



COMITE PERMANENT INTER-ETATS DE LUTTE CONTRE LA SECHERESSE DANS LE SAHEL
PERMANENT INTERSTATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL
COMITÉ PERMANENTE INTER-ESTADOS DE LUTA CONTRA A SECA NO SAHEL
اللجنة الدائمة المشتركة لمحاربة التصحر في الساحل



AGRHYMET CCR-AOS

Regional Climate Center for West Africa and the Sahel



OPERATIONAL GUIDE ON AGRHYMET RCC-WAS SERVICES

Component 1: "Digital advisory services for the prevention and management of agricultural and food crises in West Africa"





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Executive summary

This operational guide is dedicated to public, academic and private institutions working in the fields of climate, water, environment, agriculture, livestock, plant protection, food and nutrition security, climate disaster risk reduction, and any other related sectors using (or wishing to use) the products and services of AGRHYMET Regional Climate Centre for West Africa and the Sahel (AGRHYMET RCC-WAS), which is a specialized agency of the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS). Its main objective is to enhance the value of AGRHYMET RCC-WAS's various products and services, by making them more visible and attractive to development stakeholders (public, academic and private), decision-makers and partners (technical and financial), through their performance, relevance, and effectiveness in meeting the specific and collective needs of different users in the countries of West Africa, the Sahel, and other zones. The guide maps out the various services provided by AGRHYMET RCC-WAS, which is a benchmark institution in the sub-region for diploma and continuing training in the various fields listed above, and for building the operational capacities of state, university and private technical institutions involved in reducing hydro-climatic and phytosanitary risks and improving the productivity of agro-sylvo-pastoral and environmental systems in West Africa and the Sahel. It explains the different types of services that AGRHYMET RCC-WAS provides or can provide, as well as the modalities and procedures that state technical institutions and other applicants must adopt to gain access to them, in accordance with their specific or collective, immediate, or future needs, and in compliance with environmental and social safeguard standards.

Keywords: FSRP Project, Operational Guide, Services, AGRHYMET RCC-WAS, CILSS, Niamey, Niger

I Context

The Permanent Inter-State Committee for Drought Control in the Sahel (Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel - CILSS) was set up on September 12, 1973, following the major droughts that hit the Sahel in the 1970s. Today, it has thirteen (13) member states, including: eight (8) coastal states (Benin, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Togo); four (4) landlocked states (Burkina Faso, Chad, Mali, and Niger) and one (1) island state (Cape Verde). The 18th CILSS Conference of Heads of State and Government, held on February 07, 2018, in Niamey, Niger, approved Sudan's application to join CILSS as the 14th member state.

CILSS's mandate is to *"invest in the search for food security and in the fight against the effects of drought and desertification, for a new ecological balance in the Sahel"*, including through working towards the following objectives:

1. Promote sustainable food and nutrition security in the Sahel and West Africa region through : i) the provision of reliable information for decision-making; ii) the study and analysis of obstacles to the achievement of food security and better management of natural resources in order to define effective strategies and policies for the generation of new knowledge and the sustainable development of the region; iii) the animation of the Prevention and Management of Food Crises (PREGEC) and the Food Crisis Prevention Network (RPCA); iv) the capitalization of good practices and capacity building of West African and Sahelian states ;
2. Coordinate, at regional level, all discussions and actions aimed at overcoming the food, ecological and demographic constraints that hinder the sustainable economic growth of States.
3. To collect, process and disseminate quantitative and qualitative information, to inform and sensitize member states and the international community to the climatic, agro-ecological, socio-economic, and human problems linked to the development of the region.
4. Contribute to the development and coordination of development, research, training and information policies to deal with the effects of factors that degrade productivity and food security (drought, desertification, flooding, pest attacks, etc.);
5. To develop initiatives and promote actions of regional and inter-state interest, contributing to the strengthening of cooperation between States and regional integration, in the fight against the effects of factors of degradation of agro-sylvo-pastoral and halieutic productivity and food security.
6. Conduct and execute other missions requested by member states.

