologies, products and services as well as research infrastructures developed, tested, or promoted under NARO. Its scope covers the entire research cycle (concept development, project design, field trials, laboratory work, dissemination, adoption and scaling by end-users).

On the environmental side, the strategy addresses issues such as natural resource exploitation, climate change impacts, pollution, waste management, biodiversity conservation, ecosystem protection among others. On the social perspective, it covers people participation, gender equity and diversity, youth and women engagement, cultural sensitivity, occupational health and safety, equitable access to technologies among others. The strategy is anchored on 18 ESS standards as applicable to different stakeholders, donor's institutions among others. The Strategy shall apply to all NARO institutes, field sites, and partner institutions, communities, private sector actors, academia among others.

1.6 Development Process and Stake holder Consultation

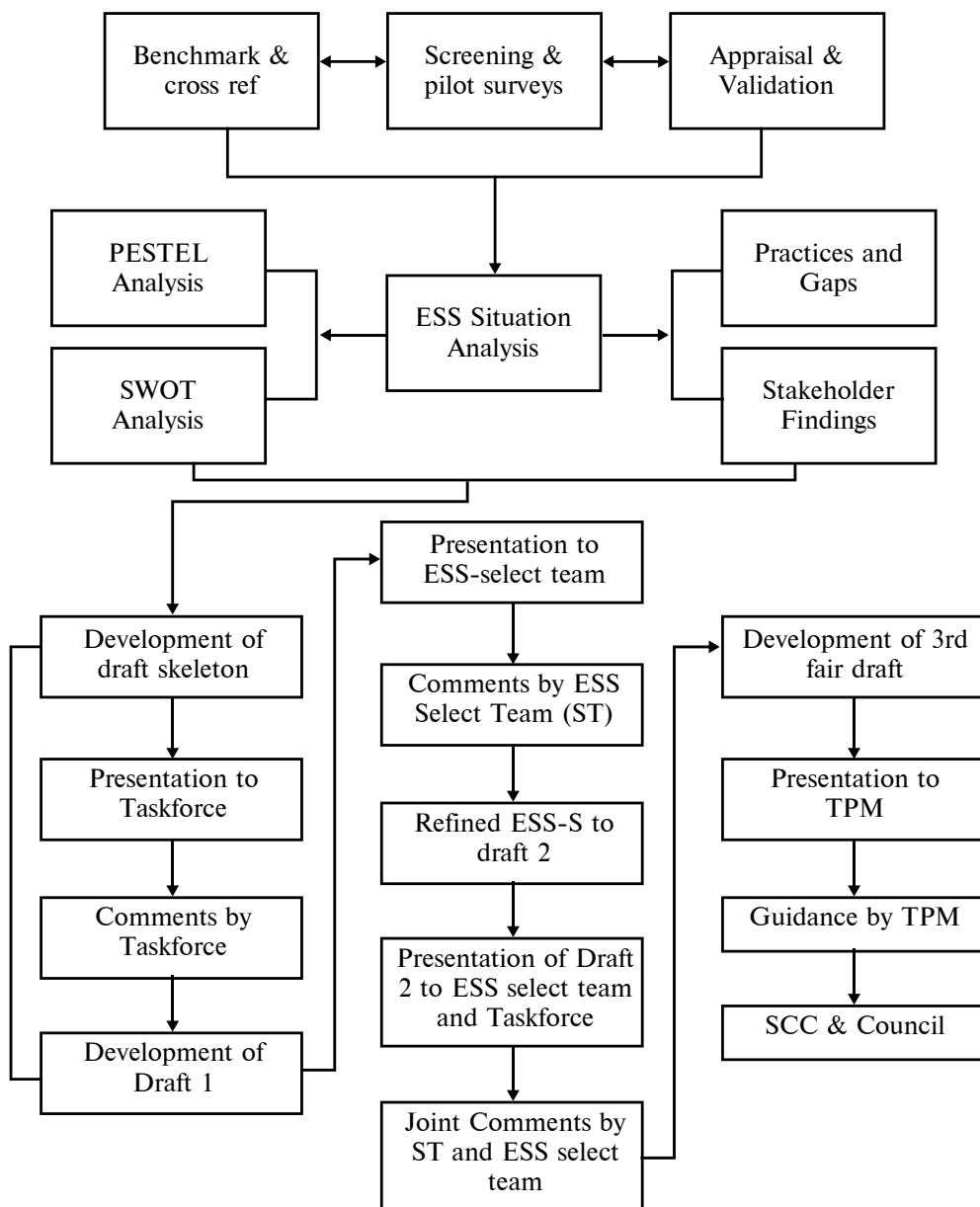
In line with the provisions of the ESS Policy, the development of the ESS Strategy became a priority to operationalize the policy framework and translate its commitments into actionable measures. The development of the Environmental and Social Safeguards (ESS) Strategy followed a participatory and evidence-based process to ensure that the framework is practical, context-specific, and aligned with institutional priorities. It began with a comprehensive situation analysis that examined the environmental and social implications of agricultural research and innovation on the environment and society following the context of agricultural research and innovation within NARO. It further involved critical document reviews complemented by screening exercises and pilot surveys conducted at institute level. These surveys provided empirical evidence on the activities, nature and extent of environmental and social impacts arising from research developments, as well as identify approaches to mitigate within NARO's research portfolio.

To systematically guide this assessment, several analytical tools were employed. A SWOT analysis was used to identify internal strengths and weaknesses in managing safeguards, as well as

external opportunities and threats that could influence effective implementation. Stakeholder mapping, consultation and analysis was carried out to determine the roles, interests, and influence of different actors ranging from research institutes, farmers, and local communities to policymakers, private sector players, and development partners in relation to environmental and social safeguards. The process also involved a review of institutional practices and gaps within NARO, as outlined the NARO's existing policies, guidelines, and operational systems for continuous improvements in handling environmental and social risks, as well as alignment with safeguard standards **[Figure 1]**.

This analysis will ensure that the strategy directly responds to pressing environmental and social challenges while equipping NARO to embed these into its research agendas.

Figure 1: Thematic flow of the strategy development process



2. SITUATION EVALUATION AND ANALYSIS

2.1 SWOT Analysis

To deepen the situation analysis and provide a structured understanding of our capacity to address environmental and social issues, formal consultations were held with a wide range of stakeholders. These discussions were instrumental in identifying the internal strengths and weaknesses within NARO, as well as the external opportunities and threats that shape the implementation of environmental and social safeguards. The insights generated through this participatory process form the basis of the SWOT analysis, providing a clear picture of where NARO stands and what strategic directions are needed to enhance safeguard integration across agricultural research and innovation.

2.2 PESTEL Analysis

The development and implementation of the Environmental and Social Safeguards (ESS) Policy Strategy at NARO are influenced by a range of external environmental factors that must be systematically considered to ensure sustainable and socially inclusive agricultural research.

To start with political perspective, the supportive environment provided by national policies such as section 5.7 and 5.8 of Vision 2040, the Chapter 12 of the National Development Plan IV (NDP IV) NARO Strategic Plan (Situation analysis), and environmental regulations creates a strong foundation for mainstreaming ESS across NARO's research programs, projects and activities. These frameworks enable institutional collaboration with regulatory agencies and local authorities, ensuring that research activities comply with national priorities and safeguard standards. Economically, funding from institutional allocations, development partners, and private sector actors provides opportunities to implement ESS activities. However, budgetary constraints and competing research priorities pose challenges

that must be addressed through targeted ESS planning and financial mobilization strategies.

Social factors are critical to this ESS Policy Strategy, as agricultural research in Uganda must consider inclusivity dimensions; gender equity, youth engagement, and the consideration of vulnerable groups to ensure research outcomes are equitable and widely adopted. Engaging communities and stakeholders early in research design enhances social acceptability and responsiveness, while neglecting these aspects risks resistance and exclusion. On the technological point of view, the growing use of digital platforms and innovations in agriculture offers tools for real-time monitoring, reporting, and enhanced compliance with ESS standards. Nonetheless, limited access to technology or technical skills among staff and stakeholders may constrain the full adoption of these tools.

Environmental factors, including climate change, soil erosion, wetland encroachment, and biodiversity loss, directly impact the sustainability of agricultural research outputs. Integrating climate resilience, ecosystem conservation, and resource management into research design is essential to safeguard both productivity and long-term environmental sustainability. Legally, NARO operates within a framework of national laws and international agreements, such as environmental protection statutes and the Sustainable Development Goals (SDGs), which provide clear guidance for ESS compliance. Weak enforcement or complex regulatory requirements, however, necessitate strong institutional mechanisms for monitoring and adherence.

The combined SWOT and PESTEL analyses reveal that NARO has a strong institutional base and considerable expertise to mainstream ESS in agricultural research. However, realizing this potential requires addressing internal weaknesses, leveraging external opportunities, and mitigating environmental, social, and financial risks. By strengthening governance, staffing, technical capacity, stakeholder engagement, and resource allocation, NARO will implement a context-specific, and high-impact ESS

system that ensures agricultural research is environmentally sustainable, socially inclusive, economically viable and aligned with national and international priorities.

Based on the analysis, the weaknesses, strength, opportunities and threats are presented below:

2.3 Strengths

- i) Existence of an Environmental and Social Safeguards (ESS) Unit with an officer at Secretariat to coordinate safeguard functions.
- ii) A pool of multidisciplinary scientists and social scientists (environmentalists, agronomists, ecologists, sociologists, auditors, finance etc) that can be tapped into for safeguard implementation
- iii) Growing institutional awareness of gender and equity considerations in research programming.
- iv) Strong partnerships with line MDAs and research institutions that provide technical backstopping of staff
- v) NARO's mandate and institutional framework explicitly recognize environmental sustainability and social inclusivity in agricultural research.

2.4 Weaknesses

- i) Absence of a dedicated and comprehensive safeguard framework to guide environmental and social risk management within agricultural research.
- ii) Limited staffing in the ESS Unit, with no dedicated staff at institute level.
- iii) Limited technical capacity among researchers, staff and stakeholders to assess, evaluate, monitor, and report on ESS.
- iv) Inadequate funding allocation for ESS activities compared to the broader research budget.

- v) Weak coordination mechanisms with stakeholders leading to compliance gaps.
- vi) Low levels of stakeholder consultations at early stages of innovation design, limiting responsiveness to community needs.

2.5 Opportunities

- i) Availability of training support and research networks to strengthen ESS expertise.
- ii) Increasing national and global push for environmentally sustainable and socially inclusive agricultural research and production systems.
- iii) Strong government support environmental sustainability and social cohesion that promote ESS.
- iv) Willingness of public, private, and donor collaboration with NARO.

