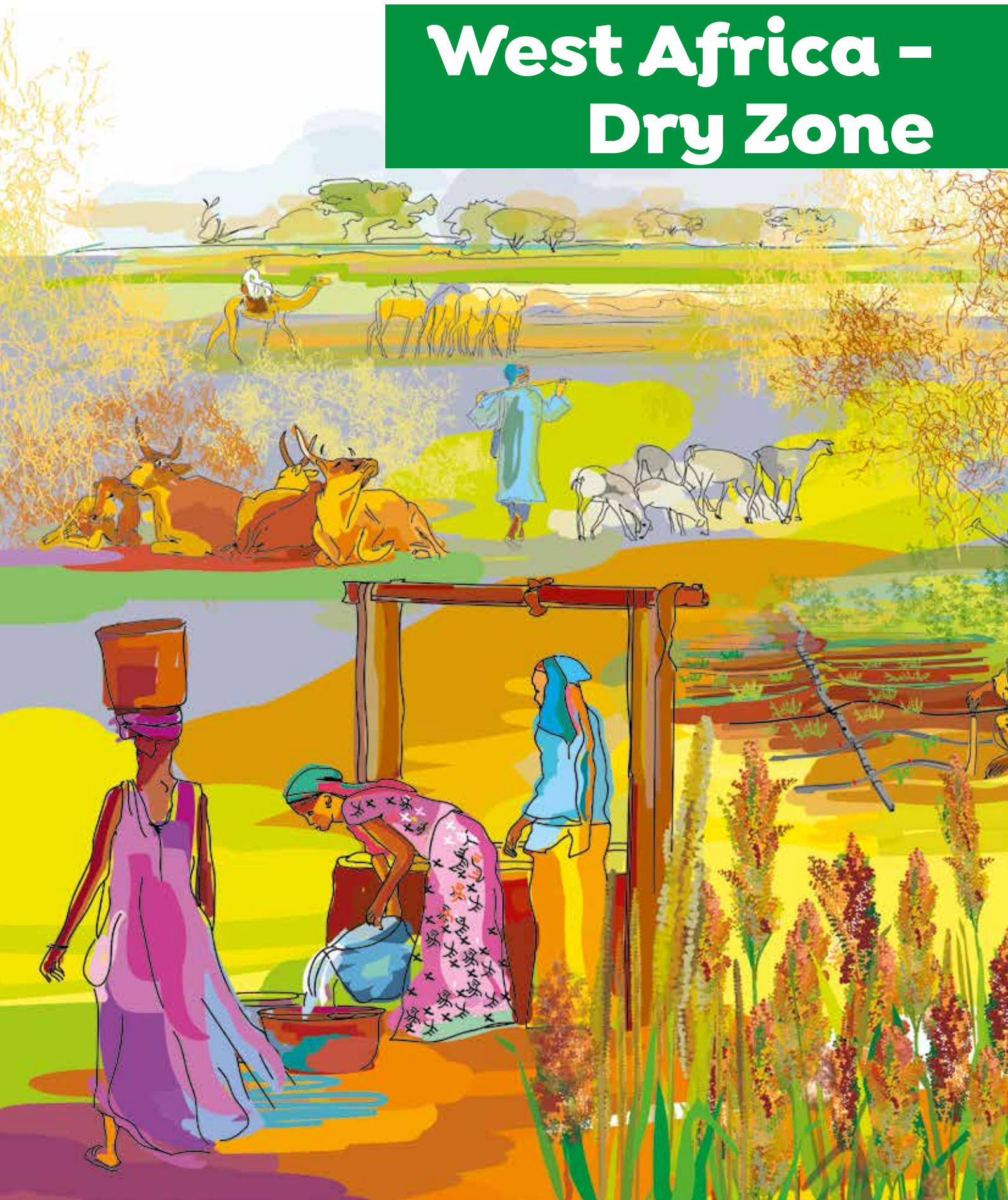


# West Africa – Dry Zone



# CIRAD Regional Office

**28**  
staff members



including 22 scientists

**45**  
PhD and  
Masters  
students



supervised each year

**6** priority  
research  
topics



Biodiversity  
Climate change  
Food systems  
Territories and collective action  
Agroecological transitions  
One Health

