

2021 Annual Report



INVESTING IN REGIONAL AGRICULTURAL RESEARCH AND
INNOVATION IN WEST AND CENTRAL AFRICA

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Citation:

CORAF 2022. 2021 Annual Report. Investing in regional agricultural research and innovation in West and Central Africa. Dakar, Senegal.

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ISBN : 978-2-493094-01-8

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Abbreviations and acronyms

AFAAS	African Forum for Agricultural Advisory Services
AfDB	African Development Bank
AFSTA	African Seed Trade Association
AGRA	Alliance for a Green Revolution in Africa
ARAA	Regional Agency for Agriculture and Food
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASIWA	Alliance for Seed Industry in West Africa
AUC	African Union Commission
AWPB	Annual workplan and budgeting
CCAFS	Program on Climate Change, Agriculture and Food Security
CCARDESA	Centre for Coordination of Agricultural Research and Development for Southern Africa
CILSS	Permanent Interstate Committee for drought control in the Sahel
DeSIRA	Development of Smart Innovation through Research in Agriculture
ECCAS	Economic Community of Central African States
ECOWAP	Economic Community of West Africa Agricultural Policy
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
FARA	Forum for Agricultural Research in Africa
FSRP	Food System Resilience Program
FtF	Feed the Future program (USAID)
IBP	Integrated Breeding Platform
IDRC	International Development Research Centre
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Centre

INSA	Integrated Nitrogen Studies in Africa
iREACH	Innovation, Research, Extension and Advisory Coordination Hub
IsDB	Islamic Development Bank
MEAL	Monitoring, Evaluation, Accountability and Learning
NARS	National Agriculture Research Systems
NCS	National Centres of Specialization
PIA	Priority Intervention Areas
RCoE	Regional Centres of Excellence
ROPPA	West African Network of Peasants and Agricultural Producers
SME	Small and medium enterprises
TAAT	Technologies for African Agricultural Transformation
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WAAPP	West Africa Agricultural Productivity Programme
WAEMU	West African Economic and Monetary Union
WAFA	West African Fertilizer Alliance
WAVE	Central and West African Virus Epidemiology for Food Security
WCA	West and Central Africa





CORAF *in brief*

About us

CORAF is an international non-profit association of National Agricultural Research Systems (NARS) of 23 West and Central African countries. It covers an area of 12.3 million square kilometres and over forty percent of Africa's population.

CORAF was established in 1987 with the responsibility of coordinating and facilitating the demand-driven research needed to unlock the agricultural potential of West and Central Africa. CORAF is the largest of the four sub-regional organizations of the Forum for Agricultural Research in Africa (FARA).

At the national level, CORAF works with National Agricultural Research Systems (NARS), comprised of public agricultural research institutes, universities and other tertiary institutions, farmers' groups, civil society organizations, the private sector and other entities engaged in the provision of agricultural research services.

Our vision

A future where people and communities in West and Central Africa achieve food and nutrition security and are prosperous.

Our Mission

Sustainably improve the productivity, competitiveness and markets of the agricultural system in West and Central Africa.

Where we work



Key Highlights in 2021

Transferable skills

Contribution of

09

projects to the achievement of the four results of the 2018-2027 Strategic Plan and the performance indicators of the 2018-2022 Operational Plan



FSRP West Africa Food System Resilience Program

Approval of the Food Systems Resilience Program (FSRP) by the World Bank



Publication of the 3rd edition of the regional catalog of plant species and varieties (2018-2021)

including 176 new varieties published by 13 of the 17 member countries of ECOWAS and CILSS, taken together



Transition from

11 to 20 priority crops

for the development of the regional catalog



Adoption and dissemination of the «Regional Executive Regulations for the Phytosanitary Control and Certification of Seeds for West Africa and the Sahel»

enabling a harmonized approach and standards for controlling the introduction and spread of pests and seed-borne diseases in the region



Publication of CORAF's Capacity Statement

to develop public awareness and engagement materials

Establishment of four (04) new innovation platforms in Adidwan, Nkwayire, Nsoatre and Derma in the Ashanti region of Ghana, bringing the total number of innovation platforms to 46, including



Benin

02



Ghana

24



Mali

13



Niger

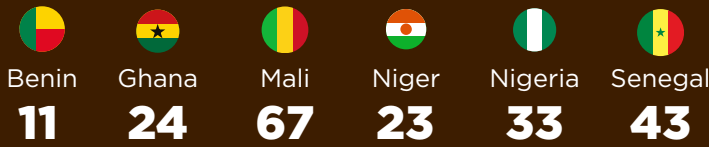
02



Nigeria

05

Installation of
201 demonstration plots
 by the national agricultural research centers of



to facilitate dissemination, communication and sensitization on **215 improved varieties of cereals including**



Installation of **417 additional demonstration/dissemination plots of high-performance varieties by the private sector with the support of CORAF**, including



Training of

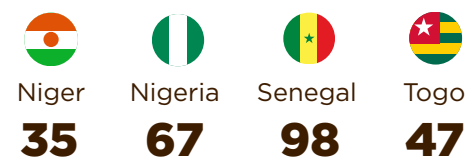


in seed production in Benin, Ghana, Mali, Niger and Nigeria, bringing the total number of people trained to

Updating of the platform for recommendations of fertilizers, seed varieties and good agricultural practices based on West African agroecologies (FeSeRWAM) by improving its UI/UX design according to user needs



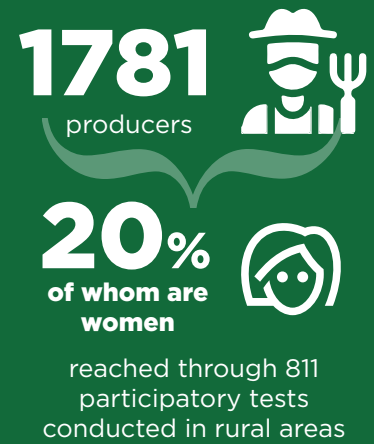
Validation and dissemination of **510 information kits of agricultural input packages** for priority crops in 11 countries, namely



Opening of the first Agricultural Technology Park in West Africa, in Bambej, Senegal



affiliated with research institutions and national meteorological services in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria and Senegal, trained on the Participatory Integrated Climate Services for Agriculture (PICSA) during a regional training



Updating of the MITA online platform to enable wide dissemination of proven agricultural technologies to drive agricultural transformation and development



Active communication on our media platforms and increased visibility of CORAF thematic and strategic events with nearly



Establishment of the community of practices of West African NARS communication experts

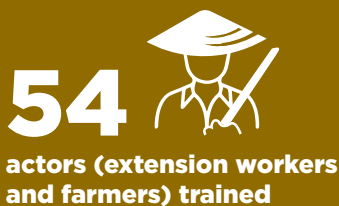


involved in series of national consultation meetings to assess the effectiveness of seed production systems and identify limits and bottlenecks in Burkina Faso, Niger and Senegal



Modernization of **12 varietal improvement programs**

in Burkina Faso, Niger and Senegal to better take into account breeding priorities based on demand from end users (producers, processors and consumers) ;



to identify cassava virus symptoms and best agricultural practices to produce healthy material, certified seeds and demonstration plots established in 5 countries (Cameroon, Ivory Coast, Gabon, Ghana and Sierra Leone);



in the use of the Plantvillage Nuru smartphone application for diagnosis of cassava diseases in plantations in Cameroon, Gabon, Democratic Republic of Congo, and Sierra Leone

178



trials conducted and 238 varieties shared

within the framework of the regional exchange network for varietal material piloted by the dP IAVAO

One (01) knowledge platform created

for knowledge and data management with the various partners / varietal selection programs in Senegal, Niger and Burkina in order to capitalize on the various research results

Importants events

March 18, 2021



Visit of the Ambassador of Burkina Faso to Senegal to CORAF

June 4, 2021



Visit of the CEO of IRD to CORAF

March 9 to 14, 2021



Visit of a joint CORAF/ ECCAS delegation to the Presidency of Chad

October 25 to 29, 2021



Organization of the West African Technology Fair (WATEF) at the King Fahd Hotel in Dakar



Message from the Chair of the Board of Directors and the Executive Director

Investing in regional agricultural research and innovation in West and Central Africa

In 2021 more than ever, African agriculture has faced new needs and expectations of populations as well as global challenges including: an exponentially growing population, climate change, the degradation of natural resources, the weakening of food production and supply chains.

Agriculture involves multiple risks due to increasing variability in weather conditions, extreme natural events, pests and diseases as well as market fluctuations. Faced with this situation, public and private actors are forced to consider the landscape of risks in the long term, to put more emphasis on anticipation in order to reduce exposure to risks and increase mitigation, and finally to give priority to investments that strengthen the resilience capacities of agricultural holdings.

Agricultural and food innovations help to adapt to shocks that negatively affect agriculture. These innovations are processes, marketing and organizational products and affect all agricultural value chains, from production to consumption.

At the 2021 United Nations summit on food systems, the African common position defended the need to invest in research for agricultural innovation and in capacity building to promote more efficient, inclusive, sustainable agriculture and which is a factor of growth and well-being of populations in West and Central Africa.

The COVID-19 pandemic has caused both an unforeseen shock to food systems and placed unprecedented short-term pressures on food supply chains around the world, particularly in Africa with worsening poverty, shrinking export markets and a tightening of credit and development funds. Yet even before the onset of COVID-19, food systems faced a “triple challenge” of ensuring food and nutrition security for a galloping African population, the livelihoods of millions of people working along the food chain, from farm to fork, and the environmental sustainability of agricultural production systems. The COVID-19 pandemic has therefore further highlighted the vulnerability of agricultural and agri-food systems and a need for innovation to renew development models in Africa. It has led to a situation of rupture, proposing new paradigms of sovereignty and new opportunities in agriculture with the aim of seeking to meet national needs to limit imports while offering products for export to improve trade balance.

In this context, African agriculture must reinvent methods of production, processing and distribution of agricultural and agri-food products in a long-term vision that takes into account the concerns of the populations and their development challenges. Africa must therefore rely on enormous possibilities for increasing its agricultural productivity and agri-food processing. To unlock this potential, the Science Agenda for Agriculture in Africa (S3A)¹ calls for the science, technology, extension, innovations, policy

¹ FARA, 2014. Science Agenda for Agriculture in Africa (S3A): “Connecting Science” for Agricultural Transformation in Africa. Forum for Agricultural Research in Africa (FARA), Accra, Ghana

and social learning that Africa must apply in order to achieve its agricultural development by 2063².

CORAF, in the implementation of its Strategic Plan 2018-2027³, also relies on the adoption of science, quality technologies and innovations, access to resources and outlets, free trade and common regulatory frameworks which constitute the best solutions to achieve agricultural transformation in West and Central Africa. These solutions would contribute to food and nutritional security. Three (03) priority intervention areas (PIA) of this plan relate to: i) Agriculture, food and nutritional security; ii) Policy, Institutions, Markets and Trade; iii) Gender, youth and social equity.

To operationalize this strategy, CORAF is working to create favorable conditions for agricultural innovation and for equitable and sustainable food systems in West and Central Africa. Thus, nine (09) projects were carried out in 2021 contributing to the following actions:

- improve the production of agricultural cropping systems and provide healthier and more nutritious food using less land, less water and chemicals, producing less waste and emitting less greenhouse gases;
- increase the competitiveness of agricultural value chains;
- scaling up and making available growth-enhancing innovations;
- strengthen the institutional and human capacities of NARS, farmers' and non-governmental organizations;
- consolidate and diversify the partnership to mobilize skills and resources to support the creation of agricultural innovations and their scaling up;
- investing in the professions of the future and empowering vulnerable groups, in particular women and young people;
- catalyze increased private sector investment in research and innovation, particularly for market access and trade in Africa;

- translate the innovations and knowledge generated for decision support, formulation and implementation of development policies.

This 2021 Annual Report presents the progress made in the implementation of the nine (09) projects executed during the reporting year. For a better understanding and easier reference to CORAF's Strategic Plan and Operational Plan, the achievements contributing to CORAF's four results are presented separately according to CORAF's three Priority Intervention Areas (PIAs) which are: PIA 1 - Agriculture, food and nutrition security; PIA 2 - Policies, Institutions, Markets and Trade and PIA 3 - Gender, Youth and Social Equity.

This annual report is structured around five sections, namely: i. Progress made in achieving CORAF's four results, ii. Partnerships, iii. Resource mobilization, iv. Governance and v. Administration and finance. Each section reviews the achievements made during the operational year.