2.6 Threats

- i) Increasing climate-related risks (droughts, floods, pest outbreaks, pandemics etc) undermining agricultural research outputs.
- ii) Increasing environmental degradation leading to soil erosion and biodiversity loss threatening research sustainability.
- iii) Risk of marginalization of women, youth, and vulnerable groups alongside rising inequalities in agricultural development.
- iv) Limited financial resources and budgetary constraints within NARO, which may slow down ESS implementation.

2.7 Recommendations

- i) Establish clear institutional policies, guidelines, and standard operating procedures to manage environmental and social risks in research projects and activities
- ii) Allocate targeted budgets within research projects and institute operational plans for ESS activities.
- iii) Involve stakeholders early in research planning to ensure responsiveness to local needs
- iv) Sensitize staff and stakeholders to embed ESS as a core component of research design and implementation.
- v) Develop tools and guidance materials to support the systematic integration of ESS across NARO's research agenda

3. THE STRATEGY

3.1 Introduction

The National Agricultural Research Organization (NARO) is mandated to coordinate and guide agricultural research in Uganda, recognizing that sustainable agricultural development relies fundamentally on the responsible management of Environment and Natural Resources (ENRs). ENRs underpin food security, livelihoods, and broader socio-economic progress. Achieving sustainable agricultural innovation requires a careful balance between advancing research and safeguarding the environment, ecosystems, and society.

The Environmental and Social Safeguards (ESS) Strategy provides a clear and actionable roadmap for embedding environmental sustainability and social inclusivity across agricultural research, innovation, and technology development over the period 2025/26–2029/30. This integrated approach will ensure that agricultural research delivers sustainable productivity, equitable benefits, and long-term contributions to economic development priorities while minimizing environmental and social risks.

3.2 Strategic Goal

The overall goal of the Environmental and Social Safeguards (ESS) Strategy is to ensure that agricultural research programs, projects, and activities are fully aligned with established ESS principles and standards. More specifically, the Strategy seeks to embed environmental and social requirements into every stage of agricultural research and innovation, ensuring responsible practices that safeguard resources, enhance community wellbeing, and contribute to equitable and sustainable agricultural transformation.

3.3 NARO ESS Strategic objectives

The Strategy is guided by six (06) strategic objectives:

- 1) Ensure that agricultural research and innovations are compliant with environmental and social laws, policies and standards.
- 2) Promote sustainable environment and social practices in the conduct of agricultural research and technology development
- 3) Strengthen institutional capacity for ESS implementation and monitoring system of agricultural research activities
- 4) Promote gender, equity and community participation in agricultural research and innovation
- 5) Mobilize resources for environment and social safeguards management and implementation
- 6) Establish and operationalize an environment and social management system (ESMS) across NARO

3.4 Guiding principles

Building on the core principles outlined in the ESS Policy and the values articulated in NARO's Strategic Plan 2025/26-2029/30, this ESS strategy is guided by the following principles:

3.4.1 Environmental Sustainability Principle

The Sustainability Principle emphasizes the balanced integration of environmental stewardship, social well-being, and economic viability. It advocates for the responsible management and protection of natural resources, ensuring their use meets the needs of the present generation without compromising the ability of future generations to meet their own needs. It accentuates secure amalgamation of the environmental, social and economic objectives of agricultural research and development. This principle is anchored on the following standards: (i) Protection of Natural Habitats, (ii) Conservation of Biological Diversity,

(iii) Climate Change Mitigation and Adaptation, (iv) Pollution Prevention, Waste Management and Resource Use Efficiency, (v) Promotion of Public Health, (vi) Preservation of Physical and Cultural Heritage, (vii) Lands and Soil Conservation. The standards are explained in the ESS policy.

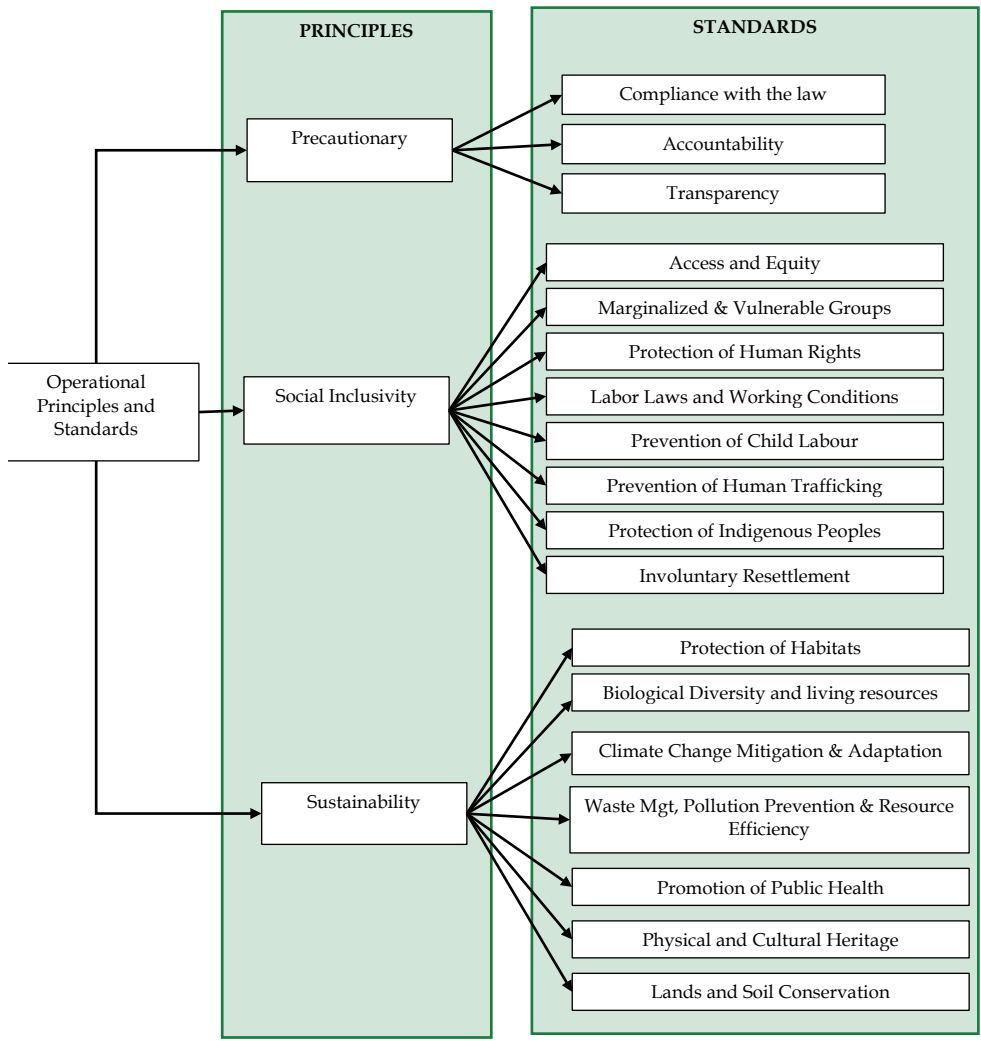
3.4.2 Precautionary Principle

This principle, as outlined by the National Environment Act (NEA, 2019), is a fundamental approach to environmental management that emphasizes preventing harm before it occurs. It promotes proactive decision-making, prioritizing preventive measures over reactive solutions. This principle ensures that research programs, projects and activities are thoroughly assessed for potential adverse risks and impacts before implementation. It is guided by the following standards: (i) Compliance with the environmental and social legislative framework, (ii) Transparency, (iii) Accountability in agricultural research

3.4.3 Social Inclusivity Principle

The Social Inclusivity Principle promotes active participation, equitable access and fair distribution of benefits among societal groups, particularly marginalized, vulnerable, and underrepresented populations such as women, youth, indigenous communities, people with disabilities (PWDs), refugees and other special interest groups (SIGs). It ensures that no group is affected by negative environmental or social impacts, fostering fairness, responsiveness and equity in agricultural research outcomes. This principle is guided by the following standards: (i) Access and Equity, (ii) Consideration of Marginalized and Vulnerable Groups, (iii) Gender Equality and Women's Empowerment, (iv) Protection of Human Rights, (v) Labor law and Working Conditions, (vi) Protection of Indigenous People, (vii) Involuntary Resettlement.

Figure 2: Description of the guiding Principles and Standards



3.5 Target Audience

The target audience for the NARO Environmental and Social Safeguards (ESS) Strategy reflects the diverse groups that will either directly benefit from, or play a role in the mainstreaming of environmental and social safeguards in agricultural research. The audience for this Strategy is categorized into broad clusters that together form the ecosystem of actors influencing and benefiting from agricultural research. At the core are community members, particularly farmers and producers, who are the primary beneficiaries of agricultural innovations. This group includes smallholder farmers, farmer cooperatives/associations, and commercial farmers, all of whom stand to gain from research that is environmentally sustainable, socially inclusive, and aligned with community priorities.

Supporting this are extension and advisory services and local governments, who act as the crucial link between research institutions and communities. Their role is to translate, disseminate, and monitor safeguard practices to ensure effective adoption at the grassroots level. The government institutions and research institutions (MDAs) represent another target, as they provide policy direction, regulatory oversight, and technical frameworks that guide compliance with environmental and social standards. Similarly, academia and education institutions shape future scientists, advancing research capacity, and embedding ESS knowledge into training curricula.

In addition, policy and advocacy actors, together with scientists (both within and beyond NARO), are key personnel's who champion safeguard integration and influence decision-making. Partners and donors support financial sustainability and alignment with best practices and perspectives. The private sector, including agro-input companies, agribusiness enterprises, and technology companies, forms another major target with their role in scaling innovations, driving commercialization, and ensuring that safeguard principles are upheld across agricultural value chains.

Accordingly, the ESS Strategy is not only confined to researchers but is directed toward a broad spectrum of actors whose collective engagement ensures that agricultural research is environmentally sound, socially inclusive, and responsive to national development goals.