**12** tropical  
agricultural  
value chains

Animal production  
Banana and plantain  
Coconut  
Cotton  
Dairy  
Forest resources  
Fruit and vegetables  
Oil palm  
Rice  
Roots and tubers  
Sugarcane  
Sorghum and millet

**4** platforms  
in partnership  
for research  
and training



**11** research  
units



**45** active  
projects



**73**  
missions  
to the region  
each year



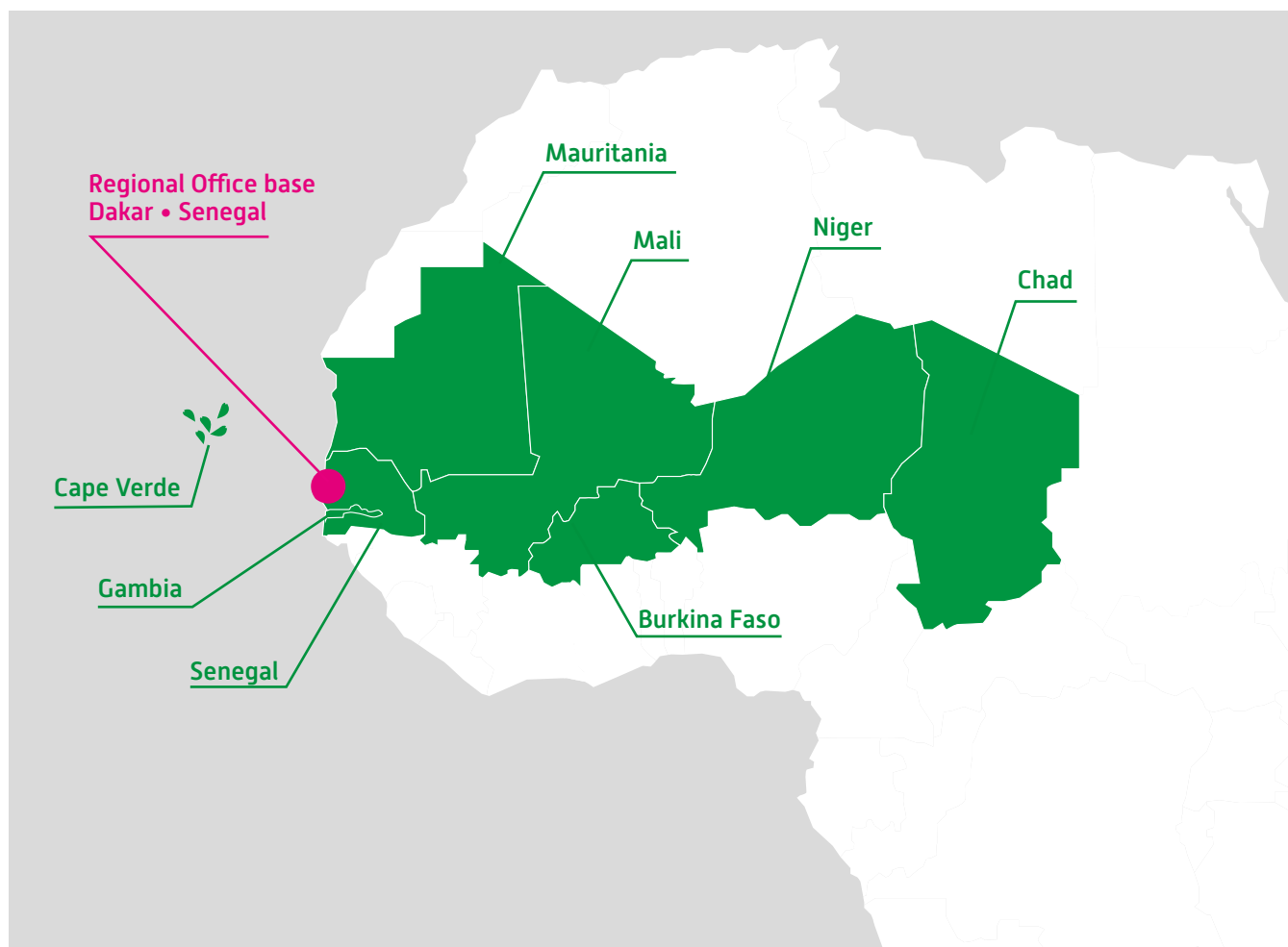
**43**  
partner  
institutions

22 local

9 regional

12 international

# West Africa – Dry Zone



## Four platforms in partnership for research and training (dPs)

### Agro-silvo-pastoral systems in West Africa

#### ASAP

Working with farmers in West Africa to design innovative, intensive and eco-friendly crop-livestock systems.



### Biological diversity and agroecological systems – Soil and crop health

#### DIVECOSYS

Making use of biological and organic processes and resources to design sustainable farming practices.



### Biological diversity and agroecological systems – Soil and crop health

#### IAVAO

Rethinking varietal improvement by recognising the diversity and complexity of farming systems and the corresponding varietal demands.