Overall, the progress reported indicates excellent performance by CORAF which, through its leadership as an African sub-regional organization, is helping to strengthen research and innovation funding for agricultural development in West and Central Africa.



Dr. Angela Maria P. Barreto da VEGA MORENO
Présidente du Conseil
D'Administration du CORAF

²AU, AFRICAN UNION COMMISSION. AGENDA 2063. The Africa we want. Common Strategic Framework for Inclusive Growth and Sustainable Development

³CORAF, 2018. The CORAF Strategic Plan 2018-2027. Driving innovation. www.coraf.org



Progress made in the achievement of CORAF's four results



CORAF's ambition is to improve people's livelihoods as well as food and nutritional security in West and Central Africa. This is only possible through a sustainable increase in agricultural production and productivity, as well as the promotion of competitiveness and access to markets. CORAF's Strategic Plan (2018-2027) was designed to strengthen agricultural research, agricultural extension and advisory services, and the capacities of stakeholders, as well as to establish and coordinate communities of practice in the field of agricultural research and development in the region. This strategy aims to:

- increase the use of appropriate technologies and innovations in the region;
- increase adoption of strategic decision-making options for policies, institutions and markets;
- strengthen institutional and human capacities in agricultural research for development;
- meet the demand for agricultural knowledge of target customers.

To achieve these four results, the focus is on three Priority Intervention Areas (PIAs) which are supported by three Activity Pillars (APs) below.:



**Food and
Nutrition
Security**

PIA1



**Policy,
institutions,
markets and
trade**

PIA2



PIA3

**Gender, youth
and social equity**

These three areas are supported by three activity pillars (AP) namely:

AP 1.

Building communities of practice on scaling technologies and innovations to achieve sustainable impact

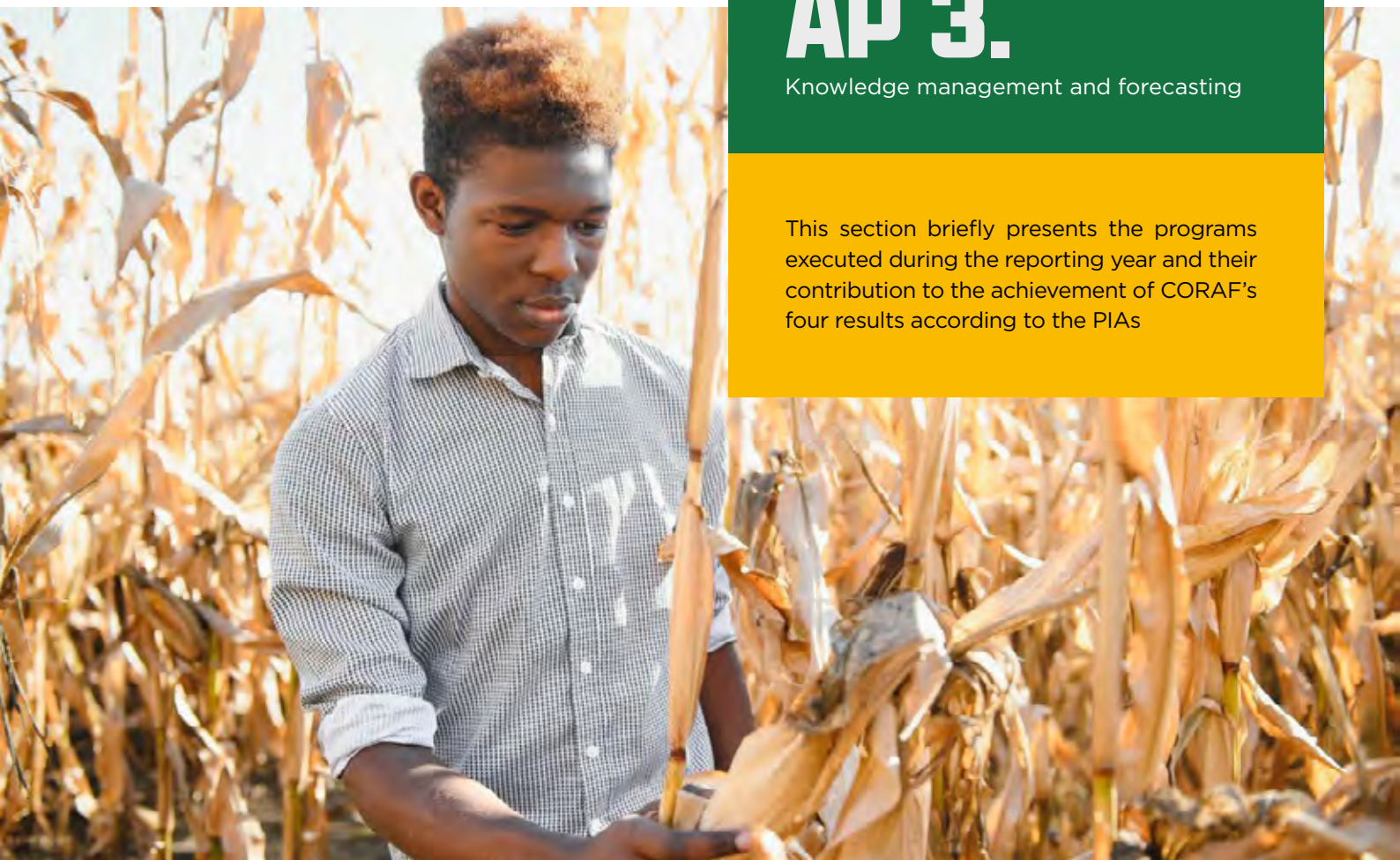
AP 2.

Strengthening of integrated regional capacities in the field of agri-food research and innovation

AP 3.

Knowledge management and forecasting

This section briefly presents the programs executed during the reporting year and their contribution to the achievement of CORAF's four results according to the PIAs



Projects implemented in 2021 and main achievements

A total of nine (09) projects were implemented in 2021, including six that were already underway and three new ones that started during the reporting year.



The project “Strengthening networks and institutional capacities in plant breeding for the development of resilient crops that meet the needs of farmers in West Africa» (West Africa Breeding Networks and Extension Empowerment - ABEE) is funded by the European Union as part of the initiative “Development Smart Innovation through Research in Agriculture - DeSIRA” for a period of five years (2019-2024) and with an overall budget of 8,771,930 Euros.

This project aims to contribute to the sustainable increase of agricultural productivity and the resilience of smallholder farmers given the population growth, economic vulnerability and climate change. More specifically, ABEE aims to implement a better coordinated approach to varietal selection, both at regional and national level, by placing breeders of five target crops (millet, sorghum, fonio, groundnut and cowpea) from three countries (Burkina Faso, Niger and Senegal) at the heart of the action to improve and modernize their breeding practices and better respond to market demands.

It is implemented in collaboration with CIRAD, Africa-Rice through the Integrated Breeding Platform (IBP), the Senegalese Institute for Agricultural Research (ISRA) through the Regional Study Center for Improving Adaptation to Drought (CERAAS), the National Institute of Environment and Agricultural Research (INERA) of Burkina Faso and the National Institute of Agronomic Research of Niger (INRAN).

The project activities have trained a new generation of breeders in the concepts and use of the tools necessary for the modernization of varietal improvement. Additionally, the establishment of multi-local trials at the regional level has favored the organization of the collection and despatching of seeds between the different partners.



The project «Anticipating and managing biological risks to strengthen the resilience of farmers to climate change in West and Central Africa» (BIORISKS) is funded by the European Union under the DeSIRA initiative for a period of five years (2020-2025) and with an overall budget of 5,000,000 Euros.

The BIORISKS project aims to increase the production, yield stability and income of the main food and fruit crops in ten WCA countries (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gabon, Ghana, Liberia, Nigeria, Democratic Republic of Congo, Sierra Leone and Togo) through the control of viral diseases of cassava, the maize armyworm, fruit flies and the strengthening of the capacities of national actors and regional networks to effectively manage biological risks.

The implementing partners are: the WAVE Regional Center of Excellence, hosted by the Félix Houphouët-Boigny University of Abidjan in Côte d'Ivoire; the Biorisk Management Facility (BIMAF) hosted by IITA in Benin and the Regional Center of Excellence for Roots and Tubers of the Council for Scientific and Industrial Research (CSIR) / Crop Research Institute (CRI) of Ghana ; the National Center of Specialization for maize hosted by the National Institute of Agricultural Research of Benin (INRAB) and the National Center of Specialization for Fruits and Vegetables (NCS) hosted by the Institute of the Environment and Agricultural Research of Burkina Faso (INERA).

Through demonstration plots in Cameroon, Côte d'Ivoire, Gabon, Ghana and Sierra Leone, 54 actors (extensionists and farmers) were trained to identify cassava virus symptoms and best agricultural practices to produce clean material and certified seed.

The development of the Plantvillage Nuru application has helped to carry out a correct diagnosis and real-time monitoring of cassava diseases in the plantations of the target countries of the project. 11 extension agents, 32 seed multipliers and 11 selected producer groups were trained in the proper use of smartphones and the Plantvillage Nuru monitoring application. In addition, the project supported the organization of high-level political and technical dialogue workshops to promote decision-making and the formulation of effective policies for the surveillance and management of cassava virus diseases. Following this dialogue, commitments were made to develop harmonized regulations on the management of cassava virus diseases for the two community areas.





The CAADP ex-pillar IV / Project to support African regional and sub-regional organizations for agricultural research and innovation (CAADP-XP4) is funded by the European Union (EU) under its DeSIRA initiative and administered by IFAD. The overall funding is 5,770,000 Euros for a period of four years (2019-2023). The area of intervention is all 23 WCA countries.

The objective of CAADP-XP4 is to stimulate agricultural transformation through innovations in the agricultural and food systems of partner countries, thus making them more resilient to climate change and to better respond to development demands. In particular, it aims to achieve better efficiency of African knowledge and innovation systems, demand-driven public policies in agricultural research and extension services as well as a better sharing of knowledge and technological development for the mitigation of the effects of climate change and the adaptation of the agricultural and food systems of the region.

CORAF, together with the African Forum for Agricultural Advisory Services (AFAAS), the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Center for the Coordination of Agricultural Research and Development in Southern Africa (CCARDESA) and Forum for Agricultural Research in Africa (FARA), are involved in the joint implementation of the CAADP-XP4 program.

Activities undertaken in 2021 led to the revitalization of the Alliance for Climate-Smart Agriculture in West Africa and the creation of an Alliance for Climate-Smart Agriculture in Central Africa. The latter was set up as part of the workshop held in Kinshasa (DRC) from November 24 to 26, 2021, which brought together representatives of Central African countries, regional economic communities, producer organizations, donors, etc. In addition, training sessions were carried out to improve resource mobilization and project proposal writing in AR4D.



COVID-IDRC



The project «Assessing the impact of government COVID-19 responses on food systems and livelihoods in the Sahel» (COVID-IDRC) is funded by the IDRC as part of its Rapid Research Response Initiative. This is a US\$620,230 project over a period of twelve months. It is implemented in Burkina Faso, Cape Verde, Mali, Niger and Senegal with the collaboration of INERA, INIDA, IER, INRAN and ISRA, respectively.

This project aims to improve food and nutrition security in the Sahel, considering the gender context, to combat physical and biological shocks, and in particular against COVID-19 and future pandemics. By learning lessons from ongoing policy formulation and interventions and their impact, this project is expected to help mitigate the impact of the COVID-19 crisis and guide future responses to pandemics in target countries.

Data collections were made on a sample of 10,680 value chain actors (producers, breeders, consumers, processors, transporters and traders) in different regions of the five (5) countries of the study. The measurement studies carried out have identified 250 measures, namely: (i) binding measures to combat the spread of the virus and (ii) support or mitigation measures.



COVID-FAO

The project «Challenges and impacts of the COVID-19 pandemic on food losses in two West African countries» (COVID-FAO) is funded by FAO for an amount of XOF 11,149,956.51.

This project focuses on studying the effects of the COVID-19 pandemic on food losses in Mali and Sierra Leone, in order to determine the impact and formulate evidence-based policy recommendations.