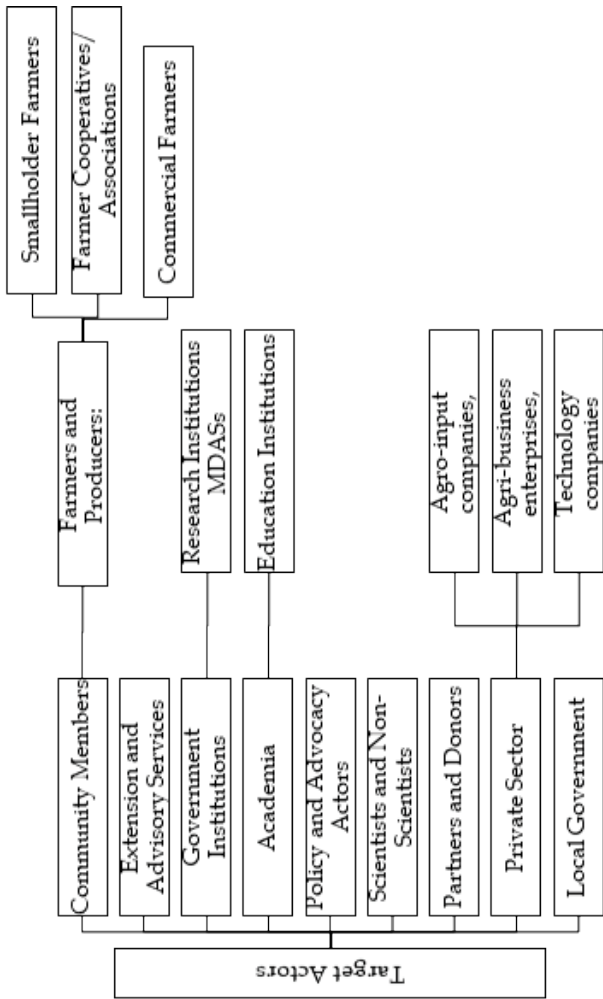


Figure 3: Description of the target Audience

4. STRATEGIC DIRECTION

4.1 Strategic Interventions and Result areas

To achieve the overarching goal of the ESS Strategy, NARO has identified a set of strategic interventions and result areas that translate policy and guiding principles into actionable measures. These result areas include:

Result Area 1: Compliance and Legal alignment of agricultural research projects and activities to national and international environmental and social laws, policies, and safeguard standards.

Result Area 2: Sustainable research practices that minimizing negative environmental and social impacts

Result Area 3: Strengthened institutional capacity for effective implementation of ESS across the research portfolio

Result Area 4: Enhanced Gender, Equity in research planning, implementation, and benefit-sharing

Result Area 5: Enhanced Resource Mobilization to support ESS activities across all research programs

Result Area 6: Enhanced Environment and Social Management System (ESMS) across NARO

4.2 Description Of Key Result Areas

The implementation of the Environmental and Social Safeguards (ESS) Policy Strategy is anchored on six (6) Key Result Areas that directly correspond to the strategic and policy objectives of the ESS framework.

These result areas provide a structured approach for translating policy commitments into measurable actions and outcomes across NARO's research programs, projects, and institutional operations. Each result area reflects a core dimension of environmental and social sustainability in agricultural research. Collectively, these Key Result Areas serve as the pillars for achieving NARO's ESS Policy objectives and ensuring that agricultural research and innovation are conducted responsibly,

inclusively, and in alignment with safeguard principles and standards.

The following section presents the Key Result Areas, each designed to operationalize the strategic objectives of the ESS Policy and guide its effective implementation

4.2.1 Result Area 1: Enhanced Compliance and legal alignment of agricultural research programs, projects and activities to environmental and social frameworks.

This result area ensures that all NARO's agricultural research programs, projects, activities and innovations strictly comply with national environmental laws, social safeguard policies, and relevant international standards. It addresses risks such as ecosystem degradation, soil erosion, wetland encroachment, unsafe use of chemicals, and social exclusion. Considering policy requirements into research design and implementation enhances resource accountability, promotes responsible research practices, protects communities, and ensures that agricultural innovations are environmentally compliant and socially just.

4.2.2 Result Area 2: Sustainable research practices that minimize negative environmental and social impacts associated with research processes

This result area responds to the need for NARO's agricultural research activities to go beyond compliance and actively embed sustainability principles into research design, implementation, and dissemination. Agricultural research often generates negative environmental risks such as soil degradation, biodiversity loss, water pollution, and chemical waste from laboratories, fields and operation areas; as well as social risks like exclusion of vulnerable groups, land-use conflicts, and unintended impacts on community wellbeing among others.

By focusing on sustainable research practices, NARO ensures that research outputs not only advance innovation and productivity but also minimize ecological footprints and prevent social harm. This result area addresses the critical balance between agricultural advancement and environmental

responsibility, ensuring that technology development and research interventions contribute to resource gain, inclusive trends, and long-term sustainability.

4.2.3 Result Area 3: Strengthened institutional capacity for effective implementation of ESS across the research portfolio.

Effective integration of Environmental and Social Safeguards (ESS) in agricultural research requires more than policies and guidelines; it demands strong institutional systems, skilled personnel, and clear accountability mechanisms.

Currently, NARO faces capacity gaps such as limited staffing in the ESS Unit, inadequate technical skills among researchers and stakeholders to assess and monitor environmental and social risks, weak coordination with regulatory agencies, and insufficient resources for ESS activities. These limitations hinder consistent safeguard implementation across research programs and projects, leading to risks of non-compliance, environmental degradation, and social exclusion.

The ESS strategy lays a foundation to address those gaps by providing measures that strengthen the institutional capacity to operationalize ESS at both the Secretariat and institute levels. It ensures that research teams have the knowledge, tools, and systems to integrate ESS into day-to-day research operations. Strengthening capacity also builds institutional flexibility, public trust and enabling environment to meet regulatory requirements, respond to emerging environmental and social challenges, and demonstrate accountability to stakeholders, including government, development partners and affected communities. Ultimately, this result area focuses on enhancing NARO's ability to deliver agricultural research that is not only innovative but also economically viable, environmentally sound and socially acceptable. To achieve this objective, the following measures will apply;

4.2.4 Result Area 4: Enhanced Gender, Equity in Research planning, implementation, and benefit-sharing.

This result area addresses the persistent gaps in gender and equity mainstreaming within agricultural research under

NARO. Despite progress in integrating gender considerations, women, youth, persons with disabilities, and other vulnerable groups often remain underrepresented in research planning, decision-making, and access to innovations. This limits uptake, undermines community acceptance, and reduces the level of usability of research outputs.

Considerably, embedding gender and equity needs into all stages of the research cycle, these measures ensures that agricultural research outcomes are equitable, and responsive to the diverse needs of communities. This alignment not only fulfills national and international commitments but also enhances the effectiveness, scalability, and sustainability of research and innovations. Specifically, this intervention seeks to address social exclusion, unequal access to research benefits, and weak participation of marginalized groups aiming at ensuring technology developments contribute to improved livelihoods, reduced vulnerabilities, and improved resilience across farming communities.

4.2.5 Result Area 5: Enhanced Resource Mobilization to support ESS activities across NARO Research Programs

This result area responds to the persistent underfunding of environment and social safeguards (ESS) within NARO's agricultural research programs. Although the integration of ESS is widely acknowledged, it continues to receive limited financial support compared to core research activities. As a result of limited funding, in many cases, project implementers and principal investigators overlook ESS considerations in research proposals, thereby restricting support for mainstreaming safeguards which eventually results in non-compliance and ineffective execution of critical safeguard functions.

The absence of sustained financing of ESS interventions exposes research initiatives to significant environmental risks and social risks. It also undermines compliance with regulatory requirements and international standards, which are essential for credibility and long-term sustainability. Strengthening resource mobilization for ESS therefore, will ensure that safeguards are not perceived as an “add-on” but recognized, financed,

and implemented as a core element of agricultural research processes. Addressing these constraints will enhance the applicability of safeguard interventions, improve compliance, and build institutional capacity to protect resources while promoting inclusive and equitable agricultural research system.

4.2.6 Result Area 6: Enhanced Environment and Social Management System (ESMS) across NARO

An Environmental and Social Management System (ESMS) is a structured framework of policies, procedures, tools, and practices designed to identify, assess, manage, monitor, and report environmental and social risks and opportunities throughout an institution's operations. It provides an institutionalized mechanism for integrating environmental and social safeguards into planning, design and implementation processes of research and innovation, ensuring compliance with legal requirements and best practices.

An ESMS will be particularly critical given the scope and diversity of research activities, which often interact directly with communities, ecosystems, and natural resources at different scales. Accordingly, the ESMS shall comprise of the legal framework, institutional arrangements, planning and mitigation measure, capacity building, monitoring and evaluations, grievance redress, and emergency preparedness and response among others.

The NARO ESMS shall:

- a) Ensure that all research programs and projects are implemented in an environmentally sound, socially inclusive, and ethically responsible manner.
- b) Harmonize safeguards practices across institutes, directorates, and research teams, thereby reducing risks of fragmented or inconsistent approaches.
- c) Strengthen accountability and transparency in the management of environmental and social risks.
- d) Enhance NARO's credibility with stakeholders, including government, development partners, and the farming communities it serves.

- e) Position NARO to better access external funding, as many donors require institutions to demonstrate robust safeguard systems.

The ESMS will directly address the current gaps and weaknesses in environmental and social safeguards (ESS) within NARO, which have limited the institution's ability to systematically manage risks associated with agricultural research. At present, safeguards integration is often inconsistent, fragmented or reactive, leaving critical environmental, social, health, and safety issues insufficiently addressed. Establishing a functional Environmental and Social Management System (ESMS) will therefore provide a structured and proactive approach to closing these gaps.

4.3 Implementation Strategies

The implementation of the Environmental and Social Safeguards (ESS) Policy requires clear, practical, and coordinated strategies that translate policy statements and standards into actionable measures. These strategies provide the operational framework through which NARO and its constituent research stakeholders can integrate environmental and social considerations into all stages of research planning, implementation, monitoring, and reporting.

They aim to ensure that the ESS Policy principles are effectively mainstreamed across research programs and institutional operations. The implementation strategies therefore outline key actions, roles, and mechanisms to operationalize the policy's objectives, promote compliance with safeguard standards, and strengthen institutional capacity for sustainable and socially responsible agricultural research and innovation.

The following implementation strategies are presented in alignment with the respective policy statements they are intended to operationalize.

4.3.1 Compliance with the Law

Policy Statement 1: NARO shall align all her agricultural research programs, projects and activities with Uganda's legal environmental and social frameworks; and regional and international ESS standards.

Operational Strategies that align to Compliance to legal and policy requirements

- a) Strengthen ESS Legal and policy alignment in research activities.
- b) Develop a searchable database for ESS requirements in research projects and activities.
- c) Strengthen NARO capacity for ESS compliance in research activities.
- d) Integrate ESS legal requirements in research processes including;
 - i) Undertake ESIA Project screening (EPS) for research activities.
 - ii) Conduct ESIA Baseline Surveys (BS) for research facilities.
 - iii) Undertake Environmental and Social Impact Assessments (ESIAs).
 - iv) Undertake Strategic environment Assessments (SIAs) for research policies and plans.
 - v) Develop Environmental and social management plans (ESMPs).
 - vi) Develop Environmental and Social Action Plans (ESAPs).
 - vii) Undertake Comprehensive Stakeholder consultations in research process.
 - viii) Integrate of Environmental and social principles (ESPs) in research programs, projects and activities.

