

FORUM FOR AGRICULTURAL



RESEARCH IN AFRICA

ENVIRONMENTAL POLICY

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ABBREVIATIONS AND ACRONYMS

AU	African Union
AU-NEPAD	AU New Partnership for Africa's Development
CAADP	Comprehensive Africa Agriculture Development Programme
CIDA	Canadian International Development Agency
EAP	Environmental Action Plan
EIA	Environmental Impact Assessment
FAAP	Framework for African Agricultural Productivity
FARA	Forum for Agricultural Research in Africa
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
MDG	Millennium Development Goal
MTOP	Medium Term and Operational Plan
NARI	National Agricultural Research Institute
NARS	National Agricultural Research System
NEPAD	New Partnership for Africa's Development
NSF	Networking Support Function
R&D	Research and Development
SEA	Strategic Environmental Assessment
SRO	Sub-Regional Organisation
UN	United Nations

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1.0 BACKGROUND

The Forum for Agricultural Research in Africa (**FARA**) is the apex organization for advancing agricultural research in Africa by assisting in the coordination and dissemination of such research.

FARA does not carry out research. As its name implies, FARA is a forum of stakeholders in agricultural research and development in Africa. The stakeholders comprise of research institutions, research systems, farmers groups, private sector and government institutions, NGOs and donors.

FARA is committed to enabling African agriculture to reach its full potential and achieve the Millennium Development Goals, especially MDG 1 (eradicate extreme poverty and hunger) and MDG 7 (ensure environmental sustainability) (MTOP – 2008-2012).

FARA's mandate is “to enhance and add value to the effectiveness and efficiency of agricultural research systems in Africa that will contribute to agricultural development, economic growth and sustainable use of natural resources.”

The mandate of FARA has been endorsed the African Union (AU) and the New Partnership for Africa's Development (**NEPAD**) through formal agreements. FARA has also been given responsibility by NEPAD for leading Pillar 4 of the Comprehensive Africa Agricultural Development Program (**CAADP**), which is: agricultural research, technology dissemination and adoption.

FARA has developed its Strategic Plan – *Enhancing African Agricultural Innovation Capacity – Strategic Plan (2007 – 2016)* with an accompanying Medium Term and Operational Plan (**MTOP 2008 – 2012**) for advancing the Strategic Plan.

In addition, FARA has also elaborated the Framework for African Agricultural Productivity (**FAAP**) which consolidates the results of various broad consultative processes among stakeholders in Africa (including development partners) into a tool for implementing the CAADP Pillar 4.

1.1 The Need for FARA's Environmental Policy

FARA recognises that agriculture is essentially a natural resource based activity and that the direct and indirect interrelationships between agriculture and the environment, including adverse and beneficial impacts, are generally known and continue to be the focus of research and development as well as ongoing debates and discussions on sustainable development.

The WORLD DEVELOPMENT REPORT 2008 states:

“Since the 1992 Earth Summit in Rio, it is generally accepted that the agriculture and environment agendas are inseparable. Degradation of natural resources undermines the basis for agricultural production and increases vulnerability to risk, imposing high economic losses from unsustainable use of natural resources. The agriculture-for-development agenda will not succeed without more sustainable use of natural resources - water, forests, soil conservation, genetically diverse crops and animal varieties, and other ecosystem services. At the same time, agriculture is often the main entry point for interventions aimed at environmental protection. It is the main user of land and water, a major source of greenhouse gas emissions, and the main cause of conversion of natural ecosystems and loss of biodiversity. The intricate links between the agriculture and environment agendas require an integrated policy approach”¹.

The challenge for African agriculture and agricultural research is how to significantly improve agricultural productivity in reducing poverty and provide health benefits while ensuring the maintenance of the quality of the environmental resources needed for socio-economic development. This challenge has been identified by NEPAD in the Action Plan for the Environment Initiative and various actions have been outlined for addressing it.

In practice, FARA advocates limiting negative environmental impacts and encourages sustainable utilization of natural resources. In addition, the requirement for Environmental Impact Assessment (EIA) is routinely built into all FARA and SRO programs and projects.

While FARA requires that EIA is carried out for initiatives under its programs, the Strategic Environmental Assessment (SEA) of FARA carried out by CIDA notes that *“as an institution*

¹ UN WORLD DEVELOPMENT REPORT 2008 – “Chapter 8 Making Agricultural Systems More Environmentally Sustainable”

mandated to coordinate and facilitate the implementation of agricultural research programs, FARA's work will affect the environment. In better coordinating agricultural research across Africa, FARA's activities will play a positive role in emphasizing the inclusion of environmental considerations in all of its programs and raising the awareness of environmental concerns in agricultural research across Africa. Negative effects may include the development of non-environmentally friendly technologies, increased land clearing and decrease in innovation of environmentally friendly agricultural practices”².