Since the 2009 food crisis leading to a fall in food prices, West African countries have been working to improve their food systems, which has triggered the need for sound policy guidance on food security, food self-sufficiency, improved livelihoods and climate-smart agriculture. In 2017, difficulties in access to food were noted due to inflation, depreciation of the local currency, associated with below-average agricultural production and high dependence on imported food products. Cette situation a été aggravée par la pandémie de Covid-19 qui a freiné les politiques des pays. Restrictions related to the mobility of economic agents, the establishment of a curfew and the closure of markets have interrupted the proper functioning of the food chain. With the closure of borders, the movement of goods, including that of agricultural inputs and products, has been seriously affected. As household economic activities have been extremely impacted, the demand for some products has dropped significantly due to low purchasing power while resorting to reduced coping strategies to survive. This shock in the food system has had a negative impact on the food security situation of the countries by increasing the food insecurity gap. The main drivers of food insecurity during this period are identified as high staple food prices, low food availability in the market and low household purchasing power to ob-

tain healthy and nutritious food.

Through this COVID-19 project, CORAF conducted an assessment that identified the challenges and impacts of the COVID-19 pandemic on food losses, particularly for smallholder farmers in Mali and Sierra Leone. The assessment followed three steps: i) Collection of secondary data through a desk review of relevant literature on the impact of COVID-19 on food losses, ii) Collection of primary data through a group discussion (1 for producers and 1 for traders) and interviews with key informants (1 for the traders' union, 1 for the drivers' union, 1 for the government, 2 for the market women's association and 3 for the NGOs), and iii) data validation through a multi-stakeholder approach. Given the qualitative orientation of the evaluation, the content analysis approach was used to summarise the responses from the various interviews conducted using themes and sub-themes.

The results showed that the economic impact of the pandemic has been felt across all food chains. The perishable product sectors (vegetables, mango and milk) were more affected than the cereal sectors with the occurrence of heavy food losses due to the absence of cold chains. Cold chain and processing development in an enabling environment for value chain thinking among stakeholders, better farmer organizations, investment in capacity building and leveraging the digital platform for extension, services and market access will help address food loss in the value of fresh produce. In cereal supply chains, value chain thinking among actors, strengthening existing farmer organizations, developing funding mechanisms to invest in post-harvest technologies and extension will help prevent post-harvest losses in addition to operating the digital platform.

iREACH

Innovation Research, Extension and Advisory Coordination Hub

Pôle de coordination innovation recherche vulgarisation et conseil

The Innovation, Research, Extension and Advisory Coordination Hub (iREACH) is funded by the United States Agency for International Development (USAID) through its Feed the Future (FtF) program. Through Kansas State University's Innovation Lab for Collaborative Research on Sustainable Intensification (SIIL), CORAF is receiving funding of US\$249,000 for the four-year pilot phase (2020-2024) which is implemented in Burkina Faso, Ghana, Mali, Niger and Senegal.

The objective of this initiative is to strengthen CORAF to enable it to more broadly achieve the objectives of its strategic plan with its wide range of partners in WCA and to increase the efficiency of the various investments in the field of research for agricultural development and sub-regional programming. More specifically, iREACH aims to (i) improve the coordination, alignment and integration of relevant activities; (ii) create and strengthen agricultural technology parks to facilitate the effective flow of information and innovations and (iii) strengthen human and institutional capacities.

The partners contributing to the iREACH initiative, in addition to the NARS of the target countries, are the local and regional missions of USAID, SIIL, IFDC and the Africa Research in Sustainable Intensification for the Next Generation (Africa RISING) program.

Demonstration plots of 16 technologies were established at the National Center for Agricultural Research (CNRA) in Bambey, Senegal as part of the open day attended by 93 visitors including 14 women from 7 countries (Benin, Burkina Faso, Chad, Ghana, Mali, Niger and Senegal) to facilitate an efficient flow of information and innovations.

Within the framework of the iREACH initiative, CORAF has also entered into sub-partnerships with three NARS in Ghana, Mali and Niger for the creation of technology parks.





The “Partnerships for Agricultural Research, Education and Development” (PAIRED) project is funded by the USAID West Africa regional mission. The amount of the project amounts to 15,000,000 US dollars for a period of five years (2017-2022).

PAIRED aims to increase agricultural growth, food and nutrition security as well as poverty reduction in West Africa, particularly in Benin, Ghana, Mali, Niger, Nigeria and Senegal. To achieve this, PAIRED aims to provide CORAF with financial, technical and human resources to achieve greater efficiency and effectiveness in the sub-regional coordination of agricultural research and development, scaling up promising technologies and innovations in key agricultural value chains in the region and increasing the production and availability of quality agricultural inputs through the promotion of contract-friendly business models for the marketing of seeds and fertilizers.

CORAF implements PAIRED with the NARS of the target countries and regional partners such as ECOWAS, CILSS and AFSTA-West Africa.

In order to foster the adoption of improved agricultural practices, trainings on good production practices have been organized by the PAIRED team in the target countries, namely in Ghana, Mali, Nigeria, Niger and Benin, and recorded the participation of 1,460 people, including 618 women. To facilitate communication and sensitization on improved varieties of maize, millet, sorghum and rice in the target countries, 153 dissemination plots (57 on rice, 62 on millet and 34 on sorghum) in Ghana, in Mali, Senegal, Nigeria and Niger have been established.

The PAIRED project in partnership with AGRHYMET and ICRAF organized three workshops to strengthen the capacities of regional actors and farmers to use climate information for decision-making in agricultural production.





As part of the implementation of its Strengthening climate resilience and sustainable agricultural productivity (ProPAD) project in Chad, the Government of Chad has signed an agreement for an amount of US\$770,000 with CORAF. The objective of this funding is to enable Chadian researchers to integrate the network of CORAF Centers of Specialization and to have access to the technologies and know-how generated by these centres.

ProPAD is funded by the World Bank Group for a period of five years (2018-2023). It aims to promote the adoption of improved technologies leading to increased productivity and to strengthen the climate resilience of agricultural production systems in the areas targeted by the project.

The execution of ProPAD has been significantly affected by the COVID-19 pandemic and the political crisis in Chad. Consequently, the activities related to the evaluation of the actors of the ProPAD project in terms of results-based management, the validation of the communication strategy as well as the implementation of the gender action plan have been delayed.

However, the members of the strategic innovation platforms were coached and supervised from October 13 to 22, 2021 in the 3 implementation areas (provinces of Mandoul, Moyen Chari and Salamat) of the project. Similarly, the gender mainstreaming strategy was validated with a first capacity building carried out from November 8 to 13, 2021.





TARSPro

Technologies et Innovations Agricoles pour
l'Accroissement de la Résilience des Systèmes de Production
et des Exploitations Familiales en Afrique de l'Ouest et du Centre.

Par **CORAF**

The «Agricultural Technologies and Innovations Scaling Up Project for Increasing the Resilience of Production Systems and Family Farms in West and Central Africa» (TARSPro) project is funded by the Swiss Agency for Development and Cooperation (SDC) for an amount of 5,682,000,000 XOF for a period of four years (2020-2024).

The objective of the TARSPro project is to ensure the food, nutritional and economic security of the populations of West and Central Africa, in particular in Benin, Burkina Faso, Mali, Niger and Chad. TARSPro envisages to: (i) increase the resilience of the food production systems of at least two million producers/processors, of which 50% women and 60% young people in the five target countries and more than 10 million indirect beneficiaries; (ii) sustainably meet the demand for know-how (technologies and innova-

tions) of at least 40% of the family farms related to project intervention; (iii) ensure a coalition and synergy of actions of agricultural transformation actors.

The implementation of TARSPro is done in collaboration with the NARS and development partners of the relevant countries. The project implementation activity was carried out in 2021. The project contributed to the organization of an agricultural technology fair in collaboration with TAAT (Technologies for African Agricultural Transformation), from October 25 to 29, 2021 in Dakar. The success of the organization of this event motivated the setting up of a partnership framework between the International Institute of Tropical Agriculture (IITA) and CORAF for the institutionalization of the agricultural technology fair in West and Central Africa.



Accomplishments made according to the Priority Intervention Areas

Key strategic interventions and activities coordinated by CORAF during the operational year contributed to improved agricultural production and productivity as well as increased incomes of farmers, processors and entrepreneurs, as evidenced by the achievements reported below. This progress has been achieved thanks to more effective coordination and an increase in the

portfolio of projects which have helped to strengthen research and innovation capacities for agricultural development in the region, to accelerate the scaling up of technologies and innovations and the establishment of effective knowledge management mechanisms.



PIA 1

Agriculture, food and nutrition security

This area of intervention addresses the challenges related to the sustainable increase of agricultural production with food and nutrition security in sight; the effects of climate change on plant (food and cash crops), animal and fish production; management of emerging and re-emerging pests and diseases, in particular monitoring and management of pests; and management of natural resources (soil fertility and water resources) to improve the productivity of food production systems.

During the year 2021, several actions aimed at increasing the use and adoption of improved technologies and agricultural innovations have been carried out as well as for the strengthening of research capacities for agricultural development and sharing agricultural knowledge and information with users. These actions are facilitated through different mechanisms used by CORAF, the most salient of which during the reporting year are reported below.

Innovation platforms and demonstration plots

Innovation platforms create the possibility to connect the various actors in the value chain around a product or a sector chosen by the beneficiaries. Four new innovation platforms have been installed in Ghana, bringing the current total in the WCA region to 36, including six (06) at district level and 30 at community level. The other countries that host the innovation platforms are Benin, Mali, Nigeria, Niger, Senegal and Chad. Through the establishment of demonstration plots and the organization of field days and open days within the innovation platforms, several potential users have learned about the improved technologies that are available. For example, in northern Ghana, 681 farmers were able to discover the improved varieties of rice and maize that were being produced in the area. The demonstration plots were also a platform for experiential learning and raising awareness of good agricultural practices.

Several private sector actors have also been mobi-

lized for the demonstration of improved technologies in these countries in order to ensure a more effective scaling up of agricultural technologies and innovations. These are namely: Cherifian Office for Phosphates (OCP), Seed Co, and several seed companies in Ghana, Mali, Niger, Nigeria and Senegal, in order to establish public-private-producer partnerships. Eight (8) seed companies have already been contracted in Mali (03), Senegal (04) and Ghana (01) for the production of seeds of first-generation improved varieties in collaboration with research institutes. These initiatives will contribute to securing sufficient quantities of quality seeds to boost the production of different crops in the project intervention areas, in particular the PAIRED project.

In addition, as part of the ABEE project, 811 participatory demonstration tests were carried out in farmers' communities with the collaboration of partner farmers' organizations - AMSP, YIYE and Sougr-Nooma in Burkina, RESOPP in Senegal and Fuma Gaskia and Mooriben in Niger. Through these tests, 1,781 producers, 40% of whom were women, were exposed to the improved varieties promoted by the project. The BIORISKS project has established demonstration plots in Cameroon, Côte d'Ivoire, Gabon, Ghana and Sierra Leone after training 54 extension workers and farmers to identify cassava virus symptoms and use best agricultural practices to produce healthy material and certified seeds.

Agricultural Technology Parks

Agricultural technology parks (ATP) aim to raise awareness of improved technologies and agricultural innovations in order to stimulate their use and dissemination. The very first ATP was installed in 2021 in Senegal, at the CNRA in Bambey with the collaboration of CERAAS. Sixteen technologies were presented, including seeds of improved varieties, sustainable intensification practices and agricultural machinery. In addition to occasional visits to the ATP, the ATP's «open day» brought together 93 visitors, including 14 women, from seven countries (Benin, Burkina Faso, Chad, Ghana, Mali, Niger and Senegal). In attendance were farmers, seed company representatives, artisans, extension service agents, scientists, media representatives and local authorities. Thanks to the ex-

cellent media coverage of the event on various media (CORAF website, print and social media), several tens of thousands of people were reached.

In order to ensure good governance of ATPs, the institutions designated under the iREACH initiative have successfully appointed seven members to form the iREACH Advisory Committee, as stipulated in the initiative's working documents. The Advisory Committee approved its terms of reference, the work plan for the initial duration of the project, the planned AWP and the communication protocols including an activity monitoring platform (iREACH Activity Tracker). iREACH Activity Tracker has been developed to track the activities of various partners including FtF's Innovation Labs (IL). In partnership with the Regional Center of Excellence (RCoE) for dry cereals and associated crops, the activities of seven innovation laboratories have been uploaded to the tracker. Data from the activity tracking platform includes research products (scientific papers, innovations, and digital display technologies for scaling) that end users can access. The monitoring, evaluation and learning plan has been completed and several people from ILs (in particular IL for groundnuts, pulses, food processing), NCS/RCoE and CORAF Secretariat have been trained in the use of the tracker.