AGRHYMET Regional Climate Center for West Africa and the Sahel (AGRHYMET RCC-WAS) is a specialized CILSS institution based in Niamey, Niger. It is involved in research, training, and operational applications in the fields of climate, hydrology, agriculture, pastoralism, natural resource and environmental management, plant protection, market monitoring and food and nutritional security. It contributes to the achievement of CILSS's major ambition, which is to achieve an ecological balance conducive to food security and the adaptation and resilience of production sectors and populations to climate hazards. This ambition stems from the firm resolve of member governments and development partners to support CILSS in its fight to: i) reduce the risk of disasters (particularly those linked to hydro-climatic extremes and phytosanitary attacks), ii) increase agro-sylvo-pastoral productivity and iii) establish food security and strengthen the resilience of the region's populations. The present document serves to support the access, visibility, prioritization, and implementation of AGRHYMET RCC-WAS services and products.

II Objectives

The main objective of this operational guide is to enhance the value of the various AGRHYMET RCC-WAS services, by mapping them and enhancing their visibility. In addition, the guide aims at highlighting their effectiveness in meeting the specific and collective needs of users in the countries of West Africa and the Sahel. Specifically, the guide presents:

- AGRHYMET RCC-WAS services in the field of diploma and in-service training for country managers,
- AGRHYMET RCC-WAS services for strengthening the operational capacities of the countries' technical institutions (technical, material, and catalytic support),
- AGRHYMET RCC-WAS capacity-building services
- Modalities/procedures for accessing AGRHYMET support services.

III Diploma and professional training services

AGRHYMET RCC-WAS organizes training courses in Agrometeorology, Hydrology, Plant Protection, Food and Nutritional Security, Pastoralism, Climate Change and Sustainable Development, Sustainable Land Management, Integrated Management of Water Resources & Environment, Maintenance of meteorological instruments and electronic equipment (Instruments and Micro-computers), etc.

3.1 Expression of training needs and support:

Applicants (sectoral departments or ministries of the country, private entities or individuals, etc.) can express their needs for diploma and continuing training courses by filling the form attached in Annex 1 and sending it to AGRHYMET RCC-WAS at the following addresses.

Email : Administration.agrhymet@cilss.int ; with copy to sanoussi.atta@cilss.int
Phone : +227 20315181/20315316 Mobile Phone : +227 96994280/90331125

More often, AGRHYMET RCC-WAS also launches training calls, particularly when the necessary funds have been acquired from its technical and financial partners, as part of the projects it implements. In the latter case, it is AGRHYMET RCC-WAS that can offer scholarships (or cover the costs) to students/persons admitted to training courses.

3.2 Diploma courses:

Diploma courses are conducted face-to-face at AGRHYMET RCC-WAS. However, online courses were initiated in 2019, during the COVID19 pandemic, via the "UN Climate Change Learning Partnership (UN CC: Learn)" platform. The first online course was launched in April 2021, on the theme of "Integrating Climate Change into national, sectoral and local policies". This online course (converted into online modules in collaboration with UNITAR and the UN CC: Learn program) is an integral part of AGRHYMET RCC-WAS' Master in Climate Change and Sustainable Development.

Diploma courses are offered for a minimum quota of 15 students per cycle/promotion. The number of students in a promotion may come from a single country or from several countries and may be sponsored by one or more public and/or private entities. AGRHYMET RCC-WAS creates the conditions for synergy between applicants for diploma courses, to obtain the required quota of students, through applications from several countries/entities, for the same cycle. This reduces training costs for the various applicants. AGRHYMET RCC-WAS can also program and deliver degree courses at the request of projects, within the duration of the project or based on negotiable arrangements with the project and/or the supervisory ministries in the beneficiary countries.

Diploma courses include:

1. **Senior technicians**, in Agrometeorology, Hydrology, Plant Protection and Instruments and Micro-computing,
2. **Engineers**, in Agrometeorology, Hydrology, Plant Protection and Micro-computing,
3. **Masters**, in Integrated Water Resources Management & Environment, Climate Change and Sustainable Development, Sustainable Land Management, Sustainable Crop and Environmental Protection, Food and Nutritional Security and Pastoralism.

As part of the FSRP's Component 1, two trainings have been launched in November 2023. These are the **Advanced Technicians** in Agrometeorology, focusing on meteorology and agrometeorological applications (2 years), and the Masters in Climate Change and Sustainable Development, focusing on disaster risk reduction and adaptation to climate change (1 year).