4.3.2 Accountability

Policy Statement 2: NARO shall ensure that individuals, teams, and partners are accountable to environmental and social safeguard measures in research programs, projects, and activities.

Operational Strategies that align with accountability for ESS principles and standards in research processes

- a) Define roles and responsibilities for ESS accountability structures.
- b) Develop and define Measurable ESS accountability indicators.

4.3.3 Transparency

Policy Statement 3: NARO shall ensure all processes, decisions and actions related to the implementation of the ESS policy are conducted in a transparent manner.

Operational Strategies

- a) Promote ESS operational transparency in research operations.
- b) Strengthen ESS stakeholder engagement in research processes.

4.3.4 Access and Equity to research innovations

Policy Statement 4: NARO shall ensure fair, inclusive and equitable access to benefits of research innovations, products and services.

Operational Strategies

- a) Promote inclusive research design to cater for different social classes in research development cycle.
- b) Establish transparent benefit sharing mechanisms.
- c) Enhance accessibility and fairness to research processes.
- d) Strengthen approaches and partnerships for inclusive access.
- e) Build awareness and capacity of research teams on equitability and fairness.

4.3.5 Consideration of Marginalized and Vulnerable Groups, Gender Equality, and Women's Empowerment

Policy Statement 5: NARO shall minimize unfavorable impacts on marginalized, vulnerable and special interest groups in regard to access, use, participation, or benefit from agricultural research technologies, products, services, projects and programs.

Operational Strategies

- a) Conduct social impact assessments and mapping before project implementation.
- b) Ensure inclusive participation in research design and implementation.
- c) Strengthen awareness and capacity building to research teams.

4.3.6 Protection of Human Rights

Policy Statement 6: NARO shall ensure that all individuals, regardless of gender, age, ethnicity, disability, or socio-economic status, have equal rights to actively participate, access, and benefit from agricultural research innovation.

Operational Strategies

- a) Consider human dignity in research processes to achieve equity in rights of different social classes.
- b) Apply non-discrimination in the research and innovation value chain.

4.3.7 Labor Laws and Working Conditions

Policy Statement 7: NARO shall protect the rights of workers, promote fair treatment, and create safe, healthy and supportive work environments for her employees and partners engaged in research activities.

Operational Strategies

- a) Create and implement safe working environments in research work places.
- b) Mainstream ESS considerations in design of agricultural research.
- c) Apply comprehensive health and safety standards across research facilities.
- d) Provision of personal protective equipment (PPEs) during research work.
- e) Develop and implement standard operating procedures (SOPs) at facilities and research environments.

- f) Develop and Implement incident reporting mechanisms in research processes.
- g) Develop and implement emergency response and preparedness plans (ERPP).
- h) Implement zero tolerance approaches to unsafe practices during research undertakings.

4.3.8 Prevention of Child Labour

Policy Statement 8: NARO shall not employ or engage a child or children in any research program, project and activity that may be harmful or hazardous to their health, physical, mental, spiritual, moral or social development in accordance with **Section 8.1** of Children Act 1997 amended 2016 and the National Child Labour Policy 2006.

Strategies

- a) Strengthen Compliance with child protection requirements.
- b) Implement age verification mechanisms during research process.
- c) Adhere to child safe practices in research activities and operational areas.

4.3.9 Prevention of Human Trafficking

Policy Statement 9: NARO shall uphold ethical standards and best practices to ensure that research programs, projects and activities are free from any form of human trafficking in accordance with national and international requirements.

Operational Strategies

- a) Strengthen application of ethical standards and best practices towards human trafficking.
- b) Support to Non tolerance to human trafficking in research activities.
- c) Develop standard operating procedures to prevent human trafficking in all research activities.

4.3.10 Protection of Indigenous People

Policy Statement 10: NARO shall respect and recognize the rights, culture and participation of indigenous communities in her agricultural research programs, projects and activities.

Strategies

- a) Enhance respect for indigenous rights in research processes.
- b) Promote inclusive participation in research processes.
- c) Foster cultural sensitivity and awareness in research processes.

4.3.11 Involuntary Resettlement

Policy Statement 11: NARO shall ensure that agricultural research project designs and alternatives avoid involuntary resettlement whenever possible.

Operational Strategies

- a) Prioritise resettlement avoidance as part of the mitigation hierarchy.
- b) Prioritise comprehensive social impact assessments.
- c) Develop Resettlement Action Plans (RAPs), where unavoidable is not feasible.

4.3.12 Protection of Habitats

Policy Statement 12: NARO shall ensure that agricultural technology development conserves and/or minimizes loss of critical habitats.

Operational Strategies

- a) Emphasize habitat screening during project design.
- b) Apply avoidance mechanisms for ecologically sensitive areas when conspiring research sites.
- c) Apply the Mitigation Hierarchy during research processes.
- d) Promote eco-friendly research practices in research processes.
- e) Implement measures to restore the degraded sections of ecosystems on NARO land.

4.3.13 Conservation of Biological Diversity and sustainable management of living resources

Policy Statement 13: NARO shall promote agricultural research programs, projects and activities that protect and enhance the variety of life on earth, including the diversity of species, ecosystems and genetic resources.

Operational Strategies

- a) Consideration of biological biodiversity into research and development cycle.
- b) Integration of biological conservation into research design.
- c) Promote sustainable practices that ensure sustainable conservation of biodiversity and agro-diversity.
- d) Implement ethical and equitable approaches for use of genetic resources.

4.3.14 Climate Change Mitigation and Adaptation

Policy Statement 14: NARO shall incorporate climate-responsive measures into its agricultural research programs, projects and activities.

Operational Strategies

- a) Integrate climate risk actions in research design.
- b) Promote climate -smart agricultural practices and innovations.
- c) Mainstream climate adaptation and mitigation in training.

4.3.15 Waste Management, Pollution Prevention and Resource Efficiency

Policy Statement 15: NARO shall ensure sustainable waste management, prevent environmental pollution, and promote resource efficiency in the execution of her agricultural research activities.

Strategies aligned

4.3.15.1 Waste Management

- a) Integrate waste management into research planning and design.

- b) Apply waste identification and classification approaches.
- c) Apply waste minimization and segregation.
- d) Implement to safe storage and handling procedures of waste.
- e) Implement safe practices during waste collection, transportation and disposal.
- f) Prioritise effective laboratory waste management procedures.
- a) Prioritise proper procurement and material use.

4.3.15.2 Management of Environmental Pollution

- g) Implement pollution assessment and mitigation planning.
- h) Apply measures for Air pollution control
- i) Apply measures for prevention of water pollution
- j) Implement measures for control of soil pollution

4.3.15.3 Resource Efficiency

- k) Apply measures for energy efficiency during research activities
- l) Adopt water use efficiency during research operations
- m) Encourage continuous improvement in resource use management.

4.3.16 Promotion of Public Health

Policy Statement 16: NARO shall promote the health and well-being of communities and ecosystems that are likely to affect and/ or be affected by her agricultural research programs, projects and activities

Strategies

- a) Conduct Health and Environmental Assessments for research projects and activities.
- b) Develop protocols to promote human and ecosystem health in research processes.
- c) Promote safe and sustainable practices to protect human and environmental health.
- d) Promote Safe Use and Management of Agrochemicals.

- e) Ensure Safety and quality of research technologies, products and services
- f) Support Continuous engagement of people and awareness.

4.3.17 Protection of Physical and Cultural Heritage

Policy Statement 17: NARO shall respect, recognize and protect the cultural and historical significance of communities in the conduct of her agricultural research programs, projects and activities.

Strategies

- a) Identify and screen cultural heritage sites likely to affect to be affected by research activities.
- b) Implement measures to protect the cultural and historical sites of significance.
- c) Apply minimization strategies to reduce adverse impacts.

4.3.18 Lands and Soil Conservation

Policy Statement 18: NARO shall promote sustainable land use practices and soil health in execution of her agricultural research programs, projects and activities.

Strategies

- a) Adopt sustainable land use planning in research processes.
- b) Develop land use plans to guide resource users.
- c) Implement land use management practices that balance research needs with sustainable use and protection of natural resources.
- d) Promote soil conservation and regeneration measures.

4.3.19 Environmental and Social Risk Assessment and Mitigation

Policy Statement 19: NARO shall ensure comprehensive management of environmental and social risk in her research programs, projects and activities.

Strategies

- a) Integrate risk assessments into project planning.
- b) Considerations environmental risk assessment (ESRA).

- c) Prioritise environmental and social risk screening.
- d) Undertake environmental and social assessment prior project commencement.
- e) Prioritise hazard identification and mapping as early as possible.
- f) Undertake risk vulnerability analysis.
- g) Develop and implement a risk response action plan.

4.3.20 Environment and Social Management System (ESMS)

Policy Statement 20: NARO shall establish an environment and social management system (ESMS) in accordance with relevant laws, regulations and standards.

Strategies

- a) Design, develop and institutionalize the ESMS.
- b) Develop operational procedures to operationalize the ESMS across NARO.

4.3.21 Environmental and Social Compliance Audits

Policy Statement 21: NARO shall conduct periodic environmental and social compliance audits for her research programs, projects and activities.

Strategies

- a) Develop an environmental and social audit framework.
- b) Conduct environmental and social compliance audits and inspections.
- c) Develop environmental compliance audit tools.

4.3.22 Policy Administration and Implementation

- a) Develop the Institutional setup and coordination mechanisms
- b) Establish the ESS Unit under the DR
- c) Designate ESS -Focal point persons
- d) Define the mandate, functions and evaluation procedures of the unit

4.3.23 ESS Unit Establishment

Policy Statement 23: NARO shall establish an ESS unit under the Directorate of Research to superintend over ESS functions.

Strategies

- a) The ESS unit and functions
- b) Define the Mandate and function of the unit
- c) Support performance and evaluation

4.3.24 ESS Policy Implementation Arrangements

Policy Statement 24: The Environment and Social Safeguards Unit (ESS-U) under the directorate of research shall lead in the implementation of the ESS policy.

Strategies

- a) Overall coordination of the ESS activities.
- b) Dissemination and internalization of the ESS policy.
- c) Management and access to environmental information of the ESS policy.
- d) Development of operational tools for guidance.
- e) Effective monitoring, reporting and accountability of ESS activities.

4.3.25 Translation of the Policy Commitments into Strategic Actions

Policy Statement 25: NARO shall develop ESS strategy and guidelines to effectively operationalize the policy and guide its implementation across her research programs, projects and activities

Strategies

- a) Develop and implement the ESS strategy.
- b) Disseminate and review the strategy.

4.3.26 Roles and Responsibilities

Policy Statement 26: NARO shall establish clear roles and responsibilities across her organizational structure and partners through the established environment and social management system (EMS) for effective implementation of the ESS policy.

