



Arne Hoel / World Bank

Fertilizers and Soil-Health Roadmap for West Africa and the Sahel

Investing in the Future by Nourishing the Soil



Table of contents

Background: Crises, and food and nutrition insecurity	4
1. The problem: The challenges facing the agricultural sector in West Africa and the Sahel are intricately linked to soil health and the problems of the fertilizer sector	4
Agriculture marked by low productivity linked to poor soil health.....	4
A fertilizer sector in distress.....	5
Opportunities to strengthen the fertilizer sector supply chain and improve soil health.....	6
2. The Roadmap and the Declaration of West Africa and the Sahel	7
Alignment of the Roadmap for West Africa and the Sahel with the Action Plan for Africa on Fertilizers and Soil Health.....	7
The 4 priority axes of the draft Action Plan for Africa.....	7
The 7 commitments of the draft Declaration for the Africa Action Plan.....	8
3. The 12 priority actions of the Roadmap for West Africa and the Sahel	10
Axis 1: Improved policies, investments, financing and markets for sustainable fertilizer and soil-health management	10
Priority action 1: Improve access to market information on agricultural inputs.....	10
Priority action 2: Strengthen and complete the regional regulatory framework on fertilizer quality control.....	10
Priority action 3: Improve the effectiveness of fertilizer subsidy programs in all countries concerned.....	11
Priority action 4: Revise the tax and customs policies on fertilizers and the building blocks among ECOWAS countries.....	12
Axe 2 : Axis 2: Improving access to mineral and organic fertilizers	13
Priority action 5: Increase local production of mineral and organic fertilizers.....	13
Priority action 6: Facilitate and encourage subregional trade in fertilizers.....	13

Priority action 7: Capacity building and extension of the network of distributors of agricultural inputs.....	14
Priority action 8: Stimulate demand and enhance fertilizer use by farmers.....	15
Axis 3: Improved efficiency, resilience and sustainable use of mineral and organic fertilizer inputs, and improved soil health interventions.....	17
Priority action 9: Strengthen soil health monitoring in West Africa.....	17
Priority action 10: Strengthen the capacity of research bodies to improve soil fertility and soil health in the region.....	18
Axis 4: Institutional and human capacity building for sustainable fertilizer and soil health management.....	19
Priority action 11: Strengthening human and operational capacities of extension services.....	19
Priority action 12: Raise awareness among policy makers and other stakeholders about the importance of fertilizers and soil health.....	19
4. Cross-cutting issues.....	20
5. Follow-up actions.....	20
6. Acronyms.....	23
7. Annexes.....	24
Annex 1: The specific objectives of the Roadmap and the Lomé Round Table.....	24
Annex 2: Summary of deliverables for the 4 outcomes or Priority axes of the Africa Fertilizers and Soil Health Action Plan.....	25
Annex 3: The stages of preparation and implementation of the Roadmap.....	26

Amidst a global crisis, with multiple causes and consequences, the ultimate destinies of agriculture, food security, and development in West Africa and the Sahel are closely intertwined, while the fertilizer sector is at the heart of the problem, but also of the solution.

Background: Crises, and food and nutrition insecurity

The current global crisis, which is the result of various shocks and upheavals, is having a severe impact on food and nutrition security, particularly in West Africa. In this region, the number of people experiencing acute food insecurity has increased by 40 percent in the past year alone.¹ If appropriate action is not taken quickly, 44.8 million people could face food insecurity between June and August 2023.

In order to face this food and nutrition crisis, the agricultural sector has, more than ever, a strategic and major role to play and, although the challenges are significant, the potential for development is very real. With more than 30 percent of the region's GDP derived from agriculture and more than 55 percent of its population living in rural areas, the agricultural sector plays a critical role in West Africa, both in terms of employment and in its ability to produce the food needed to feed its population. Agriculture is currently the main source of income for 80 per cent of the rural population and employs an average of almost 46 per cent (2010-2020) of the region's workforce. In terms of its ability to feed its populations, it has the potential to meet the needs its 418 million people.

1. The problem: The challenges facing the agricultural sector in West Africa and the Sahel are intricately linked to soil health and the problems of the fertilizer sector

Agriculture marked by low productivity linked to poor soil health

The development of the agricultural sector in the region is severely hampered by poor soil health, which is characterized by nutrient deficiency in the soil, which in turn is linked to a lack of fertilizer input. The global fertilizer crisis, exacerbated by the war in Ukraine, the COVID-19 pandemic, and the energy crisis, has significantly amplified this deficit, particularly in West Africa and the Sahel.

In his statement to the G20 meeting on 15 November 2022, UN Secretary-General António Guterres warned of the effects of the collapse of the global fertilizer market, indicating that this could jeopardize food production in the coming years, and would particularly impact countries that lack the fiscal space to carry out support programs that would keep the purchase price of fertilizer at an acceptable level.