3.2.1 Level of education required to enroll in a diploma course :

The levels required for enrolment in the various training cycles are as follows:

1. **Senior Technician** : High school degree (scientific background) or equivalent diploma ;
2. **Engineers** : High school degree (scientific background) or equivalent diploma + High school degree+2

years (University Diploma in Scientific Studies or University Diploma in Technology or, Advanced Technician's Certificate, or Senior Technician Diploma)

2. Masters: High school degree (scientific background) + Diploma equivalent to 4 years training after the High school degree : Master, Engineer, etc.

3.2.2 Duration of each course:

The duration of training varies according to the cycle, as follows:

- 1. Senior Technician:** two (2) years,
- 2. Engineers:** three (3) years,
- 3. Masters:** one (1) year.

Annex 2 gives details of the various training courses offered by AGRHYMET RCC-WAS. Other diploma courses relevant to the CILSS mission can also be offered on request.

3.3 Professional training:

AGRHYMET RCC-WAS provides short (generally less than 3 months) in-country, face-to-face or online training (in the form of workshops, seminars, or dedicated capacity-building missions). The modalities of professional trainings are as follows:

- Possibly within the framework of CILSS/AGRHYMET RCC-WAS projects
- In the form of targeted support to countries or other actors, sometimes on demand and at the requesting party's expense (technical services, government, private sector).

The areas of professional training are diverse and varied and depend on the specific and/or shared needs of the requesting parties (countries, public or private technical services). The training courses most frequently provided by AGRHYMET RCC-WAS concern data collection and management, the development and use of data analysis tools and methods, training and/or refresher courses in new technologies, methods, and tools for monitoring agricultural campaigns and food security, environmental and natural resource monitoring, IT and the maintenance of observation infrastructure/equipment, etc. Training courses can be organized at the national level or at the international level. Professional training courses can be organized regionally at AGRHYMET RCC-WAS or in-country.

Table 4: AGRHYMET RCC-WAS training services

Topics	Types of applicants	Course duration	Main fields of application
Techniques and methods for data collection and management	<ul style="list-style-type: none"> • State technical services (SNMH, Agriculture, Environment, Livestock, Plant Protection, Food Safety, etc.) , • Projects • NGOs • Regional institutions, • Private companies 	A few days to 3 months	
Data analysis tools and methods,	<ul style="list-style-type: none"> • State technical services (SNMH, Agriculture, Environment, Livestock, Plant Protection, Food Safety, etc.) , • Projects • NGOs • Regional institutions, • Schools and universities • Students (Masters, PhD, etc.) • Private companies • 	A few days to 6 months	<ul style="list-style-type: none"> • Research & Development • Training & Education • Statistical analysis • Monitoring and analysis of climatic (including climate change), hydrological, agrometeorological, agronomic, environmental, pastoral, sanitary, phytosanitary, food security and nutritional situations, etc. • Early warning systems, • Disaster risk reduction, • Civil protection, • Private sector, • Etc.
Database management tools and software			
Learning and/or retraining in new technologies			
Methods and tools for monitoring agricultural campaigns	<ul style="list-style-type: none"> • Governments/Ministries • State technical services (SNMH, agriculture, environment, livestock, plant protection, food safety, early warning systems, etc.) • Civil society • Disaster risk reduction agencies • Humanitarians, • Projects, • NGOs, • Inter-governmental organizations (IGOs), • Producers' organizations, • Private companies, • Etc. 		
Methods and tools for monitoring food security and vulnerability			
Market price monitoring methods and tools			
Methods and tools for measuring resilience to food insecurity			
IT and maintenance of measurement infrastructures	<ul style="list-style-type: none"> • State technical services (SNMH, agriculture, environment, livestock, plant protection, food safety, early warning systems, etc.) • Projects, • NGOs, • Private companies, • Students, • Etc. 		

IV Capacity-building of state technical institutions or private applicants for AGRHYMET RCC-WAS services

One of AGRHYMET RCC-WAS's key objectives is to build the capacity of countries and academic and private entities in West Africa and the Sahel to address the multiple and pernicious challenges, notably related to climate, water, environment and energy, which are hampering productivity in the primary sector (agriculture, fisheries, and forestry) and exacerbating food insecurity among human and animal populations. As part of its services to countries and other partners, AGRHYMET RCC-WAS trains, equips, and technically supports the technical services of governments and their national partners (public and private) in the fields of data collection and the production and dissemination of agro-hydro-climatic and phytosanitary information to support decision-making for food and nutritional security and achieve a sustainable ecological balance in the sub-region.