Strategies

- a) Integrate and operationalize the Environment and Social Management system (ESMS).
- b) Develop and maintain functional ESS management committees.
- c) Define roles and responsibilities of the committees.

4.3.27 Financing of the ESS policy

Policy Statement 27: NARO shall ensure adequate resources are provided for implementation of Environmental and Social Safeguards activities.

Strategies

- a) Ensure resource allocation and operational support.
- b) Integrate ESS financing into institutional planning and budgeting.
- c) Mobilize and diversify funding sources for ESS activities.

4.3.28 Capacity Building and Training

Policy Statement 28: NARO shall support capacity building for effective implementation of environmental and social safeguards activities.

Strategies

- a) Conduct institutional capacity needs assessment.
- b) Develop training and knowledge enhancement programs.
- c) Develop and disseminate learning resources.
- d) Encourage technical support and mentorship.
- e) Leverage to partnerships and collaboration for capacity enhancement.

4.3.29 Contribution and Participation in Climate change initiatives

Policy Statement 29: NARO shall actively contribute to environmental and climate change initiatives at national, regional and global levels.

Strategies

- a) Strengthen participation and visibility in national and regional and global Climate and environmental initiatives.
- b) Strengthen Policy and knowledge contribution on climate change.

4.3.30 Reporting, Monitoring and Evaluation

Policy Statement 30: NARO shall establish mechanisms for effective monitoring and evaluation of environmental and social impacts of her agricultural research programs, projects and activities.

Strategies

- a) Strengthen ESS monitoring across research portfolio.
- b) Integrate ESS monitoring and evaluation into the existing M&E framework.
- c) Enhance ESS data collection for ME analysis.
- d) Strengthen reporting of ESS activities and performance.
- e) Strengthen communication and dissemination of ESS matters.

4.3.31 Develop appropriate ESS tools

Policy Statement 31: NARO shall develop appropriate tools for conducting environmental and social compliance audits (ESCA), environmental and social impact assessments (ESIAs), environmental risk assessments (ERAs), mitigation and capacity training to support effective monitoring, evaluation and management of the environment and social risks in her research programs, projects and activities

Strategies

- a) Develop standardized environment and social management (ESS) tools.
- b) Promote continuous improvement in ESS performance.

4.3.32 Grievance Management Mechanisms

Policy Statement 32: NARO shall establish a transparent mechanism for raising and resolving issues regarding ESS in her agricultural research programs, projects and activities.

Strategies

- a) Establish a formal Grievance Redress Mechanism (GRM).
- b) Strengthen Grievance procedures (Submission, acknowledgement and assessment).
- c) Strengthen Grievance Resolution and Feedback Mechanisms.
- d) Strengthen the Management of unresolved complaints.
- e) Maintain records for effective grievance management.
- f) Management of conflict of interest in research processes
- g) Consideration and protection of whistleblowers in research activities

4.3.33 Policy Review

Policy Statement 33: NARO shall review this policy as and when need arises.

Strategies

- a) Establish a continuous policy review process.

4.3.34 Breach of Provisions of the Policy

Policy Statement 34: NARO shall require strict adherence to the provisions of the ESS Policy. Breach of these provisions will be treated as violation and shall be managed in accordance to human resource manual.

Strategies

- (a) Enhance Awareness and Induction across research teams.
- (b) Establish whistle blowing mechanisms for ESS policy violations.
- (c) Establish a clear system for Classification of ESS policy Breaches.
- (d) Enforce disciplinary measures.
- (e) Strengthen Documentation and Record-Keeping for ESS compliance.
- (f) Integrate ESS Policy provisions into Projects and MoUs.

4.3.35 Policy Disputes and Appeals

Policy Statement 35: NARO shall ensure disputes arising from the ESS policy are resolved in accordance with applicable laws.

Strategies

- a) Establish a dispute resolution framework or mechanisms.

5. ESS PLANNING AND FINANCING FRAMEWORK

5.1 Introduction

Successful implementation of the NARO Environmental and Social Safeguards (ESS) Strategy will depend on the availability of adequate, predictable, and sustained resources. Historically, cross-cutting issues such as safeguards, gender, and climate change have been underfunded within research institutions, limiting their effective integration into research activities. This chapter outlines how NARO will mobilize, allocate, and sustain the necessary resources to support ESS implementation of the strategy period of five years (2025–2030).

5.2 Planning

To ensure that the NARO Environmental and Social Safeguards (ESS) Strategy remains relevant, effective, and responsive to emerging environmental and social concerns, a systematic planning framework will be adapted. This framework will guide how the five-year strategy will be implemented and reviewed, ensuring it is evidence-based, participatory, and responding to research priorities. Through careful planning and integration, the planning and review process identifies successes, gaps, and challenges in ESS implementation, while providing actionable recommendations for improvement. Strategic approaches, including financial allocation, co-financing, data collection, stakeholder engagement, performance assessment, and resource alignment, will ensure that the strategy evolves in line with changing research contexts, environmental conditions, and social dynamics.

The NARO Monitoring and Evaluation (M&E) Unit will provide orientation and capacity-building for the ESS Unit on effective planning, monitoring and evaluation practices. Reporting on ESS implementation will be integrated into NARO's standard reporting system to ensure consistency and alignment with institutional reporting procedures.

The following strategies shall apply to planning

- a) Integration of ESS in planning processes
- b) Develop Stakeholder engagement plan

5.3 Financing

A robust planning and financing framework is central to the ESS strategy implementation process. It ensures that ESS considerations are systematically incorporated at all stages of research design, execution, monitoring, and evaluation. Through careful planning and financing, environmental and social risks are identified, priorities are set, and mitigation measures are defined and implemented. Complementing this, a dedicated financing mechanism secures the financial and human resources needed to operationalize ESS interventions. Together, strategic planning and sustainable financing form the backbone of a proactive ESS approach that will enable NARO implement, a robust research system that promotes sustainability and responsive research and innovation.

To enhance this, NARO will provide a dedicated budget line for the implementation of this strategy alongside, other several financing options such as; mainstreaming ESS activities into research programs, leverage partnerships with donors, CSOs, and private sector to mobilize targeted funding, building on international safeguards standards to attract donor support, integrating ESS requirements in project proposals for co-financing. Accordingly, the implementation of this strategy is estimated at four billion two hundred forty million Shillings (4,240,000,000/=) only. The break down is indicated in **Annex 8**.

Summary of operational strategies

- a) Strengthen Resource allocation and operation support
- b) Integration of ESS financing into NARO plans
- c) Mobilize a diversity of finding sources

5.4 Monitoring and evaluation

Effective implementation of the NARO ESS Strategy requires a systematic approach to monitoring and evaluation (M&E). M&E will ensure that ESS objectives are consistently tracked, performance is measured, and lessons are derived to improve on existing and future interventions. It provides a mechanism for accountability, transparency, and adaptive management, enabling NARO to assess the effectiveness of safeguard measures, identify gaps, and take corrective actions in a timely manner.

Within the ESS framework, M&E is not only about compliance but also promoting continuous learning, enhancing social responsiveness and strengthening environmental stewardship across agricultural research activities. By embedding structured M&E processes, NARO will ensure that safeguard measures are implemented as intended, resources are used efficiently, and research outcomes contribute to sustainable and socially responsible agricultural development.

The ESS Unit together with M&E team guided by this strategy will lead in the planning of recommended activities, updating of results, indicator development and reporting of ESS performance.

Summary of implementation strategies

- a) Strengthen ESS Monitoring and Evaluation across research portfolio
- b) Integrate ESS monitoring into NARO wide M&E framework
- c) Establish ESS Data Collection System
- d) Support periodic reporting of ESS activities
- e) Establish communication channels for ESS

6. IMPLEMENTATION MECHANISMS

6.1 Enhance ESS Institutional Setup and Coordination Mechanisms

The implementation of the Environmental and Social Safeguards (ESS) Strategy within NARO will require a well-structured institutional setup to ensure efficiency, accountability, and alignment with the organization's goals. The institutional arrangement provides clarity on roles, responsibilities, and reporting lines of officers within the ESS Unit (ESS-U) as well as focal points at the Public Agricultural Research Institutes (PARIs).

6.2 Establish and operationalize the ESS Unit

At the coordination level, the Principal ESS Officer shall head the ESS Unit, serving as the lead coordinator of all ESS activities. This role ensures that safeguards are effectively integrated into NARO's research and development programs, while also linking with regulatory bodies, development partners, and other external stakeholders with NARO's research aspirations. The Principal Officer will also be responsible for resource mobilization, budget oversight, and reporting to NARO's Top Policy Management.

Supporting this leadership are two senior technical officers: The Senior Environmental Officer and the Senior Gender Officer. The Senior Environmental Officer will spearhead the mainstreaming of environmental concerns in research programs, projects and activities. On the other hand, the Gender Officer will ensure that the needs, aspirations and constraints of different social groups are integrated in research and technology development processes. Additionally, the officer shall be responsible for carrying out gender analyses, capacity-building initiatives, and developing gender-responsive strategies and action plans. Others responsibilities are spelt out in (Annex 5). Together, these officers will strengthen the technical capacity of NARO to address environmental, social, and gender issues associated with research.

At the institute level, the Environment and Gender Focal Point Persons (EGFPP) shall be designated within each PARI by the Director of Research (DoR). These focal persons, at the level of Research Officer, will serve as the first line of responsibility for implementing and monitoring ESS principles in day-to-day research activities. They will report to both the DoR and the ESS-U, ensuring upward and downward flow of information. They shall also proactively identify risks, prepare periodic reports, and advocate for resources to support safeguard integration at institute level. Additional responsibilities are spelt out in Annex 5. Through this coordination mechanism, the ESS Strategy will ensure that environmental and social safeguards are systematically mainstreamed into all agricultural research programs and activities under NARO.

6.3 Roles and Responsibilities

The successful implementation of the NARO Environmental and Social Safeguards (ESS) Strategy will require coordinated leadership, operational support, and active participation across all levels of the organization. At the apex, the Director General will provide the overall leadership and accountability for the implementation of the NARO Environmental and Social Safeguards (ESS) Strategy. The Deputy Director General in charge of Research Coordination will provide strategic guidance for the implementation of this strategy.

Implementation and Operational support will be led by the ESS Unit officers, working in close collaboration with other Directorates, including Corporate Services, Agricultural Technology Promotion, Human Resource, Audit, and Finance among others. The NARO Governing Council, management, and staff have shared responsibilities to ensure that ESS is fully integrated into research planning, implementation, and reporting. Each unit within NARO is expected to play a role in mainstreaming safeguards into its routine operations and outputs.