.....
¹ <https://data.humdata.org/dataset/cadre-harmonise>

Figures linking average fertilizer input with yields for staple foods reflect the intensity of the problem and its consequences.² Indeed, despite some progress made by some countries in implementing the Abuja Declaration on Fertilizers, the targets have generally not been met. The use of mineral fertilizers in Sub-Saharan Africa, with barely 20 kg/ha of nutrients per hectare of cropland per year,³ is still very low compared to the global average of 146 kg/ha (175 kg/ha in India and 393 kg/ha in China), and does not compensate for the annual loss of soil nutrients through agricultural production and soil degradation.

Moreover, without addressing soil-health problems, smallholder farmers cannot benefit from the productivity gains provided by plant breeding and improved agronomic practices. For example, owing to poor soil health, yield increases for improved crop varieties are estimated to be just 28% in Africa, compared to 88% in Asia.⁴

As a result, and in terms of absolute value, cereal yields remain excessively low, with averages of around 1.45 t/ha, compared to averages of 3.20 t/ha in India and 6.08 t/ha in China, not to mention the low nutritional value of some of the food that is produced.

Finally, in the context of climate change, the phenomenon is growing, and the risks are multiplying, while the continent is already estimated to be losing around 3% of its GDP due to nutrient depletion and general soil degradation every year, an unsustainable trajectory for its economies.⁵

A fertilizer sector in distress

The diagnosis of the problems encountered in the region in relation to the fertilizer sector is now fairly well known, and can be summarized as follows:

On the supply side, the fertilizer market faces many challenges caused by: (i) an unfavorable business climate with excessive and inadequate regulation; (ii) a very large and complex supply chain characterized by inadequate transport, storage and distribution logistics, leading to excessively high transaction costs; (iii) inadequate financing mechanisms; (iv) dispersed demand due to the multitude of small, fragmented and poorly connected markets; (v) inadequate subsidy policies; and (vi) largely untapped local production capacities.

² It is estimated that around 50% of global food production is directly dependent on the use of mineral and organic fertilizers. This fact must be considered in the context of current agricultural production and productivity in West Africa, which are among the lowest in the world.

³ The target, according to the Abuja Declaration, was to reach 50kg/ha/year of nutrients, on average.

⁴ Data from the International Fertilizer Development Center (IFDC), 2013.

⁵ Soil Initiative for Africa: Frame Document (2023).

From a demand point of view, while the needs are exceedingly high, orders are quite small. This is due to a combination of factors, including: (i) the high cost of fertilizers in relation to the overall cost of production and the low margins achieved by producers; (ii) the lack of information on the availability and cost of fertilizers on the market; (iii) the limited access of farmers to appropriate sources of finance; and (iv) the lack of efficiency in the use of fertilizers by farmers who are inadequately trained and supervised, due in particular to a poor exploitation of the acquired knowledge.

Opportunities to strengthen the fertilizer sector supply chain and improve soil health

While fertilizer supply and soil health remain major challenges in the region, the sector can still draw on windows of opportunity and on existing assets and advances that should serve as examples and catalysts. In particular, mention should be made of:

- The opportunity to take advantage of local natural resources and **substantially increase regional production of organic and mineral fertilizers.**
- The opportunity to capitalize on the many exchanges and reflections conducted at various levels and translate them into resolutions and concrete actions to **improve the policy and regulatory framework that would in turn promote transparency, traceability, and circulation of fertilizers within the West African market.**
- The possibility of capitalizing on knowledge of transport and distribution channels to meet the needs for **strengthening the transport network and storage infrastructure and for strengthening associated services.**
- The opportunity to **capitalize on advances in soil health research and monitoring**, and on experiences in **widely promoting good agricultural practices and the use of fertilizers**, to increase crop yields and better address the environmental challenges compounded by climate change.
- The possibility to capitalize on the experiences of **financing agricultural producers**, in particular to promote a new strategy for **smart subsidy programs**, which sustainably increase yields, resilience, nutrition, farm incomes and soil health, but without distorting markets between neighboring countries.

2. The Roadmap and the Declaration of West Africa and the Sahel

Alignment of the Roadmap for West Africa and the Sahel with the Action Plan for Africa on Fertilizers and Soil Health

The initiative to strengthen the fertilizer sector and improve soil health in West Africa and the Sahel helped prepare the ECOWAS Roadmap. This roadmap is part of the new Action Plan for Fertilizers and Soil Health in Africa, and it proposes an operational framework for the region based on the identification of priority actions to enable the various partners to place their next contributions within a well-articulated strategy.

To ensure coherence, the ECOWAS roadmap is aligned with the draft Action Plan for Africa on Fertilizers and Soil Health. As such:

- The Roadmap adopts **the same vision and overall strategy** as the draft ten-year Action Plan for Africa.
- The Roadmap maintains the same **4 priority axes** as the draft Action Plan and builds on the same **7 proposals for commitments**, adapted to the context of the West Africa region, particularly following the consultation⁶ process that preceded the Lomé Round Table.
- The **12 priority actions** defined at the end of the **consultation process** are priority actions specific to the region and should make it possible to guide in a practical way the future commitments of the various partners within a coherent framework.