### Pastoralism and drylands in West Africa

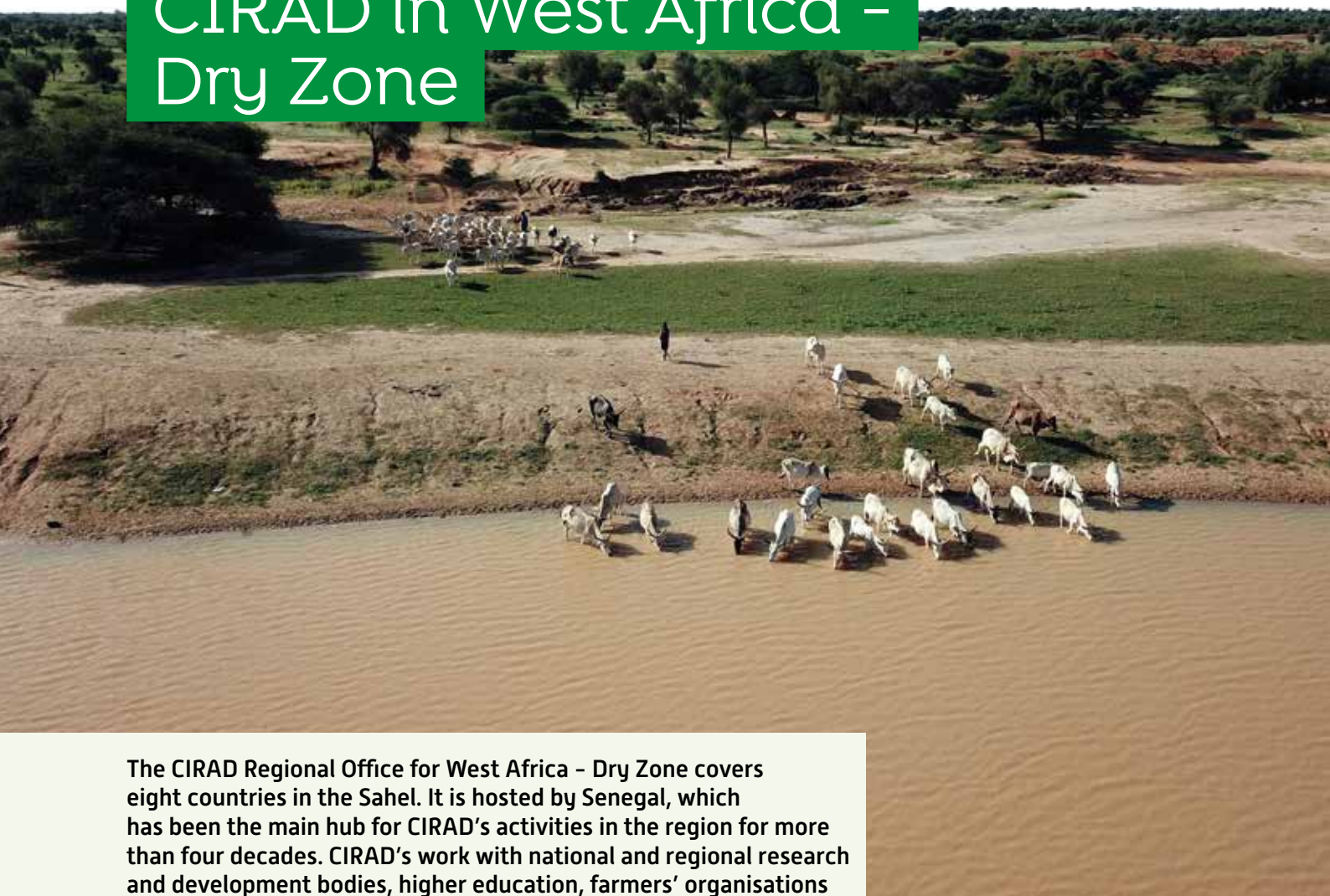
#### PPZS

Understanding and working to develop pastoral systems, integrate them into national economies and boost resilience to global change.





# CIRAD in West Africa – Dry Zone



The CIRAD Regional Office for West Africa – Dry Zone covers eight countries in the Sahel. It is hosted by Senegal, which has been the main hub for CIRAD's activities in the region for more than four decades. CIRAD's work with national and regional research and development bodies, higher education, farmers' organisations and the private sector focuses on managing natural resources and food and nutrition security more efficiently, through ecological intensification of agricultural production systems.

Herd of cattle drinking at a pond dug in Mbaye (Ferlo, Senegal) © J-D. Cesaro, CIRAD

**T**he sub-Saharan Sahel, which includes 11 countries from Senegal to Djibouti, is a transition zone that faces several issues. Its soils are fragile and increasingly degraded, and population pressure is generating conflicts over the use of water, land, rangelands, energy and forests. This growing competition is a threat to peaceful cohabitation between different communities. Climate change and security threats are exacerbating the situation.

## Stronger cooperation in the Sahel

CIRAD works with several regional institutions and universities in the Sahel and West Africa, in the fields of research, training and public policy, to support development operations across the Sahel.