It assists countries with more effectively consolidating and leveraging their achievements (best results and practices) in all the strategic areas of its expertise in West Africa and the Sahel. It also supports the efforts of private entities or individuals who request its services, by contracting with them for actions in line with its areas of expertise, prerogatives, and mission. In the latter case, partnership frameworks and/or specific agreements are required to clearly define the services requested.

With the support of FSRP and the synergy of other projects, AGRHYMET RCC-WAS is working to improve, modernize and digitalize its various services, particularly those relating to climate, water, agriculture, pastoralism, plant protection, the environment, and food and nutritional security. To this end, it emphasizes the development of know-how and mechanisms for knowledge transfer and empowerment of countries and their national partners, through the promotion of a flourishing and sustainable public-private engagement. To this end, AGRHYMET RCC-WAS provides a wide range of technical, material and resource mobilization services, including.

4.1 Technical support services

Technically, AGRHYMET RCC-WAS has cutting-edge multidisciplinary skills to support and strengthen the capacities of countries and academic and private entities in various fields.

4.2 Main technical support services

AGRHYMET RCC-WAS offers several technical assistance services to the country and to any partner or client structure. These services include:

- **Training services (as mentioned above):** diploma courses (agrometeorology, hydrology, climate change and sustainable development, food and nutrition security, plant protection, pastoralism,

electronics, and computer maintenance, etc.), in-service training (retraining and upgrading of country technical service agents, action training, etc.),

- **Climatic data and information services:** collection of quality data, analysis of variations/changes in climatic, meteorological, bioclimatic and pedoclimatic conditions and their impact on sensitive vital sectors. These services include analysis of rainfall, temperature, wind, relative humidity, seasonal forecasts, digital weather forecasts, etc.,
 - **Hydrological services:** monitoring of hydro-climatic risks, monitoring of runoff in major river basins, water levels in dams, runoff forecasts (high and low-water situations), water availability for hydro-agricultural development, hydropower, agriculture, and other uses,
 - **Services for extreme hydro-climatic events** (drought, flooding, strong winds, heatwaves, etc.): analysis-diagnosis of agronomic and hydrological droughts, drought forecasts (intra- and inter-annual), flood monitoring and flood risk forecasts, dusty wind, and heatwave forecasts, etc.,
 - **Crop monitoring services:** development and dissemination of tools and methods for monitoring the condition of farmland, sowing dates, crop growth, levels of crop water requirements, water stocks in the soil, yield forecasts, estimates of areas sown, production estimates, etc.,
 - **Phytosanitary watch and crop protection services:** information watch on the phytosanitary situation (risks of insect and crop pest attacks, types of attack and causal agents (locusts, caterpillars, birds, etc.), infected areas, control methods), management of phytosanitary databases, phytosanitary product registration and regulations, etc.,
 - **Pastoral information services:** monitoring of herd movements and routes (local, intra-national and cross-border movements), monitoring of grazing areas, development and dissemination of tools and methods for estimating forage biomass, monitoring, and estimation of forage (forage balances), monitoring of water points, herd health situation, etc.,
 - **Land use dynamics monitoring services:** monitoring of vegetation, landscape and ecosystem evolution, changes in ecosystem balances, mapping of land use changes (spatio-temporal dynamics), monitoring of the physical potential of the environment, methods for estimating vegetation cover, monitoring of vegetation anomalies/indices, etc.,
 - **Early warning services on vulnerability to food and nutritional insecurity:** monitoring of agricultural production situations (surplus, normal and deficit areas), existing food stock situations, supply of agricultural product markets, cereal and food balances, vulnerable areas and populations, vulnerability levels (Harmonized Framework), etc.,
 - **Market monitoring services:** monitoring and information on food prices on markets, prices of livestock and livestock products, inflation situations, market supply levels, etc.
- Disaster risk and impact monitoring services: prevention, reduction, and management of disaster risks (droughts, floods, food, and nutrition crises, etc.), identification and monitoring of vulnerable and/or affected people, etc.,
- **Bushfire information service:** information on the risk of bushfires (favouring factors), surface areas burned, fire density, techniques and means of control, etc.,