The 4 priority axes of the draft Action Plan for Africa

The four priority areas of the draft ten-year Action Plan for Fertilizers and Soil Health in Africa⁷ are:

1. **Strengthening sectoral policies and the policy and regulatory framework** to promote investment and strengthen the fertilizer sector market.
2. **Improving access to organic and mineral fertilizers** by increasing domestic production and distribution, improving infrastructure, supporting research in organic and mineral fertilizers, and strengthening intra-regional trade in fertilizers.

⁶ A consultation process with all stakeholders from the public, private and banking sectors and with technical and financial partners took place during the months of April-May 2023 with over 300 participants.

⁷ A detailed presentation of these priority actions, including the expected results, is provided in the Annexes section.

3. **Improved efficiency and more sustainable use of organic and mineral fertilizers** through the implementation of appropriate practices in crop farming, fertilizer use and sustainable soil management to ensure greater resilience and improved soil health.

4. **Institutional strengthening and human capacity building** for sustainable fertilizer management and soil health through the promotion of local fertilizer use and soil health technologies, the establishment of soil testing services, and the creation of regional knowledge exchange networks.

The 7 commitments of the draft Declaration for the Africa Action Plan

1. Triple domestic production and distribution of organic and mineral fertilizers.
2. Make targeted agronomic recommendations for specific crops, soils and climatic conditions available to at least 70 per cent of smallholder farmers on the continent to ensure greater efficiency and sustainable use of fertilizers.
3. Reverse land degradation and restore soil health on at least 30 per cent of degraded land.
4. Make the African Fertilizer Finance Mechanism (AFFM) fully operational to improve the production, procurement and distribution of organic and mineral fertilizers and soil health interventions.
5. Formulate and implement policies and regulations to create an enabling environment for fertilizer and soil health interventions.
6. Develop and promote systemic strengthening of national capacities in fertilizer management, soil health management practices and technologies adapted to the local context.
7. Ensure that at least 70 per cent of smallholder farmers have access to quality fertilizer and soil health extension and advisory services, from both public and private extension systems.



Figure 1: Integration of the Roadmap into the Africa Action Plan.

3. The 12 priority actions of the Roadmap for West Africa and the Sahel

The work of the expert group and the consultation process (see Annex 3) identified 12 priority actions, which are broken down into practical sub-actions, to achieve the specific objectives for the region, in line with and aligned with the 4 priority axes and the 7 contextualized commitments proposed for the Africa Action Plan on Fertilizers and Soil Health.

Axis 1: Improved policies, investments, financing and markets for sustainable fertilizer and soil-health management

Priority action 1: Improve access to market information on agricultural inputs

Contributions to Commitment 5

Description : This action aims to regularly monitor and evaluate, with an appropriate level of granularity, the demand for and consumption of fertilizers, in combination with other soil fertility improvement techniques, and to evaluate the results in terms of agricultural productivity and profitability at farm level. This will be done through the consolidation and sustainability of existing structures and tools.

Sub-action 1: Develop and ensure the proper functioning of a regional market information system for organic and mineral fertilizers and bio-fertilizers as well as soil improvers, building on existing information systems.

Sub-action 2: Regularly collect and validate information on the different actors involved, the supply and demand of products, the prices recorded, and the specificities of inputs available on the markets. This information will be made accessible to policy makers and all stakeholders in the fertilizer sector.

Sub-action 3: Establish and maintain a network of experts to regularly assess and analyze fertilizer use, soil fertility and productivity levels, and consolidate the results in annual reports, including recommendations, to be presented to Member States.

Priority action 2: Strengthen and complete the regional regulatory framework on fertilizer quality control

Contributions to Commitments 5 and 6

Description: This action aims to improve the quality of fertilizers made available to farmers by strengthening existing regulations, monitoring the capacity of producers and the dissemination of information.

Sub-action 1: Urgently establish and operationalize the West African Fertilizer Control Committee (COACE), in accordance with ECOWAS Implementing Regulation ECW/PEC/IR/05/12/16.

Sub-action 2: Complement the existing regional regulations on mineral fertilizers with regulatory provisions on complementary sources of plant nutrition and soil health (organic and organo-mineral fertilizers, bio-fertilizers, bio-stimulants, soil amendments, etc.).

Sub-action 3: Improve knowledge of fertilizer quality among the different actors in the private sector and civil society, including professional agricultural organizations, and support the initiatives of the fertilizer associations in terms of quality monitoring of their members.

Sub-action 4: Strengthen the financial, organizational, operational, and technical capacities of the competent services and bodies (control services, national advisory committees, and fertilizer analysis laboratories) and the training of technical and administrative staff through endogenous financial mechanisms (national budgets, revenues generated by control mechanisms, etc.) and exogenous financial mechanisms (projects, bilateral agreements, etc.).