At Institute level, the Director of Research will be responsible for providing oversight and ensuring that the strategy's provisions are effectively implemented within their respective institutes plans and activities. To support the DoR, the ESS Focal Point Persons (ESS-FPPs) will coordinate the day-to-day execution of ESS activities at that level. Their work will be supported and backstopped by staff from the ESS Unit at the Secretariat, ensuring that research priorities are compliance with the established safeguards framework. The detailed responsibilities are presented in **Annex 5**.

The following strategies shall actualize implementation approach

- a) Integrate coordination mechanisms in the ESMS
- b) Develop and maintain ESS functional committees
- c) Define the roles and responsibilities

6.4 Implementation Approach

The implementation of this ESS Strategy will span five years, structured in phases to ensure both institutional strengthening and long-term sustainability. The first phase (covering the initial one and a half years) will focus on establishing and strengthening ESS management structures and mechanisms across NARO. During this phase, priority will be placed on institutional capacity building, development of operational tools, and popularization of the ESS Policy and Strategy among stakeholders.

The second phase will concentrate on consolidating and supporting these structures to ensure their effectiveness, functionality, and long-term sustainability. This will include embedding ESS into institutional systems, resource mobilization, continuous capacity strengthening, and performance monitoring. A mid-term review will be conducted after two and a half years to assess progress, identify emerging challenges, and re-align priorities where necessary. At the end of the five-year period, with support from the M&E Unit, a comprehensive impact evaluation will be undertaken to measure the effectiveness of the strategy in achieving its objectives.

The ESS unit shall be the central coordinating Unit for ESS matters. The ESS Unit will play a central role in coordinating implementation, working closely with NARO directorates, Public Agricultural Research Institutes (PARIs), and focal point persons to ensure alignment with the organization's strategic objectives.

A detailed ESS Strategy Implementation Plan (SIP) will be developed to operationalize the strategy. This plan will outline clear activities, timelines, responsibilities, and performance indicators for each strategic objective, providing a systematic guide for effective execution, monitoring, and reporting **Annex 3.**

6.5 Review of the Policy and strategy

This ESS Policy and Strategy shall undergo a comprehensive assessment and review every two and half years to ensure its continued relevance and effectiveness in addressing emerging environmental and social concerns within agricultural research system.

The following strategies shall aid operations

- a) Establish a Policy review process
- b) Conduct assessments for policy improvements

Annex 1: Ranked Results of SWOT Analysis

ANNEXES

SWOT CATEGORY	KEY POINTS	IMPACT LEVEL	STRATEGIC IMPLEMENTATION
Strength	i) Existence of an ESS Unit at Secretariat level to coordinate safeguard functions. ii) Pool of multidisciplinary scientists (environmentalists, agronomists, ecologists, sociologists, engineers, etc.) available for safeguard implementation. iii) Growing institutional awareness of gender and equity considerations in research programming. iv) Strong partnerships with line ministries, universities, and international research organizations. v) NARO's mandate and legal framework recognize environmental sustainability and social inclusivity. vi) National mandate as Uganda's apex body for agricultural research and innovation.	High	Provides a strong institutional base and expertise to mainstream ESS across research programs.

Weaknesses	i) Absence of a dedicated and comprehensive safeguard framework. ii) Limited staffing in the ESS Unit; no dedicated officers at institute level. iii) Limited technical capacity among staff and stakeholders to assess, monitor, and report ESS risks. iv) Inadequate funding for ESS activities. v) Weak coordination with regulatory bodies and stakeholders. vi) Low levels of stakeholder engagement at early research stages.	High	Requires prioritization of framework development, staffing, capacity building, and funding to ensure ESS implementation.
Opportunities	i) Training support from development partners and research networks. ii) Increasing national and global demand for sustainable and socially inclusive agricultural research. iii) Strong government support via Vision 2040, NDP IV, and SDGs. iv) Willingness of public, private, and development partners to collaborate. v) Expanding digital platforms for monitoring and community engagement. vi) Rising youth and women interest in agriculture and innovation.	Medium	Leverage partnerships, policy support, and digital tools to strengthen ESS integration and inclusive research programs.

Threats	i) Increasing climate-related risks (droughts, floods, pest outbreaks). ii) Environmental degradation: soil erosion, wetland encroachment, biodiversity loss. iii) Risk of marginalization of women, youth, and vulnerable groups; rising inequalities. iv) Potential resistance by staff to change; ESS seen as “add-on.” Focus on core technology development v) Limited financial resources and budget constraints.	High	ESS implementation may be undermined unless risk mitigation strategies, staff buy-in, and financial planning are strengthened
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Annex 2: Categorized Results of PESTEL Analysis

PESTEL FACTOR	OPPORTUNITIES FOR ESS	LEVEL	RISKS/CHALLENGES
Political	Strong government commitment (Vision 2040, NDP IV) to sustainability and social inclusion; supportive regulatory environment.	Internal	Changes in political priorities; weak enforcement at local level may affect compliance.
Economic	Funding from government, development partners, and private sector; incentives for climate-smart, inclusive research.	Internal external	Budget constraints within NARO; competing research priorities may limit ESS funding.
Social	Rising awareness of gender equity, youth inclusion, and social participation; community engagement enhances adoption.	Internal external	Social inequalities, marginalization of vulnerable groups, and low community participation can hinder ESS outcomes
Technological	Digital platforms for monitoring, reporting, and community engagement; innovations in climate-smart agriculture and waste management.	External internal	Limited access to technology or technical skills among staff and stakeholders may reduce ESS effectiveness.
Envntal	Integration of climate resilience, biodiversity conservation, and sustainable land management into research; alignment with societal demand for sustainability.	Internal external	Climate change impacts, soil degradation, wetland loss, and biodiversity decline can undermine research outputs and ESS goals.
Legal	National laws and international agreements provide a clear framework for compliance; supports risk mitigation.	Internal external	Complex legal requirements and weak compliance mechanisms may lead to regulatory gaps and institutional risks.

Annex 3: ESS Strategic Implementation Plan 2025/2026-2029/2030

STRATEGIC RESULT AREA	ACTIVITIES / INTERVENTIONS	PERFORMANCE INDICATORS	MID-TERM TARGETS (2.5 YEARS) 2028	END OF TERM TARGETS (5 YEARS) 2030
1. Compliance and legal alignment	Review and harmonize legal/policy requirements	No of research projects reviewed for legal alignment	70% of the projects aligned to ESS legal requirements	100% of the research projects aligned
	Develop policy inventory & checklists	No of checklists developed and disseminated	8 checklists developed	16 checklists developed and disseminated
			50% of institutes adopted compliance checklists	100% of institutes adopted compliance checklists
	Develop searchable database and upload all ESS policies, laws and standards.	No of databases developed and accessible	1 data base developed and operation 50 % of Staff accessing ESS information	Data base developed and operation 100 % of Staff accessing ESS information across PARIs
	Routine checks and technical backstopping	No of visits conducted	10 visits for technical backstopping 30 % staff equipped with skills in aligning projects with legal requirements	20 Routine checks and technical backstopping 90% of staff equipped with skills in aligning projects with legal requirements

Screen all research proposals for ESS risks	No of projects screened for ESS risks	70% of new research projects screened and aligned with ESS principles and standards	100% of research projects screened and aligned All high-risk projects with ESMPs
	Conduct SEAs, ESAs, ESMPs, ESAPs	At least 4 SEAs and 8 ESAs conducted. 1 ESAP conducted	100% SEAs, ESAs, ESMPs for high risk projects conducted and completed
	Conduct ES compliance assessments, audits and monitoring	No of projects with mitigation measures integrated	400 mitigation plans for category c projects developed and implemented
		No of ES compliance audits conducted	4 Certifications obtained for significant projects
		10 compliance audits conducted	20 ES compliance audits done across NARO
		2 Annual ESS compliance audits institutionalized across all PARIs	5 Annual ESS compliance audits institutionalized across all PARIs

STRATEGIC RESULT AREA	ACTIVITIES / INTERVENTIONS	PERFORMANCE INDICATORS	MID-TERM TARGETS (2.5 YEARS) 2028	END OF TERM TARGETS (5 YEARS) 2030
2. Sustainable research practices	Integrate ESS in research project design and implementation	Percentage research programs, projects and activities integrated ESS principles and standards	50% of research projects include sustainability measures in development processes	90% of research projects integrate sustainability
		No of projects adopting sustainable practices	100 research project adopting sustainable practices	200 research of projects adopting sustainable practices
	Promote resource efficiency, waste reduction	Number of sustainability protocols developed	5 operational protocols developed	5 protocols established and operational across PARIs
	Develop protocols/ procedures for waste/chemical handling	%ge reduction in waste generation	30% reduction in hazardous waste 30% of PARIs apply waste management procedures	80% reduction in lab/field waste and stronger biodiversity outcomes All PARIs apply waste management protocols
	Train staff on ESS principles and sustainable practices	No of staff trained on sustainable practices	200 staff trained on sustainable practices	500 staff trained on sustainable practices

STRATEGIC RESULT AREA	ACTIVITIES / INTERVENTIONS	PERFORMANCE INDICATORS	MID-TERM TARGETS (2.5 YEARS) 2028	END OF TERM TARGETS (5 YEARS) 2030
3. Strengthened institutional capacity of NARO for effective integration of ESS in research agenda	Establish a functional ESS structure within NARO	Established ESS Unit at NARO SEC	Functional ESS Unit with fledged officers	Fully fledged , equipped and functional ESS office resident at NARO Secretariat
		Established ESS coordination office at PARI level with Focal point persons	8 ESS coordination offices at	16 ESS coordination offices at 16 PARIs established and functional
		ESS Focal points established and persons appointed at PARI level	At least 08 PARIs with 08 ESS-FPP appointed and functional	16 ESS-FPP appointed and functional ESS focal persons in at least 50% of PARIs
		No of ESS coordination committees established	01 committees established and working at each institute	01 committees established and operational at each PARI
	Develop SOPs and templates	No of SOPs/ templates developed	5-SOPs templates developed and disseminated	10 SOPs template developed and disseminated and fully in use

	Build technical skill and capacity ESS screening, monitoring and mainstreaming ESS in research system	No of needs assessments conducted	15 needs assessments conducted	30 needs assessments done for different training programs
	Mentorship programs to staff on ESS in agricultural research	No of refresher trainings for ESS integration conducted	10 trainings on ESS mainstreaming	20 trainings on ESS mainstreaming and risk and impact evaluations
	Develop an ESMIS for tracking safeguards	5 mentorship programs ESS principles and standards	50% of staff trained ESMIS designed and piloted	10 mentorship programs on ESS principles and standards done
	Conduct gender needs assessment across social groups	Number of staff trained on ESS Functionality of ESMIS	01 ESMIS developed and 600 staff trained in use of ESMIS	90% of staff trained in ESMIS -fully operational and integrated
4. Enhanced Gender & Equity	Conduct gender analysis in all projects	No of needs assessment conducted for various NARO research programs	20 assessment conducted	50 assessments for about 70 research programs across NARO
	Develop gender-responsive tools & guidelines	Percentage of projects with gender analysis	50% of projects integrate gender analysis	100% of projects integrate gender analysis
		No of gender responsive tools developed and disseminated for GDD	2 gender responsive tools developed and disseminated for GDD	05 gender responsive tools developed and disseminated for GDD across PARIs