- **Irrigation information services:** information and awareness-raising on irrigation techniques, irrigable land, agricultural water management, close support for irrigators (solutions by type of irrigated system, land management, irrigation financing), advisory support for irrigators, creation, and management of water databases, monitoring of water indicators, information on water resources (surface and underground), etc.,
- **Information services on sustainable land management best practices:** characterization, identification and development of sustainable land management best practices, dissemination and extension of best practices, evaluation of best practices (feasibility, applicability, effectiveness, return on investment, etc.), etc.,
- **Service impact monitoring services:** monitoring of the impact of the various AGRHYMET RCC-WAS services at the level of final beneficiaries and intermediaries (training services, information services, warning, and decision-making support services, etc.),
- **Knowledge management services:** organization and sharing of knowledge, definition and operation of resources, tools, and methods for sharing and using knowledge, development of artificial intelligence tools, development and operation of Web platforms, Geoportals, Android applications for sharing information and experience, etc.),
- **Services and products for digital platforms for sharing data and information:** As part of its mission to produce and disseminate decision-support information in its fields of intervention, AGRHYMET RCC-WAS designs, develops, publishes and ensures the operational running and exploitation of data and information service platforms, for the benefit of various categories of users (political decision-makers, sectoral government technical services, public, semi-public or private services and organizations working in the fields of climate, water and earth sciences, agriculture (in the broadest sense), food and nutrition security, the environment, economics, transport, etc.). , in West Africa and the Sahel. These platforms are either sector-based (specific to one field), global (covering several fields at once) or integrated (intercommunication of several complementary sector-based platforms via a single interface). Integrated platforms facilitate access to consistent, relevant information products derived from multifactorial analyses (exchanges), considering the concerted combination of several types of data or information services. The various AGRHYMET RCC-WAS services can be delivered from its different platforms, to meet users' needs (Agrhyment.cilss.int, SRIP, E-Station, Data Library 1 MapRoom, ECOAGRIS, Cadre Harmonize, AMR (resilience analysis and measurement), FANFAR, etc.). Some of these platforms (ECOAGRIS) can process information across several services, including agricultural production quantities and food security stocks. The Cadre Harmonize platform, for example, provides access to the "early warning of vulnerability to food and nutritional insecurity" service.
- **Etc.**

Table 5: Operational status, frequency and contacts for the various AGRHYMET departments

Service types	Operational status	Publication frequency	Web link	Focal point contacts
<i>Climatic and hydrological data and information</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	henri.songoti@cilss.int abdou.ali@cilss.int
<i>Hydrological services</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	abdou.ali@cilss.int
<i>Extreme hydro -climatic events</i>	Yes	Decadal; monthly; annual and on demand	https://agrhyment.cilss.int/	abdou.ali@cilss.int
<i>Crop monitoring</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	abdou.ali@cilss.int martial.traore@cilss.int alhassane.agali@cilss.int
<i>Phytopathological watch and crop protection</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	abdou.ali@cilss.int idrissa.maiga@cilss.int
<i>Pastoral information</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	abdou.ali@cilss.int issa.garba@cilss.int
<i>Monitoring land use dynamics</i>	Yes	Monthly, annual, multi-year, On demand	https://agrhyment.cilss.int/	abdou.ali@cilss.int idrissa.maiga@cilss.int
<i>Early warning of vulnerability to food and nutrition insecurity</i>	Yes	Decadal; monthly; annual	https://www.cadreharmonise.org/	issoufou.baoua@cilss.int martial.traore@cilss.int
<i>Market follow-up</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	martial.traore@cilss.int issoufou.baoua@cilss.int
<i>Disaster risk and impact monitoring</i>	Yes	Decadal; monthly; annual, on request	https://agrhyment.cilss.int/	abdou.ali@cilss.int issoufou.baoua@cilss.int
<i>Bushfire information</i>	Yes	Decadal; monthly; annual	https://agrhyment.cilss.int/	issa.garba@cilss.int soumana.djibo@cilss.int
<i>Irrigation information</i>	Yes	Annual, on request	https://agrhyment.cilss.int/	abdou.ali@cilss.int issoufou.maigary@cilss.int alhassane.agali@cilss.int
<i>Information on sustainable land management practices</i>	Yes	Annual, on request	https://agrhyment.cilss.int/	maguette.kaire@cilss.int issaka.lona@cilss.int alhassane.agali@cilss.int
<i>Service impact monitoring</i>	No	On request	https://agrhyment.cilss.int/	mamane.soule@cilss.int kabirou.magagi@cilss.int
<i>Knowledge management</i>	Yes	Permanent	https://agrhyment.cilss.int/	henri.songoti@cilss.int abdou.ali@cilss.int