CIRAD's involvement in several platforms in partnership for research and training structures its scientific and geographical partnership strategy in the region. To strengthen its longstanding partnerships and affirm their shared ambition of helping to achieve development goals in the Sahel, CIRAD, national research organisations in the countries concerned, and regional institutions committed to the Ouagadougou Declaration in 2018. We are working together to achieve sustainable rural development and food security goals in the Sahel. To this end, eight pilot projects are under way as part of the EU DeSIRA initiative, covering fields such as resilient crop development, access to agropastoral resources, sustainable bioenergy for small- and medium-sized agrifood enterprises (SMEs), carbon capture and greenhouse gas emissions from agro-silvo-pastoral systems, agroecological intensification and innovative irrigation systems.

## Main fields of research

- Pastoralism
- Rural land tenure
- Animal health
- Ecological intensification
- Pests and diseases
- Forest resources
- Food security
- Organic matter recycling
- Food crop genetic improvement
- Bioenergy for agrifood SMEs
- Climate risks
- Local agricultural and food product processing
- Irrigation
- Innovation systems

# Research guided by six priority topics

## Biodiversity

### Crop diversity guarantees yields in semi-arid zones

The project on Access to crop diversity and resilience of agroecosystems in the semi-arid regions (ARISER) is working to understand the processes that determine the information farmers receive about seed and crop diversity and their access to it. Making renewed use of traditional varieties in farming systems in arid parts of Africa, in Senegal, Morocco and Madagascar, would be a major asset for resilience to climate variability. Moreover, crop diversity serves to stabilise agricultural production.