For the establishment of ATPs in Ghana, Mali and Niger, CORAF has succeeded in attracting the interest of various organizations including 16 ILs, IFDC and AfricaRISING and in signing new funding agreements. For the ATP of Niger, which is oriented towards livestock farming, IFDC has positioned itself and allocated US\$50,000 to this activity against US\$100,000 allocated by CORAF through the Swiss cooperation. In the same vein, CORAF and AfricaRISING have reached an agreement to set up/consolidate the AWP of Ghana and Mali. Similarly, CORAF has contributed US\$100,000 through two projects that it coordinates (PAIRED and TARSPPro). In addition to Senegal, SIIL has committed to providing resources for the establishment of the Burkina Faso AWP to cover all five pilot countries. The NARS have also contributed to the financing of the ATPs by providing land and infrastructure. INRAN offered N'Dounga a fenced plot of 95 ha, about 30 km from the city of Niamey to host the Ni-

ger ATP. The Ghana Crop Research Institute (CRI) has donated 4.8 ha of land to its headquarters in Kumasi to host the Ghana ATP. In addition, AfricaRISING/IITA has offered 11ha of fenced land in Tamale, Northern Ghana to host a satellite ATP in Ghana. In Burkina Faso, INERA offered 5 ha of land at its Farako-Ba research station, less than 10 km from Bobo-Dioulasso town. Visits have been made to the selected sites and the process of subcontracting is underway at CORAF Executive Secretariat for the effective installation of all five ATPs of the pilot phase (Burkina Faso, Ghana, Mali, Niger and Senegal) in 2022.

Despite these significant efforts, more substantial financial resources are needed to be able to cover all iREACH objectives and effectively carry out communication, capacity building and monitoring and evaluation, accountability and learning (MEAL) activities.

Capacity building for agricultural research and innovation in WCA through inter-institutional exchanges, training and infrastructure support

As part of the institutional and human capacity building program of the Chadian Institute of Agronomic Research for Development (ITRAD) through the Pro-PAD project, several actions have been undertaken, among which: several ITRAD researchers working on dry cereals and other crops (maize, rice, fruits and vegetables) have been put in touch with NCS/RCoE research teams; training and/or research missions in Benin (NCS-maize), Burkina Faso (NCS-fruits/Vegetables) and Senegal (RCoE-Dried cereals and associated crops) were organized for ten of them; a multitude of promising technologies (mango drying technology, post-harvest processing of sorghum, machinery for processing millet and peanuts, seeds of improved varieties of sorghum, millet, maize and sesame, etc.) was transferred to ITRAD in order to boost agricultural production in Chad. The seven ITRAD scientists hosted at CERAAS have been trained in the management of crop genetic resources. The other three are about to transit to centers of specialization in maize (Benin) and fruits and vegetables (Burkina Faso).

As part of the regional exchange network for varietal material piloted by the dP IAVAO, 178 trials were conducted in the three target countries of the ABEE project and 238 varieties were shared for multi-local evaluations: 41 varieties for sorghum, 38 for millet, 22 for cowpea, 19 for fonio and 20 for groundnut in addition to 49 short cycle varieties previously in the IAVAO network and 49 intermediate cycle varieties from ICRISAT. Thanks to these adaptation tests in different countries, the network helps to pool the efforts of varietal creation and to quickly have high-performance varieties.

Thanks to a series of trainings that they attended, 14 scientists from different NCS/RCoE and the CORAF Executive Secretariat acquired new skills relating to the evaluation of agricultural technologies according to sustainable intensification criteria in accordance with environmental and social safeguard regulations. In addition, within the framework of the PAIRED project, seven training modules on quality seed production and teaching materials are being developed by regional experts recruited by CORAF. These modules are intended for online training on “the production and supply of quality seeds and the management of seed companies in the West African context”. The training targets at least 500 people. Following the expression of NCS/RCoE training needs, innovation laboratories were invited to conduct training sessions in their areas of expertise.

In order to build the capacity of seed entrepreneurs, CORAF, through the PAIRED project, continued to widely disseminate the training tool on seeds, developed by FAO. It is a training comprising six modules: Module 1 - small-scale seed enterprise development; Module 2 - seed processing: principles, equipment & practice; Module 3 - seed quality assurance; Module 4 - seed sector regulatory framework; Module 5 - seed marketing, Module 6 - seed storage. To date, nearly 150 seed actors, including seed companies, seed production cooperatives and government officials, have received the modules through CORAF/PAIRED networks.

The capacities of breeders and technicians (17, 29%

of whom are women) from various varietal improvement programs have also been strengthened through training on the use of modern breeding methods and the definition of demand-based breeding product profiles. To date, twenty-six breeders, including 06 women, use and master the Breeding Management System (BMS) through the development of trials with the tool, data collection and storage using tablets on the BMS. Eleven breeders, including one woman, effectively use molecular markers in their breeding program. Five product profiles have been defined through consultation mechanisms with target stakeholders to make millet-based “foura” (2), sorghum tô (meal) (2) and cowpea-based “kossei” (1). Thus 12 selection programs supported by the ABEE project have changed the way they define their selection priorities based on the demand of end users (producers, processors, consumers).

Within the framework of the BIORISKS project, standardized disease sampling and diagnostic protocols have been developed and shared with stakeholders in the 10 target countries, as well as rapid-to-deploy tools to facilitate the collection, storage and expedition of cassava disease samples. At least 13 scientists from the WAVE Center of Excellence participated in the workshop to share standardized sampling and disease diagnosis protocols. Two awareness workshops on a coordinated strategy for the fight against biological risks (autonomous armyworm) were also held.

One such diagnostic tool is the Plantvillage Nuru app. It enables correct diagnosis and real-time monitoring of cassava diseases in plantations. The application was installed in 260 smartphones acquired by the project and distributed to target actors in the Democratic Republic of Congo (120), Gabon (40), Sierra Leone (40) and Cameroon (60) to begin the diagnosis. Eleven extension workers, 32 seed multipliers and 11 selected producer groups were trained in the proper use of smartphones and the Plantvillage Nuru monitoring app. In addition, in Côte d'Ivoire, Gabon, Ghana and Nigeria, simulation exercises have been carried out and a database has been set up in each of these countries to process and store the collected data.

CORAF also contributes to the training of the next generation of agricultural science researchers through the award of thesis and master's scholarships. As part of the TARSPRO project, 10 scholarships (04 PhD and 06 Master) per target country will be offered to deserving students, 50% of whom must be women. Within the framework of the ABEE project, nine students, including two women, were recruited to carry out a thesis in varietal improvement in the various target countries of the project. In addition, 36 Master II students, including 07 girls, are enrolled in the project for their research dissertation. Six of them have already defended their theses. As part of the BIORISKS project, 13 thesis students in sociology or virology, recruited taking gender into account in each of the 10 countries participating in the project (i.e. 38% women) are also trained in scientific writing and leadership. Scholarships and subsistence expenses were granted to them so that they could carry out their research work in the project's authorized laboratories.

Furthermore, CORAF provides considerable infrastructure support to national programs through the projects it implements. For example, the ABEE project distributed 16 vehicles, 25 computers, 20 tablets, irrigation systems, boreholes, fence, drying area, greenhouse, etc. to NARS. The BIORISKS project has enabled the renewal of the equipment and disease identification kits of the UFHB-WAVE laboratories. These investments contribute to the upgrading of institutions but also to the sustainability of project achievements.

Agricultural technology fairs and markets

Through the organization of the first West African technology fair aimed at agricultural transformation, and held from October 25 to 29 at the King Fahd hotel in Dakar jointly with IITA through the TAAT program, CORAF presented a wide variety of technologies from NCS/RCoE and the TAAT program to nearly 180 participants, including 27% women and 47% young people (aged 35 and below) and coming from 28 African countries. This event not only helped to learn about improved technologies and agricultural innovations, but also to open brokerage channels

between technology seekers and providers. The success of this fair led to the signing of a partnership agreement between CORAF and IITA/TAAT for the institutionalization of the annual organization of the agricultural technology fair.

The (online) Marketplace for Agricultural Innovation and Technology (MITA), which had been developed within the framework of the West Africa Agricultural Productivity Program (WAAPP), was improved with the support of the PAIRED project in order to make it more user-friendly and attractive. At the end of 2021, more than 8,500 visitors were registered on this platform compared to 6,300 in 2020.

Physical distribution of information materials

During the open days of the innovation platforms and the ATP of Senegal, awareness-raising efforts were supported by the production and distribution of information materials such as brochures/technical sheets on the technologies presented (improved varieties of different crops, crop intensification options in particular millet and cowpea, integrated crop management approaches, etc.). For example, at the Northern Ghana Innovation Platform Open Day, 589 farmers received brochures on integrated pest management and optimal use of fertilizers for target crops. These operators are expected to share the knowledge and experiences acquired with their peers, thus creating a ripple effect and a wider dissemination of information.

Electronic monitoring, evaluation and knowledge management platforms

The online MEAL system and knowledge management platform that had been initiated to enable CORAF to monitor the implementation of its Operational Plan and the execution of associated projects and programs as well as the generation, codification and sharing of data and information between stakeholders have been strengthened this year. Following the deployment of the electronic platforms, a working group was set up to operationalize and institutiona-

lize them for use by the CORAF Executive Secretariat and the NARS. A framework for effective engagement of NARS stakeholders in project implementation and monitoring of progress has also been developed. Thanks to these tools, CORAF ensures the safeguarding of its institutional memory but also the capitalization of the various projects and programs carried out to avoid the loss of information and a more effective documentation of the achievements.

Furthermore, CORAF has undertaken the mapping of Climate Smart Adaptation (CSA) initiatives in West and Central Africa. With this database, CORAF will be able to inform stakeholders on ongoing efforts in the area of adaptation to climate change with a view to harmonizing interventions and improving regional coordination. In the first eight countries (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Mali, Nigeria, Senegal and Togo), 569 CSA initiatives were identified. The process of data collection in the remaining 15 countries is ongoing.

A CAADP-XP4-wide roadmap, titled Akosombo Integration Agenda, to improve the interoperability of CAADP XP4 knowledge management systems has been developed. In addition, a continental data entry strategy has been designed and validated. Similarly, as part of the ABEE project, a knowledge and data management platform is being created with the various partners/programs for the selection of target countries and crops in order to capitalize on the various research results.

The CORAF website document repository/directory has been restructured to enable our clientele to have easy and quick access to relevant documents. A draft strategy for ISO 30401 (Knowledge Management) and ISO 27001 (Information Security Management) standards has been developed and training has been conducted through the AFAAS leadership. As part of the implementation of this strategy, CORAF is in the process of procuring ISO 30401 and ISO 27001 standards for the upgrading and compliance of its internal knowledge management system.



PIA 2

Policies, institutions, markets and trade

This priority intervention area focuses on increasing the value addition of agricultural value chains and the marketing of crops, livestock and fisheries products; improving access to markets, sustainable seed systems and other agricultural inputs; promotion of family enterprise development to attract smallholders to invest in agriculture-based enterprises and promotion of agricultural and agro-processing industries. It is one of the major components of the policies and priorities of the ECOWAS Agricultural Policy (ECOWAP), the WAEMU Agricultural Policy Unit (UPA) and the Common Agricultural Policy (CAP) of ECCAS.

Thanks to its leadership in the sub-region, CORAF weighs significantly in the adoption of strategic decision-making based on convincing scientific results for policies, institutions and markets in WCA. During the reporting period, CORAF was heavily involved in different partnerships and high-level consultations to facilitate access to agricultural inputs, support the implementation of different regulatory frameworks and advance dialogue on climate change and biological risk management.

Promotion of access to agricultural inputs in quantity and quality

By continuing efforts to deploy the FeSeRWAM platform, the number of agricultural input packages increased from 373 to 510 for the operational year. The FeSeRWAM platform integrates a composite map of recommendations for fertilizers and seeds of improved varieties for West Africa to promote the productivity of agricultural production systems. Through this PAIRED project initiative, agricultural input packages are developed in partnership with national actors in Togo, Nigeria, Ghana, Mali, Côte d'Ivoire, Senegal, Burkina Faso, Niger and in Benin and with the collaboration of IFDC through its program known as « Improving growth through regional agricultural input systems » (EnGRAIS). The use of these fertilizer/va-

riety recommendations in the different agro-ecologies is promoted through innovation platforms and other mechanisms implemented by the NCS/RCoE as well as the countries. Thus, high-yielding, disease-resistant and climate-resilient rice, maize, millet and sorghum varieties as well as appropriate fertilizer recommendations and good agricultural practices have been deployed in Benin, Ghana, Mali, Niger, Nigeria, and Senegal, as part of the PAIRED project.