4.3 Modalities and procedures for accessing technical support services

The modalities and procedures for accessing AGRHYMET RCC-WAS technical support services are relatively straightforward, and are based on several possibilities:

- Specific partnership agreements between AGRHYMET RCC-WAS and customers/applicants,
- Service or consultancy contracts,
- Official solicitations or requests for support from a CILSS member state: in this case, official correspondence is issued specifying the types of services requested and the terms of payment, which may be charged to the requesting country or negotiated in other ways (see example in Annex 3),
- Activities programmed as part of a regional (AGRHYMET RCC-WAS, a partner entity) or national project, Etc.

Therefore, to access AGRHYMET RCC-WAS technical support services, countries, partners or private applicants must go through the following six (06) steps:

1. Send correspondence¹ and/or a concept note setting out the context of the request, expressing needs, specifying objectives, expected results and deliverables, funding arrangements and desired implementation period, ► [deadline for response: at customer's convenience].
2. AGRHYMET CCR's response (see example in Annex 4) in the form of a return letter specifying its availability, its technical offer and its opinion on the financing arrangements (an agreement may be reached after negotiations) ► [response time: approximately one (01) week after receipt of request] ;
3. Scoping meeting between AGRHYMET RCC-WAS and the entity requesting the service(s) (to discuss, clarify and agree on the scope, objectives of the service(s), timetable, resources required and payment terms), ► [deadline: the date on which the meeting is convened depends on the availability of the parties, and the meeting may last from one (01) to three (03) working days].
4. AGRHYMET RCC-WAS prepares a methodological note based on the results of the scoping meeting, specifying the number and type of technical staff it will mobilize, the timetable and terms of payment and its financial offer, ► [deadline for response: three (03) to five (05) working days]
5. The country or entity requesting the service examines and validates the methodological note ► [delai: [deadline: depending on availability];
6. AGRHYMET RCC-WAS executes the service and delivers the technical support service in accordance with the consensually validated concept note and methodology. ► [deadline: according to the duration validated in the agreement's ToR]

V Material support services

In terms of material support, AGRHYMET RCC-WAS supplies and installs in the countries equipment for collecting relevant data (meteorological, agrometeorological, and hydrological stations, rain gauges, etc.), IT equipment/applications for managing and exploiting data (computers, software, printers, etc.), office furniture, connection tools (network and internet), research, investigation and intervention material and equipment (particularly in the phytosanitary field), etc. These material support services are the financial responsibility of the requesting countries or entities. They can be programmed and budgeted within the framework of regional or national projects, which will be responsible for compensating AGRHYMET RCC-WAS for the expenses AGRHYMET incurs providing the agreed services. They can also be carried out for the benefit of countries with the financial support of a funding partner, or at the request of an individual country or a group of several countries, which can pool their resources to cover the related costs. In the event of force majeure (an emergency resulting from a lack of funding), CILSS member countries may ask AGRHYMET CRR-AOS to take charge of the project. AGRHYMET CRR-AOS will analyze the feasibility of the project before giving its approval, either by mobilizing internal resources, or by facilitating the acquisition of the necessary funds from its technical and financial partners.

VI Financial support services

AGRHYMET RCC-WAS can assist countries through catalytic support and the transfer of funds obtained, in their names, from its technical and financial partners, notably as part of the implementation of projects involving the national level and/or local sites. It can also support countries in developing initiatives to mobilize financial resources, through its assistance in setting up projects and advocating national actions.

VII Contacts for AGRHYMET RCC-WAS service offers

All requests for technical assistance and related information should be addressed to administration.agrhymet@cilss.int

VIII Annexes

Annex 1: Identification sheets for AGRHYMET CCR-AOS's training and continuing education needs diplômantes et continues d'AGRHYMET CCR-AOS

Form for identifying needs in diploma training (Specify the number of managers to be trained by sector and by year).