	Train staff on Gender Equity and social inclusion (GESI)	No of GESI trainings conducted No of staff trained	8 trainings across PARIs 250 staff participated	16 trainings conducted 500 staff trained across PARIs
	Monitor the use of gender-disaggregated data innovation development processes	Number of monitoring conducted No of women, youth, PWDs engaged in research	20 monitoring conducted Availability of GDD At least 30% women and youth and PWDs -access to innovations	40 monitoring conducted across PARIs At least 50% women/youth/PWD participation GDD reported annually
	Integrate ESS in NARO work plans and budgets	Percentage of NARO DRC budget allocated to ESS	NARO budget allocated to ESS	Apportion of NARO - DRC budget allocated to ESS
5. Enhanced Resource Mobilization	Mainstream ESS into project proposals	No of proposals with ESS budget lines	50% of proposals include ESS costs	100% of proposals with ESS costs
	Write grant proposals with ESS focus	No of grant proposals drafted & funded	2 proposal drafted and funded	5 proposals with ESS focus drafted and funded
	Build donor/partner collaborations	No of partnerships for ESS external funding mobilized	5 donor-funded ESS projects mobilized and granted	ESS resource pool established with donor/partner commitments
	Develop ESS-resource mobilization plan	No of plans developed and adopted	1 resource mobilization plan developed	Plan developed and implemented

STRATEGIC RESULT AREA	ACTIVITIES / INTERVENTIONS	PERFORMANCE INDICATORS	MID-TERM TARGETS (2.5 YEARS) 2028	END OF TERM TARGETS (5 YEARS) 2030
6. Enhanced Environmental & Social Management System (ESMS)	Develop ESMF and SOPs	Existence of NARO ESMF	Operational ESMF across PARIs	Fully functional ESMS in NARO
	Establish ESS Committees & focal points	No of ESS Committees and focal points established and functional	1 Committee at Sec functional and each PARI with 1 FPP at FPP at	Fully function committees with clear terms of reference
	Develop risk screening tools & reporting templates	No of SOPs, checklists, templates developed	5 SOPs/checklists in place	10 SOPs/checklists developed disseminated and operational
	Conduct trainings & sensitization	No of trainings and sensitizations conducted	10 training done	20 training done across PARIs
	Establish safeguards monitoring framework and Integrate ESS into NARO reporting	No of projects monitored under ESMS Inclusion of ESS in annual reports	50% of PARIs ESS reporting integrated in NARO mid-term review	100% of PARIs report on ESS on annual basis. ESS indicators integrated in the M&E monitoring tool

Annex 4: An Inventory of the applicable Law and Policies relevant to the ESS strategy

REGULATORY FRAMEWORK	APPLICABLE SECTIONS
The Constitution of the Republic of Uganda	Article 17; 17 and 39 and State policy XXVII (27)
The National Environment Act (2019)	Section 2, 4(3), 5, 21, 61 and Section 115
The NAR Act (2005) CAP 197 of Laws of Uganda	Section 3(a) and (b), and 4(b)
The Land Act (1998)	Section 27
The Occupational Safety & Health Act (2006)	Section 14, 19, and 21
OHS ACT 2006	Section 14, 19, and 21
Equal Opportunities Commission Act (2007)	Section 14(1);
Prevention of Human Trafficking Act (2019)	Section 6
Children's Act (1997)	Amended 2016 Section 8
the National Environment (Waste Management) Regulations (2020)	Section 96
Climate Change Act (2021)	Chapter 1 &2
Gender Policy (2007)	Section 5.1
National Agricultural Research Policy (2003)	Section 1-3
National Child Labour Policy (2006)	Section 1-8
NARO Grants Policy (2025)	Section 4
Agriculture Policy (2013)	Section 4.12 and 4.13
NARO Strategic Management Plan (2018/19/2027-28)	Situation Analysis
NARO Guidelines for access and benefit sharing of Genetic Resources	General
NARO Human Resource Manual (2009)	General

NDP VI National Development Plan IV for Uganda	Chapter 12
, the Green Growth Development Strategy for Uganda 2017/2028-2030/2031.	Section 2.3
The Uganda National Council for Science and Technology Act (2000)	Section 4
Vision 2040 for Uganda	Section 5.7 and 5.8.
The East African Community Environmental Policy (EACEP)	Section 12
African Union Agenda 2063	Goal 7
EAC Protocol on Environment and Natural Resources Management	General
African Convention on the Conservation of Nature and Natural Resources	General
UN-SDGs Goals	1, 2, 5, 10, 13 ,14 and 15
The Convention on Biological Diversity (CBD (2011)	Article 6, 8, 9, 10 and 12
the Nagoya Protocol (2011)	Article 1,6,8,9 and 22
ISO 14001 (2015)	General
SBSTTA	Article 25
World Bank ESS (2016).	Standard 1-10
IFC	Standard 1-10
Protection of whistleblower Act 2010	Part V) Section 9 (1-6)

Annex 5: Roles/ functions of the Proposed ESS Unit Officers and Focal Persons

OFFICER / FOCAL PERSON	KEY ROLES AND FUNCTIONS
Principal ESS Officer	• Lead and manage the ESS Unit (ESS-U), ensuring smooth operations aligned with NARO's agricultural research agenda. • Support and administer ESS policy implementation across NARO. • Develop and enforce standardized procedures and protocols for ESS policy implementation. • Coordinate with NARO directorates (including PARIs) on ESS matters. • Liaise with external stakeholders, regulatory bodies, donors, and international partners on ESS issues. • Prepare, review, and manage budgets for the unit, ensuring accountability • Compile administrative reports on ESS for Top Policy Management. • Oversee, supervise, and appraise ESS-U staff. • Conduct ESIA's, ESMPs, ESMMPs, ESAPs, project screening etc • Risk assessments and hazard identification in agricultural research
Senior Environmental Officer	• Develop and implement environmental policies, strategies, and procedures aligned with ESS framework. • Mainstream environment and safety in agricultural research programs and projects. • Conduct environmental screening for agricultural research infrastructures • Conduct Environmental Impact Assessments (EIAs) for proposed research projects. • Carry out risk assessments and prepare contingency plans for environmental emergencies.

	• Review Environmental Assessments for compliance with standards. • Prepare plans and budgets for ESS implementation. • Develop training materials and conduct ESS capacity building. • Coordinate with national, regional, and international bodies on environment, climate change, and biodiversity conventions.
Senior Gender Officer	• Develop and implement gender policies and strategies in agricultural research. • Integrate gender and diversity considerations into research activities, projects, and technology development. • Conduct gender analyses to assess impacts of research on different social groups. • Develop capacity-building training programs on gender and diversity. • Design gender-related projects and mobilize resources. • Conduct social risk assessments to identify gender-related risks and mitigation plans. • Develop gender strategies and action plans for mainstreaming in all agricultural research. • Collaborate with MDAs, international bodies, and communities on gender matters in agricultural research.
Environment and Gender Focal Point Persons at PARIs	• Ensure all research activities at PARI comply with ESS policy • Integrate ESS principles and standards into day-to-day research activities. • Prepare reports on ESS implementation at PARI. • Act as intermediary between PARI and ESS-U at secretariat • Identify and report potential environmental and social risks in PARI • Advocate for resources to support ESS policy implementation at PARI level.

Annex 6: Key Stakeholders and their Responsibilities in the NARO ESS Strategy

CATEGORY	SPECIFIC ENTITIES (EXAMPLES)	ROLES AND RESPONSIBILITIES IN ESS STRATEGY IMPLEMENTATION
Farmers and Producers	Smallholder Farmers	• Adopt environmentally sustainable and socially inclusive farming practices. • Provide feedback on ESS impacts at community level. • Participate in ESS awareness, training, and demonstration activities. • Act as champions in showcasing research innovations using socially acceptable practices
Community Members	Local households vulnerable groups	• Participate in consultations and needs assessments. • Report ESS-related grievances and concerns related agricultural research. • Benefit from safeguards (e.g., inclusion, risk reduction).
Extension and Advisory Services	NAADS Secretariat District, Production & Marketing Departments, Parish Development Model (PDM) structures	• Integrate ESS awareness into extension packages. • Provide technical guidance on sustainable agricultural research practices. • Monitor compliance with ESS safeguards at community level.
Government Institutions (MDAs)	MAAIF, NEMA, MGLSD, MWE etc	• Policy support, alignment with national agriculture programs, oversight of ESS in agricultural research. • Ensure environmental compliance and EIA processes.

		• Ensure gender equality, social inclusion, and labor standards. • Provide technical guidance on water, forestry, and climate change safeguards. • Oversee occupational health and safety in research institutions. • Set standards for safe use of agro-inputs and products. • Provide financial support to ESS activities
Academia	Universities, Tertiary institutions, Colleges etc Secondary school, Vocational training centers	• Collaborate on research addressing environmental and social challenges. • Mainstream ESS awareness in curricula. • Provide capacity-building and training on ESS. • Generate evidence to inform ESS policy and practice. • Produce skilled graduates with ESS-oriented knowledge
Policy and Advocacy Actors	Civil-Society Organizations (CSOs) NGOs	• Advocate for strong ESS integration in agricultural research. • Monitor compliance and hold institutions accountable. • Mobilize communities and disseminate ESS knowledge.
Scientists and Non-Scientists	NARO scientists	• Integrate ESS safeguards into research designs. Implement ESS plans and mitigation measures Adhere to ESS standards and principles • Conduct ESS training to stakeholders • Document and share lessons learned on ESS practices.

Partners and Donors	Internal external	• Provide funding and technical assistance for ESS mainstreaming. • Support capacity development and technology transfer. • Ensure safeguards compliance in funded projects. • Enforce compliance to ESS compliance and standards
Private Sector	Agro-input companies Agri-business enterprises Technology companies	• Promote and supply environmentally safe technologies and products. • Adopt corporate social responsibility aligned with ESS safeguards. • Partner with NARO in piloting innovations that respect to ESS principles.
Local Government	District Local Governments Sub-County and Parish Councils	• Mainstream Sustainability LG agricultural initiatives. • Train community on Natural resource use planning and management • Monitor and enforce ESS safeguards at grassroots level. • Mobilize communities for ESS awareness and participation.
Research Institutions	NARO Institutes	Integrate ESS in national and institutional policies and research projects. Build internal systems for waste management, social inclusivity, and risk mitigation. Report on ESS performance indicators.