Thanks to the electronic seed demand forecasting tool that had been developed by CORAF, also through the PAIRED project, accuracy has increased in estimating the demand for seeds of different generations and in appropriate production planning based on anticipated demand. Several seed companies and government agencies use this platform to better plan and organize the production and marketing of seeds and avoid shortages or overproduction. In addition, 86 seed actors, 20% of whom are women, have been impacted by the ABEE project, through series of national consultation meetings to assess the effectiveness of seed production systems and identify the limits and bottlenecks in the three target countries.

Through these actions, CORAF contributes not only to the dissemination of proven technologies and innovations that improve agricultural productivity, but also to the creation of an enabling environment for the production and marketing of appropriate and quality inputs.

Support for the establishment and implementation of regulatory frameworks

As part of the implementation of the regional seed policy and regulation, CORAF funded, through PAIRED, the regional technical meeting of experts to develop the modalities for updating the electronic database for managing the regional catalog of West African plant species and varieties. Seventeen participants from Burkina Faso, Mali, Nigeria, Senegal and

Chad and regional organizations (UEMOA, INSAH/CILSS, CORAF and FAO/Burkina Faso Office), including breeders from the public and private sectors, seed inspection and certification specialists, seed policy experts and ICT specialists, took part in this workshop which was held in Ouagadougou, Burkina Faso from February 1 to 4, 2021.

CORAF, with the support of a group of five experts in plant improvement, has developed on behalf of ECOWAS-UEMOA-CILSS the harmonized protocols for the conduct of multi-local trials of VATE (Agro-nomic, Technological and Environmental Values) for the certification of varieties of 15 priority crops (rice, maize, sorghum, millet, cowpea, groundnut, cassava, potato, yam, wheat, sesame, soybean, sunflower, sweet potato and cotton). In the absence of an international guideline for the conduct of DUS (Distinctness, Uniformity and Stability) for local eggplant (Jaxatu), CORAF has developed a guideline document for the harmonized conduct of DUS trials for the approval of local eggplant, following the procedures of international standards.

In addition, CORAF supported ECOWAS in the development and adoption of the «Regional implementing regulations on harmonized methods of phytosanitary control and certification for seeds in the West African region». This regional implementing regulation, which complements the harmonized seed regulation, aims to prevent the introduction and spread of pests and diseases through seeds and seedlings in the region. It was adopted by representatives of ECOWAS, WAE-MU and CILSS member states during a statutory meeting of the regional seed committee, in June 2021, in Conakry, Guinea.

Contribution to political dialogues to deal with climate change

Through high-level political actions, CORAF contributes to advancing climate-smart agriculture in WCA. During the reporting period, CORAF organized, within the framework of CAADP-XP4 activities, the Science/Policy Dialogue in West and Central Africa in preparation for the UNFCCC contribution to COP26. Twenty African climate change researchers/scientists from 18 organizations took part in this dialogue to support

UNFCCC focal points with scientific evidence for the COP26 negotiations.

CORAF has also engaged with ECOWAS, ECCAS, One CGIAR/CCAFS, UNFCCC focal points, CAADP and CAADP-XP4 focal points as well as farmers' organizations and civil society organizations in virtual dialogue meetings on climate-smart adaptation in West and Central Africa. The objectives of these dialogues were to (i) revitalize the West Africa CSA Alliance and establish the Central Africa CSA Alliance; (ii) take stock of national priorities based on National Agricultural Investment Plans (NAIPs) and (iv) strengthen links between scientists and decision-makers. The dialogue meetings resulted in action plans regarding the implementation of the first objective under the leadership of CORAF.

Regional Coalition to Prevent and Manage Biorisks

A high-level political and technical dialogue on cassava virus diseases was organized in Abidjan, alongside the inauguration ceremony of the WAVE Regional Center of Excellence hosted by the Science and Innovation Hub of the Félix Houphouët Boigny University. Several members of the Ivorian government and other countries took part in the political dialogue: the Minister of Agriculture and the Minister of Higher Education of Cote d'Ivoire; the Minister of Agriculture of Gabon as well as the Minister of Agriculture, the Minister of Innovation and the former Minister of Family, Women and Youth of Sierra Leone. In attendance also was, the ECOWAS Commissioner in charge of Agriculture, Environment and Water Resources, the ECCAS Director of Agriculture, the Executive Director of CORAF, the Secretary General of CAMES, the President of the Félix Houphouët-Boigny University, representatives of the European Union, the Bill and Melinda Gates Foundation, the Commonwealth Federal Organization for Development (Great Britain), the African Development Bank, Islamic Development Bank, as well as technical partners such as FAO, AfricaRice, IITA and ARAA.

This political and technical dialogue helped to sensitize decision-makers not only on cassava viral diseases but also on other transboundary pests and diseases.

Recommendations were made on how to harmonize regulations to minimize the spread of these pests and diseases and also to have a sustainable and effective surveillance mechanism in the ECOWAS and ECCAS regions.

Analysis of policy interventions for the management of the COVID-19 pandemic

Through the COVID-IDRC project, more than 250 measures taken by the governments of Burkina Faso, Cape Verde, Mali, Niger and Senegal as part of the management of COVID-19 have been identified. These are binding measures to combat the spread of the virus and also support or mitigation measures. Data was collected in different regions of the target countries on a sample of 10,680 value chain actors (producers, breeders, consumers, processors, transporters and traders).

The measures that have most affected the actors of the selected value chains are, in order of importance, the closure of borders, the limitation of social gatherings, the closure of educational establishments, and the state of emergency /curfews. The restrictive measures have negatively affected the region while the accompanying measures have had positive effects. Government responses have had a negative impact

on the availability of labour, access to markets, movement of herders and herds, food prices and have created discrimination against vulnerable groups, especially women who have been more impacted than men. In addition, the analysis of marital status shows that single mothers and widowed women are more exposed to the negative effects of the measures taken.

The restitution of the results of the study was carried out at national and regional levels with the involvement of representatives of the Ministries of Health, Agriculture, Social Affairs and Gender, the NARS and farmers' organizations. Policy recommendations and more inclusive and equitable actions have been formulated to better respond to the effects of COVID-19 on food systems and livelihoods in the Sahel, and to better respond to future pandemics. In addition, the results of this study have been widely disseminated, with media coverage provided by 12 national and private television channels and at least 27 press articles produced. Thanks to this media coverage, which facilitated the national and regional dissemination of the results to political decision-makers and value chain actors, better ownership is expected in order to facilitate the implementation of the recommendations made.



PIA 3

Gender, Youth, and Social Equity

This priority intervention area addresses issues related to equitable access to resources, opportunities and benefits in the field of agricultural research and development, taking into account gender and vulnerable groups. It helps to target the specific needs of women farmers, processors as well as entrepreneurs and agricultural professionals to ensure that equal opportunities are offered to them to benefit from the interventions of agricultural research and development programs and to support youth employment.

Through its Gender, Youth and Social Equity Program, CORAF provides the technical support necessary for the integration of gender and youth dimensions in the various projects and programs of the CORAF Executive Secretariat, as well as in the initiatives carried out by its partners, including NARS, Regional Economic

Communities (RECs) and the One CGIAR. These advisory and support actions, as well as certain specific gender-oriented activities in the projects, make it possible to address priority issues in terms of gender and youth employment, in accordance with CORAF's 2018-2022 Operational Plan. Gender and youth dimensions are taken into account in a cross-cutting manner in all CORAF project interventions, with a target of at least 40% women and 30% young beneficiaries both in technology dissemination activities and capacity building in agricultural value chains, and access to various agricultural productive resources. This is facilitated by the establishment of a gender-sensitive reporting and dissemination system for project results with the disaggregation of contractual indicators by sex and age.

Integration of gender and youth dimensions in CORAF-led projects and programs

During the year 2021, CORAF's Gender, Youth and Social Equity Program provided the PAIRED project team with technical support on gender, through its participation in project review meetings with the USAID team and in the meeting held with the gender focal points of the target countries. These interventions enabled the assessment of the status of the implementation of the project's gender activities in the countries and to propose corrective actions to improve the gender performance of the project. Similar actions of monitoring/evaluation relating to the consideration of gender, young people and social inclusion in the projects have been carried out with the heads of other CORAF projects, namely the ABEE, BIO-RISKS, CAADP-XP4 projects, iREACH and ProPAD. In addition to sensitization of project managers, in the case of the iREACH project, gender-sensitive technologies were selected to be included in the AWP; as part of the ABEE project, the specific needs and strategic interests of women and young people are taken into account in the choice of farmers' plots with farmers' organizations; in the case of the ProPAD project, a gender strategy was developed and validated in Ndjamena in Chad with the participation of PRO-PAD executing agencies. This was followed by an initial capacity building of the Project Coordination Unit and the project executing agencies (ANADER, ANAM, ITRAD, CNCPR, CELIAF, DSP, DPVC, DEPS, etc.) on mainstreaming gender in agricultural research and development. Internal monitoring/evaluation makes helps to improve the gender performance of projects by highlighting the achievements in this area and by systematically recording the number of female and young beneficiaries reached in the execution of projects.

Within the framework of the Food Systems Resilience Program funded by the World Bank, CORAF plans to strengthen the scientific and leadership capacities of women and young researchers. To this end, the Gender, Youth and Social Equity Program of CORAF worked with the AWARD program to ensure the relevance of the activities and the planned budget and

to define areas of collaboration with AWARD. Several scenarios were presented for countries to support the AWARD scholarship for potential beneficiaries.

A discussion panel on the theme "Female Leadership: Strategies to respond to the impacts of COVID-19 on the empowerment of women in agriculture" was organized during the celebration of International Women's Day 2021 at CORAF Executive Secretariat. Panelists came from the ECOWAS Center for Gender Development and ISRA/CERAAS. On this occasion, the overall results of CORAF's gender policy were presented, under the chairmanship of Dr. Angela Moreno, President of the CORAF Board of Directors.

Furthermore, in 2021, CORAF updated its gender and youth policy and strategy to align it with the Strategic Plan (2018-2027) and taking into account regional priorities. The draft of the 2023-2027 gender policy, strategy and action plan was presented to the members of CORAF's STC during their statutory meeting at the end of 2021.

Technical support to NARS for gender mainstreaming in their projects and programs

ISRA/CERAAS benefited from the support of CORAF within the framework of the drafting of the proposal for the funding of the « Crop Innovation in West Africa" (CIWA) initiative for genetic gain and rapid development of varieties of sorghum, pearl millet and cowpea" which was submitted to the Innovation Laboratory for Crop Improvement (ILCI). This initiative aims to advance plant breeding to reduce malnutrition and hunger and provide equitable benefits to women and youth in Senegal, Burkina Faso and Niger. CORAF contributed to improving the gender section and indicators that correspond to the gender objectives of the project.

Technical support to regional and international partners for the integration of the gender dimension in their initiatives

During the year 2021, CORAF was asked by several partners, including ECOWAS, FARA, One CGIAR/ICRISAT, LadyAgri, African Union/ARC, ROPPA and OECD

for related events and consultations to gender and equity. In addition, CORAF's gender advisor, in her capacity as a member of various governing bodies of organizations or initiatives, has guided partners for the effective consideration and inclusion of the gender aspect in their activities.

As part of the United Nations Food Systems Summit (UNFSS), FARA organized the webinar on "Sustainable Financing of Research and Innovation to Improve the performance of Africa Food System". The CORAF Gender Advisor took part by facilitating the session on "Capacity building for gender-responsive private sector engagement and investments in African agriculture for an inclusive food system". Additionally, she participated as a panelist in the UNFSS Summit Independent Dialogue, on "Building Resilient and Sustainable Food Systems: How Can Emerging Lessons from Communities Affected by COVID-19 Shape the way forward?". This dialogue brought together a range of stakeholders and discussed perspectives on the impact of the COVID-19 pandemic on food systems and livelihoods, focusing on the evidence and experience generated from the most affected communities in low-income countries to generate ideas for action. This event was co-convened by Canada's International Development Research Centre (IDRC), the Institute of Development Studies (IDS) and the Australian Centre for International Agricultural Research (ACIAR).

CORAF, represented by its Gender Advisor, also took part in the Virtual High-Level Policy Dialogue on Gender Equality in West Africa "From Data to Policy Action: Addressing Gender-Based Discrimination in Social Institutions". The main objective of the dialogue was to discuss relevant actions needed to respond to gender discrimination in social institutions. The event was organized by the OECD, in collaboration with DEV Gender and the AfDB, and recorded the participation of the Ministers in charge of Gender from Cape Verde and Burkina Faso, the Vice-President of the AfDB (Yacine Fall), senior gender officials, and the ECOWAS Commissioner for Gender and Social Affairs. CORAF Gender Advisor expressed interest in being involved in the implementation of the OECD Gender Action Plan knowing that economies are more resilient, productive and inclusive when they reduce gender inequalities for sustainable food and

nutrition security.