To date, agricultural development programmes have paid little attention to the question of farmers' access to crop diversity, and have continued to support centralised seed distribution models, despite the fact that a growing number of farmers' organisations and researchers have doubts about their appropriateness. These players stress the risk of jeopardising the resilience of family farms by limiting their access to crop diversity, and are calling for regulatory frameworks and development actions based on local crop and seed diversity management practices.

Period > June 2022 to May 2027

Donor > European Research Council



Woman in a cowpea plot, Senegal

© J. Stutz



## Climate change

### A concerted regional policy for pastoralism in the Sahel

The Regional Sahel pastoralism support project (PRAPS-2) aims to boost the resilience of pastoralists and agro-pastoralists in six Sahelian countries: Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal. It follows on from the first phase (2016-2021) and is based on the 2013 Nouakchott Declaration on pastoralism. Phase 2 has several specific objectives: improved animal health; sustainable landscape management; promotion of cattle value chains; social and economic inclusion of women and young people; and crisis coordination, governance and prevention. The project should directly benefit at least 12.6 million people in the Sahel whose livelihoods primarily depend on livestock production.

#### Our objectives

- To achieve a 90% vaccination rate for contagious bovine peripneumonia by 2027
- To vaccinate and mark 396 400 000 animals against peste des petits ruminants by 2027
- To place 13 738 000 hectares of land under sustainable landscape management by 2027
- To boost household incomes.

Period > December 2022 to May 2027

Donor > World Bank



Herd of cattle by a pond in the Sahel

© I. Touré, CIRAD





## Food systems

### West Africa is acting to boost food security

West Africa is one of the world's most vulnerable regions. The risks surrounding the climate, agriculture, health, markets and conflict make for a highly volatile food system, and are triggering increasingly frequent and severe crises. Moreover, the region is marked by inequality between social groups and between the sexes.

In consequence, regional organisations and member countries [Burkina Faso, Chad, Ghana, Mali, Niger, Sierra Leone, Senegal and Togo] have made strong commitments to transform agriculture and make their food systems more resilient, with the support of the World Bank and its partners within the West African Food System Resilience Programme (PRSA). The aim is to protect against food insecurity and make players more resilient. This approach includes preventing and managing agricultural and food crises;



Vegetable stalls at a market in Cameroon © L. Parrot, CIRAD

building resilient agro-silvo-pastoral systems; and developing both domestic and export-oriented agricultural markets in West Africa.

Period > 2025 to 2031  
Donor > World Bank



## Territories and collective action

### Territorial health, a vector for wellbeing

The Santés & territoires project aims to improve local people's quality of life and wellbeing, by building sustainable farming systems within a One Health approach on a territory scale. The primary objective is to design, test and assess an innovative participatory, inclusive approach to support agroecological transition, by simultaneously improving the health of humans, agricultural production systems and the environment.

The project stipulates that the state of health of a territory, defined collectively by local players, can be used as a common good, to steer operations in favour of agroecological transition. It is therefore taking an iterative, scalable participatory approach using living labs as experimental frameworks to co-design and test new agroecological practices. Its activities are being conducted in collaboration with local partner networks in four countries: Benin, Cambodia, Laos and Senegal.



Aerial view of Feto village, Keur Momar Sarr municipality, Senegal  
© P. Martin, CIRAD

Period > December 2020 to December 2026  
Donors > European Union and Agence française de développement



## Agroecological transition

### Agroforestry innovations, a lever for sustainable food systems

The objective set for the Galileo project is “innovative agroforestry integrating people, trees, crops and livestock, to improve rural livelihoods and resilience to climate change in Africa”. A large part of the population in sub-Saharan Africa depends on agroforestry, and must withstand extreme weather phenomena. Long dry seasons and environmental degradation in the region are pushing people to migrate to marginal areas, which is in turn threatening forests and ecosystems. Agroecological transition is urgently required, to reconcile agricultural productivity, food security and ecosystem health.