Priority action 3: Improve the effectiveness of fertilizer subsidy programs in all countries concerned

Contributions to Commitments 5 and 6

Description: This action aims to improve the efficiency, harmonize, and avoid adverse effects of agricultural subsidy programs, including fertilizer subsidy programs. The distribution of subsidized fertilizers will be carried out in compliance with the guiding principles laid down in the directive on subsidized fertilizers, especially those relating to efficiency, transparency and targeting, by implementing innovative systems that use ICT (coupons, vouchers, etc.) to improve traceability.

Sub-action 1: Accelerate the process of adoption of the draft directive⁸ on the management of fertilizer subsidy programs, its enactment and application by Member States for smart subsidies, with a particular emphasis on addressing complementary inputs and soil health.

.....
⁸The guide developed by ECOWAS and IFDC, which constitutes the draft regional directive, summarizes the main features of most grant programs and thus proposes a set of 13 consensual guiding principles and 36 concrete actions to improve the design, implementation, supervision and evaluation of these programs for the benefit of all actors involved, from fertilizer suppliers to farmers.

Sub-action 2: Widely disseminate the guide for smart grant programs and other communication and training materials and raise awareness, train, and support the various actors in the application of the relevant guiding principles.

Sub-action 3: Support Member States in reforming current subsidy programs and transforming them into smart subsidy programs, as well as in their implementation and monitoring. Emphasis should be placed on programs that support and reward sustainable and efficient nutrient use at farm level and soil health (according to the 4Rs principles, carbon sequestration, etc.) while implementing the guiding principle on exit strategy.

Sub-action 4: Create frameworks for consultation among countries in the region, with the strong involvement of the private sector and other actors in the agricultural/fertilizer value chain, with a view to promoting exchanges on the implementation of fertilizer subsidy programs and decision-making at the highest level of Member States to strengthen the harmonization process.

Priority action 4: Revise the tax and customs policies on fertilizers and the building blocks among ECOWAS countries

Contributions to Commitment 5

Description: This action proposes a revision of the taxation of fertilizers and the elements used in their manufacture to reduce the costs of fertilizers to farmers and encourage local production.

Sub-action 1: Enact the commitment to gradually phase out duties and taxes on fertilizers and related products in accordance with the rules of the Single Market and the Common External Tariff.

Sub-action 2: Conduct a study on the status of duties and taxes on fertilizers in West Africa and the Sahel, including organic and mineral fertilizers, bio-fertilizers, soil amendments and other related products; and then propose the appropriate reforms and support Member States in their implementation and monitoring at national level. In addition, it is strongly recommended to simplify customs and administrative formalities for imports in order to reduce the time taken for products to be admitted into the respective countries.

Axis 2: Improving access to mineral and organic fertilizers

Priority action 5: Increase local production of mineral and organic fertilizers

Contributions to Commitment 1

Description: This action consists of increasing the regional production of mineral and organic fertilizers and related products to better meet current and future demand in the region.

Sub-action 1: Identify and promote investment opportunities to enhance the regional resources involved in the production of organic and mineral fertilizers and related products, in particular by promoting innovative and more environmentally friendly techniques (such as green ammonium production).

Sub-action 2: Develop, in partnership with the private sector and with the support of technical and financial partners, regional plans for the development of local resources and the establishment of new local and regional production sites. To this end, feasibility, conceptual design, and engineering studies should be funded at the country level to bring these projects to maturity and make them bankable in order to attract investors. An expert group including industry professionals will be set up to support the development of the projects.

Sub-action 3: Deploy tax incentives, technical and financial support to (i) facilitate the creation of enterprises dedicated to the local production of both organic and mineral fertilizers and soil improvers (amendments), in particular those led by women and youth; and (ii) link these local units to local marketing channels.

Priority action 6: Facilitate and encourage subregional trade in fertilizers

Contributions to Commitments 1 and 5

Description: This action aims to better meet regional fertilizer needs, in particular imported fertilizers and fertilizers produced locally and in large quantities by industry. It aims to facilitate and smooth the conditions for entry into the ECOWAS, UEMOA and CILSS membership areas, harmonize the conditions of fertilizer movement within the ECOWAS region, and improve logistics. It also aims to ensure an adequate and regular supply of fertilizers based on new models of agreement and commitment between the public sector and industry.

Sub-action 1: Promulgate the declaration on fertilizers, both inorganic and organic, as a strategic commodity without borders, free to move freely in the ECOWAS, UEMOA and CILSS membership areas.

Sub-action 2: Institutionalize the docking and unloading priority in West African ports for vessels transporting fertilizers as a basic necessity.

Sub-action 3: Invest in infrastructure necessary for the transport and storage of fertilizers to facilitate handling and reduce logistical costs, which includes: (i) preserving port infrastructure including dedicated docks to accommodate large vessels with modern unloading mechanisms; and (ii) maintaining rail infrastructure to adapt to the bulk transportation of fertilizers.

Sub-action 4: Review the mechanisms for calls for tenders and the ordering of fertilizers from the respective state governments with the support of the private sector and technical and financial partners in order to agree on commitments and prepare medium-term to long-term contracts for the purchase of fertilizers with the main local and regional producers, instead of short-term contracts, and with the aim of minimizing costs, and getting fertilizers on time and mitigating price volatility.