Although FARA does not have a sustainable development strategy ratified by its General Assembly, FARA's guiding policies are endorsed by the African Union and they include environmental considerations.

It is also noted that FARA's Strategic Plan addresses the issue of agriculture and environment as part of the cross-cutting themes. Specifically, Part 2 of the FARA Strategic Plan Companion Document discusses the 'agriculture-environment' agenda extensively and provides recommendations which form the basis for elaborating the Environmental Policy and Action Plan.

Additionally, among the key principles reflected in the best practices and guidelines of the FAAP is that of the “explicit incorporation of sustainability criteria” in the evaluation of public investments in agricultural productivity and innovation programme (fiscal, economic, social and environmental)³.

However, notwithstanding the efforts discussed above, FARA has not as yet defined a specific environmental policy tailored to cover its range of activities to ensure that environmental considerations are mainstreamed in FARA's operations.

It is therefore expected that the elaboration of the following FARA Environmental Policy and Action Plan will enable FARA to be more strategic and consistent in integrating and promoting sustainable development in its activities.

² Strategic Environmental Assessment Forum for Agriculture in Africa (FARA II) Project Number: A-033092

³ FARA ANNUAL REPORT 2006

The participatory processes utilised in developing this Environmental Policy and Action Plan ensures that FARA stakeholders have ownership of both the process and content --and are therefore committed to its implementation.

2.0 OUTLINE OF ENVIRONMENTAL POLICY

As emphasised in the preceding discussions, FARA's Environmental Policy is derived mainly from the issues raised and recommendations made in the comprehensive Environmental Assessment carried out as part of the process of developing the FARA Strategic Plan (2007-2016). The Policy is structured in a logical sequence and begins by first identifying the current main **issues of concern** as well as **opportunities for improvement** relating to agriculture and the environment in Africa. This is followed by outlining the factors contributing to the change including the drivers of change and other underlying factors. Based on these, the Policy statements reflecting FARA's vision for sustainable agriculture are presented. Policy Objectives, Implementation Arrangements, Monitoring and Evaluation and Responsibilities are also incorporated.

2.1 Relevant Issues of Environmental Concern:

FARA's assessment of the state of the environment as related to agriculture and natural resource management in Africa identifies the key issues of concern as follows:

- **Land:** The greater portion of available land for agriculture in Africa is made up of drylands in the semi-arid and arid regions and suffers moderate or severe degradation. The causes of land degradation are noted to include overgrazing, deforestation and overexploitation for fuel wood and various unsustainable practices related to agriculture and pastoralism (slash and burn on a very large scale).
- **Soil Fertility:** Nearly 90% of land in sub-Saharan Africa is covered by nutrient-impooverished granites, basement sediments and sand; thus resulting in a condition of generally inherently low soil fertility. This situation is further worsened by continual net nutrient losses through erosion, leaching and harvesting of produce.
- **Water and Water Scarcity:** Agriculture is the largest user of water in Africa, with annual fresh water extraction for agriculture exceeding 70% in most countries. Most countries in Africa are vulnerable to water stress due to the low level of exploitation of the available water resources. Many large scale irrigation systems

which were developed to boost productivity have turned out to be inefficient and contribute to serious environmental problems like soil salinization and water logging.

- **Climate Change:** Slash and burn and deforestation on a large scale for agriculture and pasture lands are transforming fallowed lands, pristine areas and natural ecosystems, and are the main contributor to greenhouse gas emissions in Africa. Often dismissed, Africa's contribution to global greenhouse gas emissions is relatively low (Africa contributes 3.6% of global CO₂); however, these practices are contributing to the severe degradation of local and regional ecosystems. Furthermore, noticeable effects of climate change are occurring in Africa in recent years. These include significant reductions in rainfall, decreasing river flows and continent-wide temperature rise of about 0.5°C over the past 100 years. Various models used to predict likely global effects of climate change indicate a tendency towards greater extremes for Africa. This poses major challenges for African agriculture as many African countries lack adequate adaptive capacity and coping mechanisms and will therefore remain highly vulnerable to the adverse effects of climate change.
- **Biodiversity:** Africa generally has a rich biodiversity consisting of large varieties of plant, mammal and bird species⁴. Specifically, Agro-biodiversity includes all the plants, trees, animals, insects, microbes, pathogens and fungi found in agricultural systems. Generally agriculture is seen as destructive to bio-diversity, especially in systems using intensification where herbicides and pesticides degrade ecosystems and reduce bio-diversity and in traditional systems using slash and burn practice on a large scale (pastoralism and subsistence agriculture). A further concern relates to wetlands which are known to be rich in bio-diversity, providing many useful products and ecosystem functions; but are often regarded as wastelands or habitats for pests and disease vectors. Converting wetlands to agricultural use leads to bio-diversity losses.