Galileo comprises 24 partners working together to develop agroforestry innovations centring on people in the agropastoral, agroforestry and agro-silvo-pastoral systems typical of sub-Saharan Africa. Eight agroforestry living labs, four national agricultural innovation platforms and one regional platform have been set up in Cameroon, Ghana, Kenya and Senegal. The aim is to become a byword for agroforestry in Africa and for virtuous adaptation to climate change.



Expanse of agroforestry plantings in the Sahel  
© Galileo project, CIRAD

Period > January 2025 to December 2028  
Donor > European Union



## One Health

### Knowing more about Rift Valley and Crimean-Congo haemorrhagic fever viruses

The regional One Health committee for Saint-Louis (northern Senegal) is supporting the rollout of zoonotic disease monitoring projects such as AfriCam, funded by the Agence française de développement (AFD). In this capacity, it has identified a need for greater regional surveillance capacity.

This prompted another project, AISSA, aiming to contribute to better knowledge of haemorrhagic fever viruses in West Africa, such as Rift Valley fever (RVF) and Crimean-Congo haemorrhagic fever (CCHF) along the border between Senegal and Mauritania. It is taking a One Health

approach, across the region, covering several forms of health: human, animal (domestic and wildlife) and environmental (vectors, micromammals and environmental water). The Djoudj, Gueumbeul and Diawling National Parks, along the border between Senegal and Mauritania Senegal, are hot spots for the emergence of various zoonoses, including RVF and CCHF, two diseases that affect both animals and humans.

Period > July 2025 to July 2027  
Donor > French Embassy in Senegal

Herd of zebus on the border between Senegal and Mauritania © C. Cêtre-Sossah, CIRAD



## Main partners

CIRAD is hosted by the following partners in Senegal and Chad:

### Senegal

- Institut sénégalais de recherches agricoles (ISRA)
- Cheikh Anta Diop University (UCAD)
- Gaston Berger University (UGB)
- Société nationale d'aménagement et d'exploitation des terres du Delta du fleuve Sénégal et des vallées du fleuve Sénégal et de la Falémé (SAED)

### Chad

- Institut de recherche en élevage pour le développement (IRED)

### Regional partners

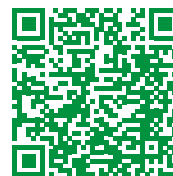
- Comité permanent inter-États de lutte contre la sécheresse au Sahel (CILSS)
- West and Central African Council for Agricultural Research and Development (CORAF)
- Centre international de recherche-développement sur l'élevage en zone subhumide (CIRDES)
- Consultative Group on International Agricultural Research (CGIAR)
- International Livestock Research Institute (ILRI)
- Africa Rice Center [AfricaRice]



**CIRAD  
Regional Office  
West Africa -  
Dry Zone**

37, avenue Jean XXIII  
BP 6189  
Dakar-Etoile  
Senegal

Tel.: +221 33 822 44 84  
+221 33 842 22 26



CIRAD in  
West Africa - Dry Zone  
on social media



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**CIRAD is the French agricultural research and international cooperation organisation working for the sustainable development of tropical and Mediterranean regions.**

It works with its partners to build knowledge and solutions for resilient farming systems in a more sustainable, inclusive world. It mobilises science, innovation and training in order to achieve the Sustainable Development Goals. Its expertise supports the entire range of stakeholders, from producers to public policymakers, to foster biodiversity protection, agro-ecological transitions, food system sustainability, health (of plants, animals and ecosystems), sustainable development of rural territories, and their resilience to climate change. CIRAD works in some fifty countries on every continent, thanks to the expertise of its 1750 staff members, including 1200 scientists, backed by a global network of some 200 partners. It also supports French science diplomacy operations.

CIRAD is a national Public Industrial and Commercial Establishment (EPIC) under the joint authority of the Ministry of Higher Education, Research and Space and the Ministry of Europe and Foreign Affairs.

**Working together for tomorrow's agriculture**



42, rue Scheffer  
75116 Paris  
FRANCE

**cirad.fr**