Sub-action 5: Developing strategic regional stocks aligned with the development of regional corridors and identifying an integrated investment plan to ensure efficient supply to the countries of the region including landlocked countries.

Priority action 7: Capacity building and extension of the network of distributors of agricultural inputs

Contributions to Commitments 1, 2 and 5

Description: This action consists of extending and strengthening the network of agro-distributors and strengthening their capacities in order to improve the distribution of inputs across all territories in order to provide farmers with quality inputs and services.

Sub-action 1: Promote the formation of associations of agro-distributors to stimulate synergies and partnerships. Facilitate dialog with other stakeholders and better represent this sub-sector. Support the strengthening of agro-distributors and better structure the distribution network.

Sub-Action 2: Strengthen the technical and operational capacities of agro-distributors through certified training programs on best agronomic and management practices.

Sub-action 3: Develop appropriate financial products to provide agro-distributors with credit and guarantee mechanisms in line with their capital and operating expenditure needs.

Priority action 8: Stimulate demand and enhance fertilizer use by farmers

Contributions to Commitment 5

Description: This action aims to promote the integration of agricultural producers upstream and downstream the fertilizer value chain, to facilitate both the physical and financial access to inputs and the sale of agricultural produce in order to enable the farmers to implement sustainable and profitable agricultural practices that promote the adoption of integrated soil fertility management practices.

Sub-action 1: Identify and document promising initiatives and models that have been tested and have successfully linked agricultural producers to markets for fertilizers and other agricultural inputs. Develop a strategy for scaling up such initiatives and models through development plans and programs.

Sub-action 2: Prepare and implement strategies and policies, including financing mechanisms, to enable smallholder farmers to improve physical access to fertilizers and linkage to good markets.

Sub-action 3: Propose and prepare on a large scale, on the basis of promising initiatives and models, financing mechanisms adapted to the conditions and needs of agricultural producers in order to facilitate their access to agricultural inputs and other services relevant for integrated soil fertility management.

Sub-action 4: Develop, with the support of technical and financial partners, financing mechanisms adapted to local processing and enhancement of agricultural production and to the development of aggregation systems facilitating market access for agricultural products.



Dominic Chavez / World Bank



Yosef Hadar / World Bank

Axis 3: Improved efficiency, resilience and sustainable use of mineral and organic fertilizer inputs, and improved soil health interventions

Priority action 9: Strengthen soil health monitoring in West Africa

Contributions to Commitments 2, 3 and 6

Description: This action aims to strengthen soil health monitoring and improve the dissemination of results and recommendations. A first phase will be to update the current state of soil fertility. This assessment should enable the determination and mapping, at the desired level of granularity, of the crop nutrient requirements to be supplied through organic and mineral fertilizers and with appropriate agricultural practices. The second step will be to ensure regular monitoring, based on sustainable structures, in order to assess changes and regularly propose the necessary adjustments. This regular monitoring could inform carbon sequestration and facilitate access to carbon credits for smallholder farmers.

Sub-action 1: Implement and coordinate subregional programs for the continuous monitoring of soil fertility and soil health with national and regional research bodies through the establishment of a Regional Center with the following tasks: (i) coordination and coherence of soil condition assessment initiatives in order to fill gaps in current knowledge; (ii) establishment and publication in Soil Information Systems of regional fertility maps taking into account soil specificities in different countries; (iii) regular soil health assessments, capitalizing on data and existing tools; (iv) making policy recommendations to improve soil health; (v) developing scientific studies; (vi) advocating topics related to soil health in the region; (vii) strengthening the capacity of national fertility and soil health institutions; and (viii) mobilizing funding resources for the operation of the Regional Center and its programs to improve soil health and fertility.

Sub-action 2: Encourage countries to develop fertilization recommendation programs based on the implementation of the 4Rs (right source, right time, right quantity, and right place), taking into account cropping systems, climatic specificities, soil health components and environmental impacts.

Sub-action 3: Prepare and finance, with the support of technical and financial partners and the involvement of the private sector, a regional program to (i) address issues related to fertilizer availability and access, and the sustainable improvement of fertility and soil health; (ii) support the implementation of reforms required for the improvement of the environment of the fertilizer sector; and (iii) implement the afore-mentioned Regional Center.

Priority action 10: Strengthen the capacity of research bodies to improve soil fertility and soil health in the region

Contributions to Commitment 6

Description: This action aims to improve the capacity of national and regional research institutions. It includes interventions such as financing the acquisition of adequate equipment, and training through partnerships with the private sector or directly by the respective governments and their partners. It also aims to ensure farmers have access to appropriate agricultural practices and that governments have access to policy recommendations to address the challenges of restoring and maintaining soil fertility and soil health.

Sub-action 1: Strengthen agricultural research institutions, particularly through (i) funding the acquisition and maintenance of research equipment and infrastructure for national agricultural research services; and (ii) capacity building and training of new researchers.