As a member of the Independent Advisory Committee of the One CGIAR Program on Grain Legumes and Dryland Cereals (GLDC), a program implemented in Sub-Saharan Africa and Asia, the Gender Advisor of CORAF participated in the 7th and 8th meeting of this committee. She presented comments on the status of implementation of the gender component of the program and made recommendations aimed above all at contributing to the sustainability of the gender impacts of the program, after its closure at the end of 2021.

On the occasion of the celebration of International Women's Day organized by the ECOWAS Gender Development Center, CORAF's Gender Advisor gave a presentation on « "Empowering Women in the Context of COVID-19 with Gender and Climate Sensitive Technologies and Innovations". The event recorded the participation of ministers in charge of gender from ECOWAS countries and/or their representatives. CORAF's expertise in gender has earned it consideration among the partners in the roadmap for the implementation of the action plan of the ECOWAS Gender Center. In addition, the CORAF Gender Advisor has been appointed as a member of the Technical Committee on Equity, Resilience and MEAL for the ECOWAS Rice Observatory. She helped to identify regional and national gender priorities in observatory activities that align with the ECOWAS regional rice action plan.

During the official launch of the Gender and Disaster Risk Management Platform, at the ARC (African Capacity for Risk Management) initiative, a specialized institution of the African Union, CORAF's Gender Advisor was asked to deliver a presentation on the theme «Empowering women researchers to effectively contribute to influencing decision-making in favor of gender equality and women's empowerment in climate risk management». At the same time, CORAF was officially registered in the Gender and Climate Risk Management Platform of the African Union.

CORAF has initiated exchanges with the Platform for Agricultural Risk Management (PARM), a program hosted by IFAD (Rome), with a view to identifying areas of collaboration within the framework of their

gender program. The two institutions will pool their resources during the implementation of their gender activities, such as the use of CORAF WebTV to disseminate the gender manual of the IFAD/PARM platform as well as the involvement of IFAD/PARM as a stakeholder in CORAF projects.

Promoting Women and Youth

Entrepreneurship

With the aim of facilitating access to credit for women and young project beneficiaries, CORAF is working to develop a partnership with Lady Agri Impact Investment Hub (LadyAgri). LadyAgri is a non-profit association specialized in supporting enterprises in agricultural value chains, in particular enterprises with a strong female component. The realization of this initiative between CORAF and LadyAgri will significantly contribute to the sustainable development of gender-sensitive agribusiness in the region.

The Executive Secretariat of CORAF received the visit of a delegation from the ROPPA Women and Youth College, led by the Honorary President Mr. Mamadou Sissoko, to examine sustainable ways to involve ROPPA women and youth in the various CORAF projects implemented across the region. During the meeting, a roadmap was adopted by the stakeholders and the modalities for its implementation were discussed.





Partnerships



In 2021, CORAF signed and materialized funding, collaboration or execution agreements with national and international, scientific, technical and development partners, donors and Regional Economic Communities, sub-regional organizations and the private sector. This diversity of partnerships mobilized during the reporting year highlights the synergies that are capitalized on in an effort to produce results that will have an impact on livelihoods in WCA.

Scientific and technical partners

Scientific and technical partners participate in the planning, design and implementation of CORAF's research and development activities. This category of partners includes the One CGIAR, national and international research institutions and non-governmental organizations. Existing partnerships have been maintained and strengthened while new ones have been initiated during the year 2021.

Scientific partnerships

These are strategic partners in the development of technologies and innovations, particularly in the field of support for national agricultural research institutes and other NARS organizations. These include:

One CGIAR: CGIAR entities operating in the CORAF region continue to be strategic partners in the development of technologies and innovations particularly in the area of support to national agricultural research institutes and other NARS organizations. During the reporting period, partnership agreements with several One CGIAR centers were renewed or signed to:

- strengthen collaboration in support of the generation and adoption of agricultural technology in Africa with the African Agricultural Technology Foundation (AATF);
- Accelerate the Impacts of CGIAR Climate Research for Africa (AICCRA Project) Coordinated by ILRI. International Center for Tropical Agriculture - CIAT, which has a funding agreement with the International Development Association;
- collect quantitative information as a basis for understanding the contribution of science and technology to agricultural growth as well as strengthening the monitoring of AR4D in West and Central Africa in collaboration with ASTI/IFPRI;
- align the strategy of the Excellence in Breeding (EiB) initiative with that of the Regional Centers of Excellence (RCoE), and the Crops to End Hunger initiatives for the development of an ambitious program for the transformation of agri-food systems in WCA by making them more adapted to the climate;
- support AfricaRice and IBP in building the capacities of NARS in the digitalization of breeding programs in WCA;
- support the implementation of the Chadian government's ProPAD project (CCAFS);
- Promote and accelerate agricultural research on rice and rice-based systems and strengthen research programs on natural resource management related to the rice sector (IRRI);
- ICRAF, ILRI, IWMI, World Fish and WorldVeg, contribute to the development of Component 2 « Sustainability and Adaptive Capacity of the Food System's Productive Base » of the World Bank project entitled Food System Resilience Program (FRSP).



(data from scientists, partners, production, etc.) on behalf of the Executive Secretariat.

After the signing of a memorandum of understanding between CORAF and Félix Houphouët-Boigny University in 2020, followed by the signing of the final project implementation agreement and the official launch of the project, a high level political and technical dialogue on cassava virus diseases was organized in May in Abidjan.

Technical partners

Technical partners contribute to the implementation of CORAF's 2018-2022 Operational Plan according to their own mandate and interest. The main technical partners of CORAF during the reporting period are:

The NARS of the 23 countries participate in the implementation of the CAADP-XP4 programme. The NARS Directors general have designated focal points for its implementation. Among other missions, they coordinate the collection of essential national data

- The African Agricultural Technology Foundation (AATF): Strong collaboration for the development of the regional agri-input strategy as well as for the implementation of the seed regulation.
- The Alliance for a Green Revolution in Africa (AGRA): Strong collaboration for the development of the regional agri-input strategy as well as for the implementation of the seed regulation. Considering funding a proposal on seed purity and biosecurity in West Africa.
- The International Fertilizer Development Center (IFDC): Several agricultural input packages were jointly developed while the Fertilizer and Soil Map for West Africa based on the main agroecologies of the region has been updated. Recommendations for improved seeds and appropriate fertilizers (EnGRAIS) aim to increase the productivity of the main crops in the different agro-ecological zones of West Africa. The input packages are developed in collaboration with various stakeholders, including the West African Fertilizer Association (WAFA), the Alliance for the Seed Industry in West Africa (ASIWA) and other regional institutions such as CILSS, WAEMU and ROPPA.

CORAF has signed letters of agreement with FAO to carry out:

- A study on the challenges and impacts of the COVID-19 pandemic on food losses in two West African countries (COVID-FAO project);
- A study of regulations and standards for the production of livestock, poultry and fish feed in three (03) West African countries (Benin, Niger and Senegal);
- An analysis of the seed sector landscape in West Africa to identify priority areas, national and regional strategic drivers for sector improvement and program development;
- An assessment of the socio-economic impact of Peste des Petits Ruminants (Ovine rinderpest) epidemics and control measures and cost-benefit analysis of PPR control and eradication programs in Ghana, Niger and DRC;
- Reflections on the Program of the «One Million Silos for West Africa and the Sahel» Initiative in support of ECOWAS for food and nutrition security in the region;
- The design of a roadmap on biological risk management involving all sub-regional institutions and organizations has been developed using the One-Health approach.

Private sector

Recognizing the critical role of the private sector in enhancing quality, efficiency and impact in improving agricultural production and productivity, increasing incomes and enriching livelihoods for millions of farmers and entrepreneurs from West and Central Africa, CORAF has sought to cooperate with private sector entities to foster sustainable improvements in agricultural system competitiveness and markets. In 2021, CORAF consolidated and diversified the partnership with companies seeing that they provide the majority of development investments and jobs, contribute to poverty reduction and can bring solutions to scale in a sustainable way.

The African Seed Trade Association (AFSTA) and CORAF have come together to:

- Engage in negotiations to support the organization of learning and field visits to East Africa on the seed industry (logistical arrangement, planning missions with key stakeholders/organization);
- Collaborate with COMESA to learn and deploy the COMESA regional seed label model in West Africa;
- Liaise with the African Union Inter-African Phytosanitary Council (AU-IAPSC) to support the development of the regional framework and executive regulations for phytosanitary control and seed certification;

- Revitalize the AFSTA West Africa committee to better defend and support the regional seed industry.

The Seed Systems Group (SSG) and CORAF are committed to engaging actions for the sustainable transformation of seed systems in West and Central Africa with a view to developing the seed sector and other agricultural input supply systems and jointly exploring opportunities for funding and productivity gains by promoting the public-private partnership model.

Development partners

As part of its partnership with USAID, CORAF has entered into an agreement with the Innovation Lab for Crop Improvement (ILCI) of Cornell's Feed the Future program for the implementation of technologies, tools and methods aimed at accelerating the genetic gain of crops, improve the profiles of varietal breeding products that meet the development, food security, and nutrition goals of the U.S. Global Food Security Strategy (GFSS). This partnership with USAID has also resulted in initial funding for the start-up of the iREACH initiative through funding granted to Kansas State University (KSU) which hosts the Sustainable Intensification Innovation Laboratory (SIIL) for the installation of technology parks in Senegal for the pilot phase, then in Ghana, Mali and Niger. The iREACH initiative aims to: (i) improve coordination, alignment and integration of relevant activities; (ii) create and strengthen technology parks and facilitate the effective circulation of information and innovations; and (iii) build human and institutional capacity. The USAID mission in West Africa provided financial support to CORAF to facilitate the implementation of the five-year program "Partnership for Agricultural Research,

Education and Development" (PAIRED) in West and Central Africa.

CORAF, with the support of the European Union and IFAD, is responsible for the implementation of the CAADP-XP4 project in West and Central Africa from 2019 to 2023 to contribute to the implementation of the 2030 Agenda and the Malabo Declaration of the African Union (AU) in the West and Central Africa region.

CORAF participates in the development of a project proposed by the World Bank, the Food System Resilience Program (FSRP), and leads the development of component 2: Sustainability and Adaptive Capacity of the Food System's Productive Base.

The Swiss Development Cooperation (SDC) is committed to supporting the implementation of CORAF's 2018-2027 strategic plan. The first phase executed in 2021 is the TARSPRO program which aims to ensure the food, nutritional and economic security of the populations of West and Central Africa.

The International Development Research Center (IDRC) financially supported CORAF in its strategy to assess the COVID-19 pandemic on food production, availability and access, and how this has affected gender relations and equity for the most vulnerable groups.

Also, on "the impact of government responses to COVID-19 on food systems and livelihoods in the Sahel" with particular reference to the specific measures taken in five countries, namely Burkina Faso, Cabo Verde, Mali, Niger and Senegal.

Regional Economic Communities and Intergovernmental Organizations

CORAF collaborates closely with ECOWAS, CILSS and WAEMU in the overall coordination of AR4D, in hosting the secretariat of the Regional Seed Committee of West Africa, as well as the coordination of the development and monitoring of the implementation of the integrated regional strategy for agricultural inputs for West Africa and the Sahel.

CORAF shares its experience and network with EC-CAS. In its role as the technical arm of the Regional Economic Communities (RECs), CORAF continues to seek the necessary budgetary support from the RECs in order to support them effectively. The launch of the CAADP-XP4 project, which includes a significant number of activities to be carried out in Central Africa, should constitute a good basis for continued collaboration and building on the foundations already established.

CORAF, in collaboration with FARA and sister sub-regional organizations (AFAAS, ASARECA, and CCARDESA), is coordinating the implementation of the CAADP-XP4 project in West and Central Africa. During the reporting period, these institutions jointly finalized key indicators and project targets. A baseline survey was carried out at the very beginning of the year, as well as a mapping of existing climate-related initiatives, conducted by FARA. On the other hand, AFAAS led the consortium in the development and adoption of ISO standards for information sharing and knowledge management with members of the CAADP-XP4 consortium and furthermore provided a generic roadmap that its members should follow to achieve these standards.