2.2 Opportunities for Improving Environment and Ecosystem Health

FARA's Environmental Assessment also identifies a number of opportunities for agriculture/agricultural activities to improve the environment and ecosystem health, provide valuable environmental services as well as to enhance livelihoods and reduce poverty. Some of the opportunities identified include:

⁴ Africa has more than 50,000 known plant species, 1500 species of birds and 1000 mammals (NEPAD, 2003)

- Implementing soil fertility management strategies that promote the selective application of animal manure (especially at the village farms level) to ensure good yields in limited areas and save labour.
- Appropriately combining the use of organic and mineral inputs to contribute to improving the soil structure, reduce losses and improve fertilizer nutrient absorption by crops.
- Adopting the use of small-scale water harvesting techniques (e.g. using grass bunds) to increase productivity of rain-fed lands and reduce erosion and losses which will benefit poor farmers and help reduce poverty, especially where this is supplemented with organic pest control and soil fertility inputs.
- Promoting some of the current developments in ecologically sound farming practices such as integrated pest management, multi-cropping, etc that can increase biodiversity in cultivated systems. These practices apply agro-ecological principles to reduce dependence on external inputs (e.g. fertilizers and pesticides) and thereby protect ecosystem services which also have beneficial effects on crop productivity.

2.3 Drivers of Environmental Change in Agricultural systems

The changes to the state of the environment, including the condition of natural resources and the environmental services derived from them do not just happen but are the result of actions of 'drivers' – both direct and indirect.

The identified direct 'drivers' are:

- Farmer management – mainly in the choice of production systems (i.e. intensive or extensive) and related practices,
- Global Climate change effects which directly affect the condition of natural resources.

The indirect 'drivers' are:

- Farmer assets (access to land and labour)
- Farmer health, increasingly threatened by the spread of HIV/AIDS which affects especially the women who form the bulk of rural farmers in Africa.

- Farmer knowledge, perceptions and degree of organization – particularly the extent to which indigenous/local knowledge is brought to bear on managing the natural resources.
- Access to markets
- Access to technologies and information

In addition to these ‘drivers’ of change are the underlying factors that also cause environmental change and these have been identified to include:

- Demographics
- Economic growth
- Policy and macro-economic environment

2.4 Policy Statements:

FARA recognises the importance of the environment as a building block for sustainable agricultural development as reflected in the objectives and targets of the World Summit on Sustainable Development Johannesburg Plan of Implementation (UN 2002) and the New Partnership for Africa’s Development and its Environmental Action Plan (NEPAD, 2003).

Accordingly, FARA is committed to ensuring that growth in Africa’s agricultural productivity is achieved through sustainable practices rather than overexploitation of resources or adoption and use of technologies that harm the environment.

FARA will emphasise new methodologies, based on agro-ecologically sound principles that would lead to sound decision making at field, farm and community level utilising indigenous and/or scientific knowledge.

FARA is organised as a form of Multi-Stakeholder Partnership which brings together the diverse resources and competencies of the various partners to work collaboratively to achieve mutually beneficial outcomes.

FARA will seek to use its multi-stakeholder platform, operating on the principle of subsidiarity, to promote the adoption of approaches at all levels aimed at addressing the

identified drivers of environmental change as well as dealing with the related underlying policy and socio-economic factors.

Among these approaches are those that would promote:

- Increasing yields on existing farmlands so as to avoid bringing more natural ecosystems into cultivation;
- Enhancing nutrient-use efficiency by crops to boost productivity, increase profitability and benefit the environment, taking into consideration the relevant socio-economic conditions of the farmers;
- Improving water-use efficiency through various appropriately-targeted water harvesting techniques;
- Utilising integrated pest and disease management systems that are based on ecologically sound methodologies;
- Empowering farmers to adopt agroforestry and mixed farming systems such as alley-cropping, (agricultural crop grown simultaneously with a long-term tree crop), sylvopastoral systems, crop-livestock or crop-fish pond or other forms of diversification to boost farmer income and enhance livelihoods;
- Adopting practices aimed at enabling farmers to better cope with climate risk, including transfer of knowledge, response and coping mechanisms and also policy recommendations such as providing increased economic buffer capacity;
- Mobilising and equipping African farmers and farmers' organisations to be key players in sound environmental stewardship.