Sub-action 2: Develop or improve the availability and accessibility of soil analysis services as close as possible to agricultural producers through public and private research centers and institutes, including academic institutions, with a view to enabling fertilizer recommendations that meet specific soil needs.

Sub-action 3: Encourage National Agricultural Research (NARES) institutions to collaborate with NGOs and private sector partners to develop, complement and improve technical soil fertility recommendations and methods, including practices that promote soil health conservation and soil fertility improvement, and to make them accessible to agricultural producers by ensuring their wide dissemination through various channels/outlets, including online platforms.

Sub-action 4: Develop, validate and disseminate regional guides for the production, distribution and use of organic and mineral fertilizers and soil improvers and related products.

Sub-action 5: Conduct, with the support of technical and financial partners, a research and development program on soil health problems (acidity, salinity, erosion, etc.), and develop feasible solutions for soil amendment and restoration.

Axis 4: Institutional and human capacity building for sustainable soil and fertilizer health management

Priority action 11: Strengthen human and operational capacities of extension services

Contributions to Commitments 6 and 7

Description: This action aims to consolidate knowledge on fertilizer use and soil health from appropriate technological tools and a network of extension agents.

Sub-action 1: Promote the emergence and adoption of a regional digital platform for extension workers to facilitate the availability and access to agricultural practices recommendations for farmers and the dissemination of best practices for soil improvement and restoration.

Sub-action 2: Promote the strengthening of public and private extension services to farmers through policy documents for the various agricultural programs.

Sub-action 3: Strengthen the capacity of training institutions in the field of soil fertility and soil health by integrating training on new digital techniques and technologies for soil analysis, mapping, artificial intelligence, modeling, big data, etc.

Sub-action 4: Strengthen the capacity of public and private agricultural extension and advisory services by providing them with more highly qualified human resources in soil fertility and soil health management, and modern material means for soil collection, analysis, problem diagnosis, data processing and dissemination of agricultural advice, and partnerships and synergies between agricultural extension and advisory services and research and training institutions.

Priority action 12: Raise awareness among policy makers and other stakeholders about the importance of fertilizers and soil health

Contributions to Commitments 6

Description: This action aims at properly raising awareness among all stakeholders, including policy makers, about the strategic importance of fertilizers and soil health in relation to agricultural development and the achievement of food and nutritional security objectives in the region.

Sub-action 1: Raise awareness among all decision-makers and key stakeholders, based on appropriate and properly conveyed messages, about the importance of integrated fertilizer and soil fertility management, with the aim of ensuring sustainable agricultural development in the region.

Sub-action 2: Inform and sensitize rural populations in the region on the issues of integrated soil fertility, soil health management and environmental protection through mass communication tools (information campaigns, educational programs, etc.).

Sub-action 3: Develop training programs that certify public and private sector agricultural professionals on integrated soil fertility and soil health management.

Sub-action 4: Declare soil health as a public good. Accordingly, soil and landscape restoration programs should be funded by technical and financial partners and state budgets.

Sub-action 5: Promote the establishment of Geospatial Information Systems capitalizing on satellite and field data, which will be used as decision-support tools for public and private actors, and which will be used to fill the information gap and allow adequate monitoring of the fertilizer sector.

4. Cross-cutting issues

The following cross-cutting issues are an integral part of this roadmap, and their inclusion helps to support and improve its implementation:

- Identification and optimization of innovative fertilizer and soil health development initiatives in the countries of the subregion.
- Establishment of a functional monitoring, evaluation, capitalization and learning mechanism, including regular reviews of the implementation of community policies, regulations, directives, and programs.

5. Follow-up actions

The next steps following the validation of the roadmap are:

1. The transmission to the various Member States, and through official channels, of the validated Declaration and Roadmap for ownership and contribution to implementation.

2. Supporting the preparation for and participation in the African Fertilizers and Soil Health Summit in 2023 and presenting the Roadmap as a contribution to the Africa Action Plan.
3. Preparing and launching an awareness-raising campaign regarding the Roadmap, orchestrated by ECOWAS, in order to solicit commitments from Member States, technical and financial partners, and the private sector.

Implementation of the Roadmap

The Roadmap opens an 18-month preparatory phase for the definition of ten-year regional and national action plans (domestication phase). This preparatory phase should (i) address the immediate challenges; and (ii) prepare for the implementation of actions in the medium and long term.

Address immediate challenges and opportunities for rapid impact

- **Declare that fertilizers**, both mineral and organic, are a strategic commodity without borders, which can move freely and circulate without hindrance in the ECOWAS, UEMOA and CILSS area.
- **Institutionalize priorities for docking and unloading** in West African ports for vessels transporting fertilizer as a basic necessity.
- **Activate the West African Fertilizer Control Committee** (COACE), pursuant to Implementing Regulation ECW/PEC/IR/05/12/16, to ensure maintenance of fertilizer quality in the region.
- **Support urgent and innovative actions that are underway or under preparation**, facilitate and accelerate the implementation of ongoing projects and initiatives, including activities that are sensitive to the reduction of greenhouse gas emissions, as well as activities that enable producers to respond quickly and effectively to their needs.
- **Carry out studies and a specific action plan, following a preliminary study phase, to capitalize on opportunities for local fertilizer production**, based on the development of a regional strategy for the production and distribution of mineral and organic inputs.