Other partnership initiatives aim to:

- Strengthen the capacities of the WAVE Regional Center of Excellence in order to contribute to the management of biorisks linked to the spread of cassava viruses which seriously threaten the food security of the populations who make it their staple food. Like other cooperation frameworks, this partnership contributes to the consolidation of the agricultural research and innovation system without which no «inclusive sustainable development of WCA countries» can be envisaged.

- Foster cooperation with the Regional Network of Agricultural Research Policy Institutes (ReNAPRI) for the development and implementation of collaborative programs in training on issues related to national and regional agricultural and plant protection policies in sub-Saharan Africa with the National Academy of Sciences, Arts and Letters of Burkina Faso (ANSAL-BF);
- Transform the seed system in West and Central Africa and achieving productivity gains Seed Co West & Central, a joint venture between Seed Co and Limagrain whose objective is to provide WCA farmers with the best seeds for all farmers, big or small, whether for subsistence farming or commercial farming;
- Provide data, policy analysis and support capacity building to enable the African Union Commission (AUC) and its Member States to achieve economic transformation and shared prosperity in support of Agenda 2063 (AKADEMIYA, 2063).



Resource mobilization



Mobilization of human resources

To support the ongoing institutional reforms, a consultant in charge of handling monitoring and evaluation systems was recruited to replace the ICT manager.

A new Director of Research and Innovation has been recruited to give a new momentum to program quality, project development and the delivery of strategic results.

In addition, a call for the recruitment of a Strategic Partnerships and Resource Mobilization Manager has been launched and the recruitment process is underway.

The Secretariat also mobilizes a critical mass of experts to serve either in their professional capacities as implementing partners in collaborating institutions or as consultants.

As part of the institutional reforms, a review of all staff contracts was carried out by a consulting firm responsible for carrying out the reforms. In this process, a fixed-term contract (CDD) model was proposed. Recommendations were made to abolish the service contracts which could in the future lead to litigation for the institution and to replace them with consultancy contracts. This proposal should be implemented at the beginning of the 2022 financial year for contracts expiring at the end of December 2021. Further to this recommendation, we note that its application is somewhat difficult for certain positions which require full-time presence for better performance. The firm recommends transforming the contracts of service providers who have worked for more than 5 years within the Institution into fixed-term contracts in order to avoid possible disputes.



Mobilization of financial resources

CORAF's resource mobilization strategy has consisted of co-opting commissioned funds from donors to fund programs and activities contributing to the achievement of CORAF's four strategic results. The reporting year recorded a tremendous desire to expand partnerships, diversify resource mobilization efforts and mobilize funds for the operationalization of the 2018-2027 Strategic Plan and the achievement of performance indicators. Thus, CORAF has made notable efforts strengthening financial partnership with traditional donors, broadening the donor base and emphasizing cooperation with non-traditional development partners, such as the Bill and Melinda Gates Foundation, Dangote Foundation, private sector actors, etc.

Resource mobilization efforts focused on advocating for sustainable agricultural research funding. CORAF has worked closely with ECOWAS and CILSS to develop a new program called the West African Food Systems Resilience Program (FSRP) aimed at sustainably reducing food insecurity in WCA. This programme, funded by the World Bank, aims to increase the region's capacity to deal with food insecurity through a regional systemic approach. This innovative program will simultaneously increase agricultural productivity

through climate-smart agriculture, promote intra-regional value chains and trade, and build regional capacity for agricultural risk management. Under the FRSP, CORAF requested USD 10,000,000 from the World Bank.

Six other projects have been submitted (or resubmitted) to various donors including IFAD and FAO for possible funding. The total amount requested is USD 13,045,000.

1. South-South platform and partnerships in R&D and knowledge for sustainable family farming in Portuguese-speaking countries. Amount requested: USD 3,550,000.
2. Employment Opportunities for Rural Youth: Support to Integrated Agribusiness Hubs in Nigeria and Rwanda. Amount requested: USD 3,500,000.
3. Provide opportunities for young people to do business in agriculture. Amount requested: USD 3,608,000
4. Assessing seed quality and genetic purity of selected crops along the seed value chain in Mali, Burkina Faso, Ghana and Nigeria. Amount requested: USD 2,387,000

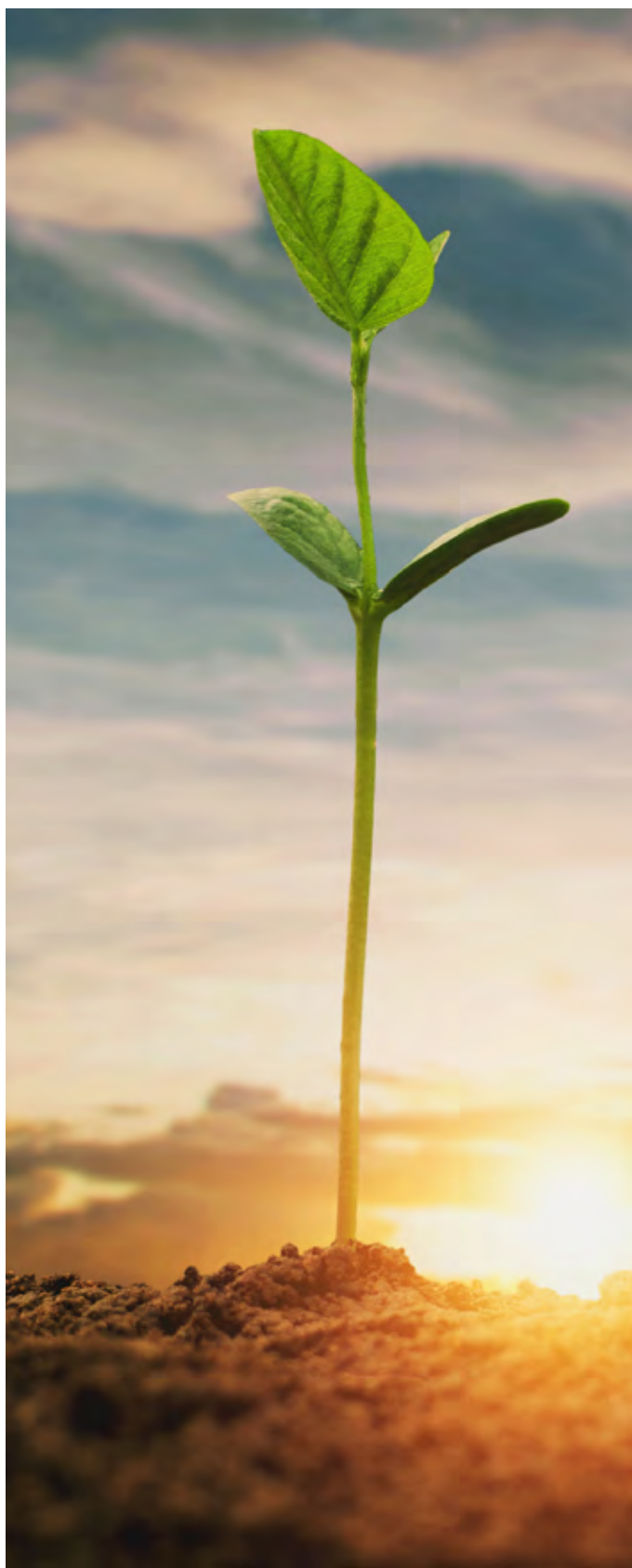
5. One Million Silos Initiative for West Africa, Benin, Ghana, Niger, Sierra Leone, Senegal. Amount requested: USD 145,000
6. Strengthening food safety standards for better competitiveness of SMEs in the Sahel (SF4S), Burkina Faso, Niger and Senegal.

Internally, CORAF has increased its reserve funds through project management, coordination and operating costs.





Governance



Activities of the governing bodies

The CORAF Board of Directors met in its 30th ordinary session from 13 to 15 July 2021 via video-conference to assess the performance of the governing bodies, including the General Assembly, the Board of Directors, the Scientific Committee and Technical and the Executive Secretariat. As a result, 66 governance acts (resolutions, decisions, recommendations) were issued. In the follow-up to these acts, 39 have been completed and 27 are in progress. The implementation status of governance acts and the items requiring decisions and recommendations resulting from the 31st ordinary session of the CORAF Board of Directors from 18 - 20 January 2022, also recorded a good performance of the governing bodies of CORAF. CORAF and enhanced coordination between the Executive Secretariat and the Board of Directors.

The status of implementation of governance acts and the items requiring as well as recommendations resulting from the 31st ordinary session of the CORAF Board of Directors from 18 - 20 January 2022, also recorded a good performance of CORAF's governing bodies and strengthened coordination between the Executive Secretariat and the Board of Directors. The General Assembly also endorsed the decision on the renewal of the term of office of the members of the Board of Directors at the 14th ordinary session of the General Assembly to enable them to effectively oversee the governance reforms initiated by the Board of Directors. This session was an opportunity for CORAF to demonstrate its maturity and willingness to respond to the pressing challenges faced by agriculture in the sub-region: food and nutrition insecurity, disruptions in food supply chains, climate change, Gender Disparities, Massive Youth Unemployment and Rural-to-City Migration in West and Central Africa.

Status of contributions of CORAF member countries

The amount of contributions due by the NARS members of CORAF as of November 30, 2021 amounts to **XOF 217,467,318**. Reminder letters were sent to the various institutions, which made it possible to record a total amount of **XOF 11,000,000** following the reaction of eight of them (INRAB-Benin, INERA-Burkina Faso, INIDA-Cape Verde, IRA-Congo, ISRA-Senegal, ITRAD-Chad, and ITRA-Togo) for arrears for the year 2020 and contributions for the year 2021.





Administration & Finances



Human resources and talents

The Executive Secretariat has 28 employees (12 agents and 16 consultants), 43% of whom are women and 57% men. There is an increase of more than 5% in the percentage of women compared to the previous year. This is a positive aspect in terms of gender inclusion within the institution. The consultants are split as follows: five (05) project coordinators, eight (08) service providers, two (02) trainees and one (01) volunteer deployed in the various departments. The remuneration of the staff ensuring the basic functioning of the institution is distributed as a percentage of working time on the projects and the rest is covered by the indirect costs of certain agreements. However, the COVID 19 pandemic has affected the disbursement rate of projects, which has also had an impact on the generation of indirect costs.

The reporting year recorded:

- The retirement of the Director of Research and Innovation;
- Recruitment of staff replacing the ICT manager at the end of the contract;
- Reinforcement of the attendance (sign-in) system for the presence of staff in the office;
- The recruitment of the new Director of Research and Innovation in October 2021;
- Recruitment of a consultant in charge of monitoring and evaluation systems.

Within the framework of institutional reforms, the audit of human resources was a strong recommendation of the Board of Directors as well as the implementation of reforms; in its follow-up of this recommendation, CORAF has contracted with a consulting firm whose results are expected in the first quarter of 2022.

Financial resources situation

The COVID-19 pandemic had a significant impact on the implementation of activities. Nevertheless, the state of financial execution of the budget remains appreciable and shows significant progress in the execution of the work plan.

Cash flow status

The institution's cash flow amounted to FCFA 2,253,017,464 as of November 30, 2021. The details can be found in Table I. Consisting of resources domiciled in dedicated accounts, the cash flow includes funds allocated to programs or projects in progress as well as staff entitlements, end-of-contract indemnities and retirement indemnities. It should be noted that the financial resources available from current agreements as of November 30, 2021 amount to USD 52,921,430 with an effective disbursement of USD 14,680,813 (27.74%).

Despite these mobilizations of funds, the problem relating to the costs of basic operation is still existant, which calls for reflection on the methods of negotia-

tion of agreements and the mobilization of funds for basic operation.

Funding mobilized for the implementation of the Operational Plan

The funding requirement for the 2018-2022 OP was estimated at USD 60,892,556, including USD 52,239,559 for research and development and USD 8,663,027 for institutional support. A total amount of USD 72,807,714 has been mobilized, an overrun of USD 11,911,128 (20%) as of November 30, 2021. In 2021fiscal year, CORAF was able to mobilize and secure funds amounting to USD 661,196 149 FCFA or 1,202,175 USD, through its partnerships with ECOWAS (41.7%), CILSS (22.6%), FAO (20.3%) and CIAT (15.4%). The state of execution of the mobilized funds (Table II) and the disbursements status (Table III) reflect an effective resumption or even an acceleration in the implementation of activities during the second half of the year, which increased the rate of implementation. .