Annex 7: ESS Strategy Task Force and Stakeholders

No.	NAME	DESIGNATION
1.	Dr. Yona Baguma	Director General
2.	Dr. Swidiq Mugerwa (Chairperson)	Deputy Director General -Research Coordination
3.	Dr. Stevens Kisaka	Director Cooperate Services
4.	Mr. Mark Seremba	Director Human resources
5.	Dr. Kasim Sadik	Director Technology promotion
6.	Dr. Juventine Boaz Odoi	Research Officer -NaFORRI
7.	Dr. Hillary Agaba	Principal Grants Officer-NARO SEC
8.	Dr. Barbara Zawedde	Office of Deputy Director General ATP
9.	Dr. Nankya Eseri	Senior Research Officer-NARL
10.	Dr. Damalie Akwango	Principal Research Officer-M&E
11.	Mr. Abbey SSeguya	Principal Planner-NARO SEC
12.	Mr. Basaliza Edigar (Secretary)	Senior Environment and Social Safeguards Officer
13.	Mr. Denis Ashaba	Agroforestry Scientist-KARZARDI
14.	Ms. Jane Kugonza	Outreach Officer-ATP-NARO SEC
15.	Ms. Angela Kakooza	PME Officer-NARO SEC
16.	Dr. Pricilla Nyadoi	Uganda Martyrs University
17.	Dr. Nagasha Judith	Kyambogo University
18.	Dr. Musinguzi Simon Peter	Uganda Martyrs University
19.	Dr. Masaba Sowedi	Busitema University
20.	Dr. Pricilla Nyadoi	Uganda Martyrs University
21.	Dr. Aijuka Sarah	National Environmental Management Authority
22.	Mr. Wilbert Ikilia	National Environmental Management Authority

Annex 8: Budget estimates for the implementation of ESS Strategy

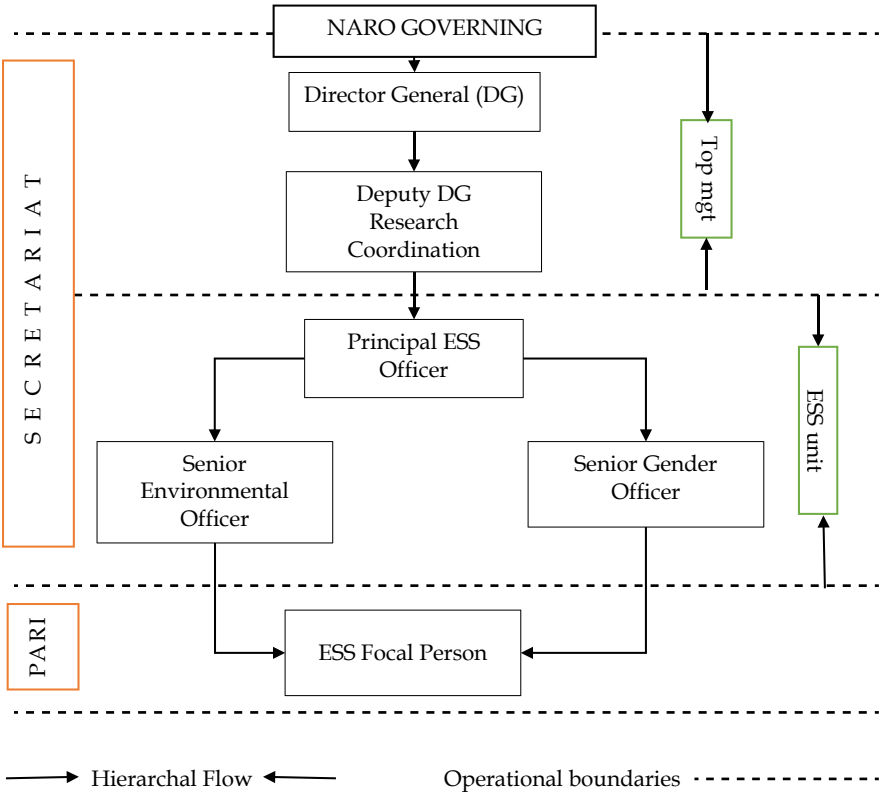
ESTIMATED BUDGET FOR THE IMPLEMENTATION OF THE ESS STRATEGY (2025-2030)						
Result area	Activities / Sub-Activities	Amount (000 UGX)				
Result Area 1: Enhanced Compliance and legal alignment of agricultural research programs, projects and activities to environmental and social frameworks	Compliance & Legal Alignment	Y1	Y2	Y3	Y4	Y5
	Review & harmonize legal/policy requirements to ESS	10	10	10	10	10
	Develop searchable database and upload all ESS policies, laws and standards	20	10	10	10	10
	Develop policy inventory & checklists	10	10	10	10	10
	Screen research proposals for ESS risks and impacts	20	20	20	20	20
	Conduct screening, baseline surveys, SEAs, ESIA's, ESMPs, ESAPs	20	20	20	20	20
	Facilitate stake holder consultation and engagements in research processes	10	10	10	10	10
	Conduct compliance assessments & monitoring audits	40	40	40	40	40
	Routine checks and technical backstopping	30	30	30	30	30
	Subtotal	160	150	150	150	150

Result Area 2: Sustainable research practices that minimize negative environmental and social impacts associated with research processes		Y1	Y2	Y3	Y4	Y5
Sustainable Research Practices and conservation of ecosystems	Integrate ESS in project design & implementation	10	10	10	10	10
	Promote resource efficiency & waste reduction	30	30	30	30	30
	Rehabilitation of degraded sections of ecosystem on NARO land	20	30	30	30	30
	Control and management of pollution from research activities	30	30	30	30	30
	Develop waste/chemical handling protocols	30	30	30	30	30
	Train staff on ESS principles & sustainability	40	40	40	40	40
	Soil and water conservation efforts to maintain agro-biodiversity	20	20	20	20	20
Subtotal		180	190	190	190	190
Result Area 3: Strengthened institutional capacity for effective implementation of ESS across the research portfolio						
3. Institutional Capacity Strengthening	Establish and operationalize ESS Unit at Secretariat	30	0	0	0	0
	Provide required office equipment's and operational tools	20	20	20	20	20
	Establish and operationalize ESS coordination offices at PARIs	30	0	0	0	0
	Develop SOPs & templates	20	20	20	20	20

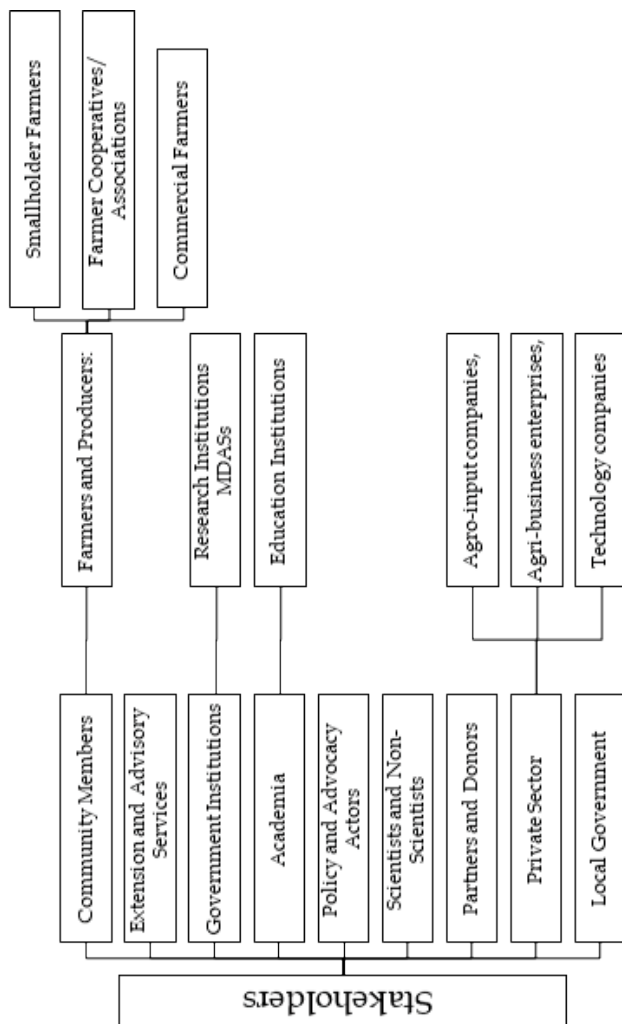
		Build technical skills & capacity (training, mentorship)	30	30	30	20	20	20
		Develop & operationalize ESSMIS across NARO	40	20	20	30	30	20
	Subtotal		170	90	90	90	90	80
	Result Area 4: Enhanced Gender, Equity in Research planning, implementation, and benefit-sharing							
4. Gender & Equity Mainstreaming		Conduct gender needs assessments for all research undertakings	30	10	10	10	10	10
		Conduct gender reviews and analysis in projects proposals	30	30	30	30	30	30
		Develop gender-responsive tools & guidelines	10	10	10	10	10	10
		Support Gender planning, budgeting and decision making in research processes	40	40	30	30	30	30
		Train staff on Gender & Social Inclusion in research processes	20	30	20	20	20	20
		Monitor gender-disaggregated data use in design of research innovation	30	30	30	30	30	30
	Subtotal		160	150	120	130	130	130

Result Area 5: Enhanced Resource Mobilization to support ESS activities across NARO Research Programs, projects and activities		Y1	Y2	Y3	Y4	Y5
5. Resource Mobilization	Integrate ESS in NARO budgets & work plans	30	30	30	30	30
	Mainstream ESS into research proposals and provide budget lines	20	20	20	20	20
	Write ESS-focused grant proposals	30	20	30	30	30
	Build donor/partner collaborations to soloist operational funds	20	20	20	20	20
	Develop and implement ESS resource mobilization plan	80	20	10	10	10
	Technical support visits for resource mobilization and inclusive planning	20	20	20	20	20
	Subtotal	200	130	130	130	130
Result Area 6: Enhanced Environment and Social Management System (ESMS) across NARO						
6. Enhanced ESMS	Conduct pilot surveys, and assessments for the ESMS	40	0	0	0	0
	Develop ESMF & SOPs	40	10	10	10	10
	Establish ESS Committees & Focal Points	40	10	10	10	10
	Develop risk screening tools & templates	10	15	15	15	15
	Conduct trainings & sensitizations	40	40	40	40	40
	Establish safeguards monitoring & integrate in reporting	40	30	30	30	30
	Subtotal	190	105	105	105	105
TOTAL		4,240,000,000				

Annex 9: ESS Structure and Network



Annex 10: Key stakeholders of ESS Strategy



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