Preparing for the implementation of actions over the medium and long term (2025-2035)

- **Prepare regional and national action plans for fertilizers and soil health** including: (i) an information gathering phase; (ii) studies (including impact studies); (iii) preparation of the operational environment; and (iv) identification of funding.
- **Ensure the application of single-market rules for fertilizers and fertilizer-related products:** (i) promptly address institutional issues of the legal, fiscal and regulatory framework at the level of each country and among ECOWAS, UEMOA and CILSS countries in order to facilitate the entry and circulation of fertilizers and fertilizer products within the regional market; (ii) promote the use of best transparency and procurement practices; (iii) Improve traceability, certification and quality control of fertilizers; and (iv) provide incentives, including fiscal incentives, to attract greater private sector engagement.

6. Acronyms

ADB/AfDB	African Development Bank
AFD	French Development Agency
AFFM	African Fertilizer Development Finance Mechanism
AFSHS	African Fertilizers and Soil Health Summit
BIDC/EBID	ECOWAS Investment and Development Bank
BOAD	West African Development Bank
CILSS	Inter-State Committee to Combat Drought in the Sahel
COACE	West African Fertilizer Control Committee
CORAF	West and Central African Council for Agricultural Research and Development
DGIS	Directorate-General for International Cooperation of the Kingdom of the Netherlands
ECOWAB	Coordinator of ECOWAP Donor's Group
ECOWAP	ECOWAS Agricultural Policy
ECOWAS	Economic Community of West African States
HUNGER	African Fertilizer Development Financing Facility
InFAT	Project Feed the Future Stimulating growth through regional systems of agricultural inputs
FAO	World Organization for Agriculture and Food
FARA	African Forum for Agricultural Research
IFAD/IFAD	International Fund for Agricultural Development
FSRP	West Africa Food Systems Resilience Program
WBG	World Bank Group
GIFS	Integrated soil fertility management
IFDC	International Fertilizer Development Center
IITA	International Institute for Tropical Agriculture
NGO	Non-governmental organization
UN	United Nations
PAM/WFP	World Food Program
PTF	Technical and Financial Partners
RAIS	Regional Strategy
ROPFA	Network of Producer Organizations of West Africa
NARS	National Agricultural Research Structures
WAEMU	West African Economic and Monetary Union
USAID/WA	United States Agency for International Development/West Africa Mission
WAFA	West African Fertilizer Association

7. Annexes

Annex 1: The specific objectives of the Roadmap and the Lomé Round Table

a) **Prepare ECOWAS with all partners to domesticate the future Action Plan of the African Summit on Fertilizers and Soil Health (2023-2033) in order to adapt it to the context of West Africa and the Sahel, and to make it operational by translating the objectives and expected results into concrete activities** to be financed and carried out by the various actors (public, private, partner institutions, beneficiaries), in the short and medium to long term.

b) **Verify alignment** between the Action Plan and other framework documents referring to fertilizers and soil health in the region, including the ECOWAS Agricultural Policy (ECOWAP) and the Integrated Regional Strategy for the Sustainable Management of Agricultural Inputs in West Africa and the Sahel. **Make adjustments to the various plans and commitments, if necessary**, in order to increase coherence and effectiveness.

c) **Integrate all actions that are already under way or those in the initial phase**, in a common matrix around the 7 main commitments of the Action Plan, so as to better identify, from this scoreboard, the progress made, the efforts needed in terms of synergies and coordination, building blocks, gaps and opportunities, in order to propose the appropriate solutions.

d) **Decide on interventions that help address these gaps and improve coordination in order to meet objectives and commitments, in a logical order and a list of the priority actions.**

e) **Create a space for exchange to receive and integrate new contributions from different partners and translate them into commitments.**

Annex 2: Summary of deliverables for the 4 outcomes or priority axes of the Africa Fertilizers and Soil Health Action Plan