Table 1. STATUS OF EXECUTION OF THE FUNDING AGREEMENTS

Donors (USD)	Initial Budget (USD)	Execution (USD)	Blance (USD)	Execution (%)
USAID -PAIRED	15 000 000	8 157 934	6 842 066	54,39
DeSIRA ABEE -EU	11 508 019	2 947 649	8 560 370	25,61
CORAF WAVE -EU	6 559 570	1 011 075	5 548 495	15,41
CAADP EX PILLAR 4 -IFAD	6 881 587	1 028 504	5 853 083	14,95
ProPAD -WB	770 000	139 422	630 578	18,11
KANSAN S. UNIVERSITY -Ireach	249 000	147 773	101 227	59,35
IDRC COVID 19	589 254	561 328	27 926	95,26
SWISS COOPERATION	11 364 000	687 129	10 676 871	6,05
TOTAL 1	52 921 430	14 680 813	41 155 387	27,74

Table 2 DISBURSEMENT STATUS AS OF NOVEMBER 30, 2021

Donors/Project	Revised Budget 2 (USD)	Disbursement (USD)	Balance (USD)	Execution (%)
USAID PAIRED	3 270 628 185	1 770 278 764	1 500 349 421	54,13
CAADP EX PILLAR 4	1 687 643 546	354 107 610	1 333 535 936	20,98
CORAF WAVE	393 261 890	135 177 969	258 083 921	34,37
DeSIRA ABEE	2 206 217 067	291 536 381	1 914 680 686	13,21
ProPAD_WB	94 857 400	36 087 468	58 769 932	38,04
CRDI-COVID 19	314 702 223	246 722 613	67 979 610	78,40
SWISS COOPERATION SDC	1 126 510 952	337 320 297	789 190 655	29,94
IREACH	69 263 123	54 791 806	14 471 317	79,11
FAO	11 149 957	-	-	-
TOTAL	9 174 234 343	3 226 022 908	5 937 061 478	35,16

Financial Resources Status

For the year 2021, a total amount of USD 71,782,687 has been mobilized, of which USD 54,274,687. This represents a forecast overrun of USD 10,890,131, or 33%.

Funds mobilized for institutional support amount to US\$8,663,027. Nevertheless, the problem relating to the costs of basic operation is still existant, which calls for a reflection on the modalities of negotiation of agreements and the mobilization of funds for basic operation. Funds mobilized for institutional support amount to US\$8,663,027. Nevertheless, the problem

relating to the costs of basic operation remains, which implies a reflection on the modalities of negotiation of agreements and the mobilization of funds for basic operation. Efforts are ongoing to mobilize additional funds estimated at approximately USD 21,691,743.

At the same time, the mobilization of donor resources at the operational level is overrun by 33% (USD 19,911,128) compared to the set objectives (60,896,586 USD).

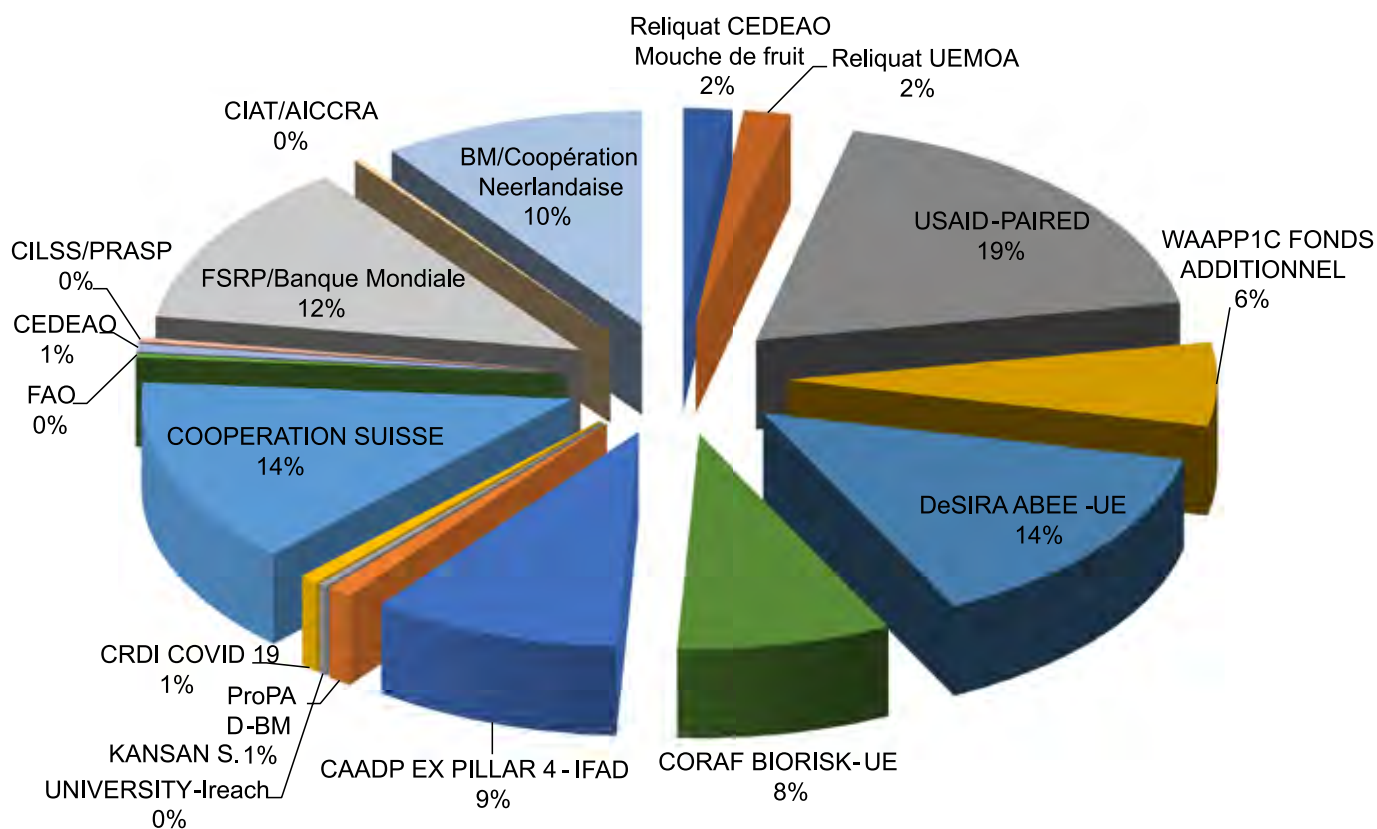


Figure: Share of donor resource mobilization

Available financial resources

The financial resources available from current agreements as of November 30, 2021 amounted to USD 54,274,687 with an effective disbursement of USD 6,583,661.16. The changes observed were due to recent agreements signed with ECOWAS, IITA, CILSS and FAO.



Figure: Status of disbursements

Cash flow status

The institution's cash flow in the various bank accounts all located in Dakar is **FCFA2,253,017,464** as of November 30, 2021. Consisting of resources domiciled in accounts dedicated to programs or projects in progress and secured staff entitlements, the cash flow includes staff entitlements, end-of-contract indemnities and retirement indemnities.

Communication and marketing

Impressive results on CORAF's reputation and visibility have been recorded through the marketing strategy and several external and internal communication and outreach activities. Media coverage of CORAF's major thematic and strategic events has never been so productive and so positive as evidenced by the total figures:

- 120 articles published by the media;
- 40 million people on our social media platforms;
- 68 articles on our institutional website in line with the digitization of institutional communication;
- 140,000 readers of articles on CORAF key programmatic activities.

CORAF has also published its monthly newsletter which covers CORAF's major activities and events. The newsletter was distributed to over 5000 emails on the CORAF mailing list.

CORAF is in the process of reforming its financial system and its human resources, with implications on communication. The organization's highest decision-making body has asked the Executive Secretariat to take action to increase its foothold in Central Africa. A recent assessment of the institution's transition strategy indicated several paths to follow for communication and its link to other relevant areas such as data, knowledge management and IT. An update of the strategy is underway to take into account emerging issues. This process will likely require an update of the implementation instruments, including the accountability of CORAF's administrative, financial and communication management.





Challenges and Looking towards 2022



The year 2021 has been a post-pandemic year with Covid-19 and the global challenges being faced by the populations of West and Central Africa in particular have worsened: food insecurity, disruption of supply chains of agricultural and food products, etc.

Despite this context and contingent health and safety measures, CORAF's daily operations were occupied by official visits, meetings, high-level consultations and strategic alliances established with stakeholders in agricultural research and development.

CORAF has been able to work towards achieving the strategic results and performance indicators of its 2018-2027 strategic plan. All the programs carried out in 2021 by CORAF's scientific community have contributed to improving agricultural production and productivity as well as increasing the incomes of farmers, processors and entrepreneurs. Significant progress has been made in the three priority intervention areas.

CORAF has assumed its leadership role beyond its area of intervention by expanding its partnership with ASARECA, ECCAS, diversifying its projects and donor portfolios. Its governing bodies were able to formulate critical guidelines and recommendations which were followed and which gave a new momentum to the Institution and raised hopes and expectations. Satisfactory evaluations of CORAF's performance by financial partners and significant resource mobilization have resulted in an increase in reserve, coordination, program and project funds.

2021 was also marked by the development and promotion of new and creative ways to link investment and innovation to positively impact the lives of millions of people in West and Central Africa.

Supporting strategic changes within the organization with a view to modernizing governing bodies, conso-

olidating and extending the institution's partnership and leadership, raising the rate of resource mobilization for proper execution of the last phase of its 2018-2022 operational plan and placing CORAF in a better position to launch its second phase of its strategic plan 2018-2027.

However, challenges still remain and require the implementation of new palliative measures such as: the adoption of a security policy to prevent or minimize the risks that could harm both the proper execution of projects, staff and the properties of the institution.

It is imperative to redouble efforts in the mobilization of resources to offset the salary cost of the staff constituting the basic workforce, part of whose remuneration is covered by the projects which are coming to an end.

The investment of partners and the resources mobilized through an extended partnership have contributed to the achievement of performances and major results of CORAF's Strategic and Operational Plans. Despite a post-pandemic year, the progress made in 2021 has boosted socio-economic development, poverty reduction and fostered economic activity in WCA. These investments have made a significant contribution to agricultural innovation, to the stren-

gthening of human capital, in particular vulnerable groups, to the enthusiasm of the private sector for innovations and market niches, and to the interest of the general public in CORAF events and marketing.

This capital investment executed by CORAF in 2021 has supported research for innovation, actors in agricultural value chains and private companies to be competitive, young people and women to empower themselves, States and populations to better cope with global shocks. This is proof that the development of the WCA also requires substantial investment, not just aid.

In 2022, CORAF plans to deploy its interventions to mobilize funding that will enable research and the scaling up of results to improve prosperity, food and nutrition security in West and Central Africa. (see 2022 Plan, programs and AWPB). Building on its well-established leadership, CORAF will continue to advocate the need for investment in agricultural research and innovation at high-level consultation meetings and to establish strategic alliances with key stakeholders in agricultural research and development, both within West and Central Africa and outside its area of intervention.



Acknowledgments to our donors and development partners

CORAF expresses its gratitude to international donors, foundations, bilateral agencies, regional and African development organizations, as well as the international agricultural research centers of the CGIAR for their undeniable support. Acknowledgments are also addressed to the members of the Scientific and Technical Committee of CORAF, to the partners of the national agricultural research systems of the 23-member countries of CORAF, to the NGOs, the Regional Economic Communities, farmers' organizations, sub-regional organizations, ASAREA and CCARDESA, AFAAS and FARA, as well as the private sector in West and Central Africa for their multifaceted support.



USAID
FROM THE AMERICAN PEOPLE



IsDB
البنك الإسلامي للتنمية
Islamic Development Bank



CCARDESA
Centre for Coordination of Agricultural Research and Development for Southern Africa

ASARECA
Transforming Agriculture for Improved Livelihoods



**BILL & MELINDA
GATES foundation**

 Schweizerische Eidgenossenschaft
Confédération suisse
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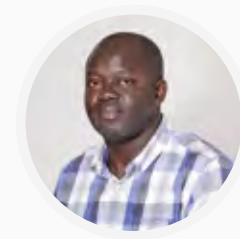
Nina Tening FAYE



Haby TAMBEDOU



Issa GUEYE



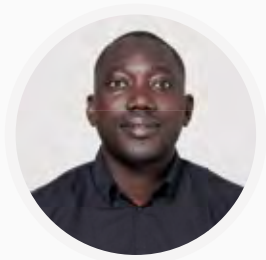
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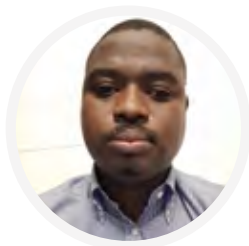
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