2.4.1 Policy Objectives:

FARA's Environmental Policy aims to:

- Project FARA as a key partner among continent-wide institutions championing the drive towards sustainable development in Africa;
- Advocate changes in agricultural research and development in Africa in order to accelerate agricultural innovation and productivity while protecting the environment;
- Promote creation of knowledge and widespread information sharing and awareness raising among all FARA stakeholders on environmental issues at the local, national, continental and global level;

- Facilitate research and development and to aid implementation of sustainable agricultural practices that meet the needs of the present and future generations;
- Advocate a progressive “greening approach” through conservation and efficiency of resource use within FARA’s secretariat and among SROs and other stakeholders.

2.4.2 Policy Implementation:

Environmental Sustainability cuts across all the networking support functions and therefore FARA’s Environmental Policy will be implemented through an **Environmental Action Plan**⁵ (attached to this policy) developed along and in line with the activities of the 5 Networking Support Functions (NSF) as presented in the MTOP 2008-2012⁶ namely:

- **NSF 1 - Advocacy and resource mobilisation** – to support the Sub-regional organisations (SROs) and their National Agricultural Research Systems (NARS), and other regional and continental agricultural research and development stakeholders, in establishing appropriate institutional and organisational arrangements for regional agricultural research and development (including conducive policy, research infrastructure and financial environments).

NSF 1 will focus on mobilising greater resources from both public and private sectors to support more sustainable agricultural systems.

- **NSF 2 - Access to knowledge and technologies** – to empower researchers and users of research products by providing them with access to information, learning opportunities, and new technologies. This is being achieved through mechanisms for information exchange, mechanisms for the exchange of technology-based innovations between sub-regions, and decision making tools designed to transform information into knowledge for innovation.

NSF 2 will emphasise on facilitating access to knowledge and technologies to better manage environmental issues affecting agriculture and related natural resources.

⁵ The main focus of each NSF (*in italics*) is used in deriving the Environmental Action Plan

⁶ FARA Secretariat Medium-Term and Operational Plan 2008-2012

- **NSF 3 - Regional policies and markets** – to promote and facilitate policy analyses and market research. This provides policy makers, particularly at the continental ministerial level, with evidence-based options. It also provides information that empower Africa’s delegates in international trade and environmental treaty negotiations, and improve broad-based inter and intra-regional markets.

NSF 3 will focus on influencing the policy agenda at regional level and as appropriate, national levels and also exploring the development of market incentives for investments in environmental services.

- **NSF 4 - Capacity strengthening** – to ensure that Africa has the human and institutional capacity in public, private and civil society organisations and institutions for agricultural innovation that is needed to ensure the achievement of improved and broad-based agricultural productivity, competitiveness and markets.

NSF 4 will direct efforts on influencing curricula at all levels of agricultural training to ensure that environmental issues are suitably integrated.

- **NSF 5 - Partnerships and strategic alliances** – to catalyse and facilitate the establishment of partnerships that bring together the range of expertise and the capacities needed to achieve FARA’s Specific Objective. These partnerships will be able to draw on the support of all FARA stakeholders, African and non-African, depending on the task at hand. They will serve as platforms for enhancing agricultural innovation which, linked with the other supporting Functions, will bring about improvements desired in the efficacy and impact of African agricultural research and development. Each Function complements the other Functions to promote the achievement of the goals and objectives of the Comprehensive Africa Agriculture Development Programme in ways that are consistent with the principles set out in the Framework for African Agricultural Productivity.

NSF 5 will lead the drive to make FARA the African voice on the agriculture-environment agenda, mobilising continental and external actors to tackle Africa's environmental challenges

2.4.3 Monitoring and Evaluation:

Implementation of FARA's Environmental Policy and Action Plan will be monitored using verifiable indicators appropriately identified for each of the components of the action plan. The progressive monitoring and evaluation of these indicators will inform the modification of the specific action plans where it is deemed necessary.

2.4.4 Responsibilities:

In order to ensure that Environmental issues are suitably championed in organizations, responsibility is usually assigned to the top management. Accordingly, the dissemination and implementation of FARA's Environmental Policy and Action Plan will be responsibility of the Executive Director supported by FARA's Secretariat and the NSF Directors.

2.5 Related Policies or Procedures

FARA will ensure that this policy is implemented in consonance with the AU – NEPAD Environmental Action Plan.

Furthermore, FARA will ensure its stakeholders operate in conformity with any National Environmental Policy Frameworks and Legislation of their respective countries where applicable.

In addition FARA will seek to promote the objectives of the relevant global environmental treaties and conventions including those on Biodiversity, Climate Change, Desertification and Land Degradation where applicable.

References

1. FARA Strategic Plan 2007 – 2016
2. FARA Strategic Plan Companion Document (Part 2)
3. FARA Secretariat Medium-Term and Operational Plan 2008-2012
4. Action Plan of the Environment Initiative of the New Partnership for Africa's Development (NEPAD) – UNEP 2003
5. UN World Development Report 2008