Summary: Action Plan on Fertilizers and Soil Health in Africa	
Background and rationale	The African Fertilizer Summit, held in Abuja, Nigeria, in June 2006, identified the urgent need to strengthen the use of fertilizers and related inputs to boost sustainable agricultural productivity growth and economic development and address declining soil fertility. The African Summit will focus on soil health in Africa from an integrated soil fertility management (ISFM) perspective. ISFM takes into account the concept of production systems in which efficient fertilizers, both mineral and organic, other inputs, such as improved seeds, the efficiency of water use for irrigation, and other aspects of soil health and sustainable soil management are crucial for food security and agricultural sustainability.
Vision	Implementation of the action plan will help reverse land degradation, accelerate inclusive agricultural transformation, and end hunger, malnutrition, and poverty.
Expected impact	The successful implementation of the Action Plan will be confirmed by healthier soils, increased agricultural productivity, sustainable food systems and improved resilience to climate change.
Strategy	The key strategy for the successful implementation of the Action Plan is to leverage multi-stakeholder partnerships and investments to stimulate policies, finance, research and development, markets, and capacity in fertilizers and sustainable soil health management.
Outcome 1: Improved policies, investments, finances and markets for fertilizers and soil health management.	Output 1.1: Improved policy environment for efficient fertilizer production and use, and sustainable soil/land management.
	Output 1.2: Improved financing and investment.
Outcome 2: Improved access to and affordability of organic and mineral fertilizers.	Output 2.1: Increased domestic production and distribution and improved research on organic and mineral fertilizers.
	Output 2.2 Improved intra-regional trade in fertilizers.
Outcome 3: Increased efficiency, resilience and sustainable use of inorganic and organic fertilizer inputs and interventions for soil health and sustainable soil management.	Output 3.1 Development of recommendations targeted at specific crops, soils and climatic conditions.
	Output 3.2 Increased efficiency of agronomic fertilizer use at optimal levels.
	Output 3.3 Creation of a digital database of soil information and ensuring its accessibility.
Outcome 4: Strengthened institutional and human capacity building for sustainable fertilizer and soil health management.	Output 4.1 Development and promotion of effective local fertilizer and soil health technologies.
	Output 4.2 Soil analysis services available and affordable for many smallholder farmers.
	Output 4.3 Establishment and consolidation of Regional Knowledge Exchange Networks.
	Output 4.4 Improvement of last-mile delivery systems for soil health solutions.

Annex 3: The stages of preparation and implementation of the Roadmap

The Roadmap was developed using a participatory approach with all stakeholders, including the national and regional public sector, key private sector representatives, technical and financial partners, and selected representatives of beneficiaries.

Figure 2: Presentation of the steps for the development and implementation of the Roadmap

An expert group was tasked with drafting the Roadmap under the supervision of ECOWAS and with technical support from IFDC and the World Bank.

The Roadmap was informed by virtual, face-to-face and hybrid technical exchanges and discussions, based on a robust consultation process and pre-established methodology and questionnaires. This process included input from more than 300 representatives from different institutions, associations, and representatives from the fertilizer sector.

On 25, 26 and 27 April, 2023, the first steps of the West African and Sahel Pre-Consultations (ECOWAS-UEMOA-CILSS) of stakeholders were held to establish a roadmap for ECOWAS ahead of the African Fertilizers and Soil Health Summit (AFSHS).

The virtual consultation meetings of all key stakeholders in the West African and Sahelian region involved in issues related to agricultural production, plant nutrition and soil health. For three (3) days, the three one-day consultations brought together stakeholders from (i) the private sector of the fertilizer sector, (ii) civil society and fertilizer users, and (iii) the public sector responsible for fertilizer issues. The 15 ECOWAS member countries plus Mauritania and Chad were represented.

Key documents related to these consultations include:

- Terms of Reference for Virtual Consultations
- Presentation: objectives of the consultations
- Presentation: Introduction to the African Summit on Fertilizers and Soil Health
- Presentation: presentation of the 12 priority actions for ECOWAS
- Survey results
- Virtual consultation minutes
- List of experts
- Pre-consultation press release
- Press release after the consultations

The Roadmap will be technically validated after the technical sessions of the first day of the Round Table on 30 and 31 May 2023 in Lomé, and validated after the high-level meeting of the second day in the presence of officials and the private sector. Commitments from partners and institutions in support of the operationalization of this Roadmap will also be integrated during this meeting.

As a next step, the Roadmap will be presented by ECOWAS as a framework document for the implementation of the Action Plan on Fertilizers and Soil Health for West Africa and the Sahel during the upcoming summit.

The regional implementation of this Roadmap will start with a phase of domestication and preparation of actions (investment, projects, national programs) over a period of 18 months. The total duration of the Roadmap will be 10 years (2023-2033).

Preparation of the African Summit on Fertilizers and Soil Health	Lomé Round Table			African Summit on Fertilizers and Soil Health	Implementation
Draft of Fertilizers and Soil Health Action Plan for Africa	The West Africa Roadmap		Declarations of commitment	Validation of the Action Plan on Fertilizers and Soil Health for Africa	Implementation of the West Africa Roadmap
The 4 contextualized priorities	The 4 contextualized priorities for the region	Identification and description of the 12 priority actions to meet the commitments, according to the 4 priority axes	Declarations of commitment by certain partners during the Round Table as a contribution to priority actions	Presentation by ECOWAS of the Roadmap as a contribution to the African Action Plan on Fertilizers	After an 18-month preparation phase (domestication), implementation of the 12 priority actions under the West Africa Roadmap
The 7 contextualized priority commitments	The 7 contextualized priority commitments to the region				
	Analysis of the regional situation in relation to the 7 commitments				
Early 2023	May 2023			Summer 2023	2023-2033

Figure 2: Presentation of the steps for the development and implementation of the Roadmap.