Important: Le respect du Genre est une exigence fondamentale. Veuillez donc respecter un quota de 40% pour les femmes

Branches / Training cycles	2024	2025	2026	2027	2028
S.T.* in Agrometeorology					
S.T. in Hydrology					
S.T. in Plant Protection					
S.T. in instruments and Micro-computing					
Engineer in Agrometeorology					
Engineer in Hydrology					
Engineer in Plant Protection					
Engineer in instruments and Micro-computing					
Master in Integrated Water Resources and Environment Management					
Master in Climate Change and Sustainable Development					
Master in Sustainable Land Management					
Master in Food Security and Nutrition					
Master in Sustainable crop and environmental protection					
Master in Pastoralism					

Professional training needs identification form (Specify the number of managers to be trained by topic and by year).

Important: Respect for gender is a fundamental requirement. Please respect a 40% quota for women.

Topics	Course duration	Training location *	2024	2025	2026	2027	2028
1. Food Security and Nutrition							
Title 1** :							
Title 2 :							
Title x :							
2. Natural Resources Management							
Title 1 :							
Title 2 :							
Title x :							
Climate-Water-Weather							
Title 1 :							
Title 2 :							
Title x :							
4. IT Services							
Title 1 :							
Title 2 :							
Title x :							
5. Other technical supports							
Title 1 :							
Title 2 :							
Title x :							

* : Specify whether the training will take place at AGRHYMET CCR-AOS or in your country

** : Specify the title of the training course requested

Annexe 2 : AGRHYMET CCR-AOS training services for senior

Table 1 : Training services for senior technicians by AGRHYMET RCC-WAS

Branch	Main teaching units	Duration of training (year)	Main fields of application
Agrometeorology	<ul style="list-style-type: none"> - Physical and dynamic meteorology - Synoptic Meteorology - Tropical Meteorology - Satellite Meteorology - Climatology - Climate change - Environmental management - Water resources - Conventional and automatic meteorological instruments - Meteorological code and observations - Mapping and upper air measurements - Basic agrometeorology - Agrometeorological monitoring - Basic agrometeorology of irrigation - Plant physiology - Agronomy - Crop water requirements - Water management and soil fertility - Agrometeorological database - Climate data analysis - Agrometeorological data analysis software 	2	<ul style="list-style-type: none"> - Meteorology - Water resources - Agriculture - Livestock - Environment
Hydrologie	<ul style="list-style-type: none"> - GEO 1103 : General geology - PED 1105 : Conservative soil management - CSC 1106: Climate and climate services - MAG 1107: Meteorology - INF 1108: Informatics - Weather & Climate - Soil management and conservation - General hydrology - Surface hydrology - Hydrometry - Hydraulics - Meteorological measurements - Hydrogeology - Topography - Cartography - Technical drawing and quantity surveying 	2	<ul style="list-style-type: none"> - Ressources en eau - Environnement - Agriculture - Elevage

	<ul style="list-style-type: none"> - Hydrological software - Hydrological data processing & analysis - Climate Change & Climate Services - Surface Hydrodynamics - Water quality 		
Plant Protection	<ul style="list-style-type: none"> - Meteorology and Climate - General Plant Pathology - General Nemato-Virology - General Agricultural Zoology - Integrated pest and vegetable production - management - General Mycology - Generalities on Bacteria - Nematode bioecology - Agro-pharmaceutical product management - Extension and rural animation - Integrated pest and cereal management - Integrated pest management and fruit production - Phytosanitary control and quarantine 	2	<ul style="list-style-type: none"> - Plant Protection - Agriculture - Livestock - Environment
Instruments and Micro-computers	<ul style="list-style-type: none"> - Basic Electronics - Computer Science - Meteorology and Classic Instruments - Basic Electricity - Electrical Machines - Telecommunications - Automatic Hydrometeorological Station - Computer systems maintenance - Computer networks - Technical drawing - Databases - Amplifiers - Electronic maintenance Logic systems - Industrial control - Microprogrammed systems Programming techniques - Printer maintenance 	2	<ul style="list-style-type: none"> - Meteorology - Water resources - Agriculture - Livestock - Environment

Table 2 : Engineering training services by AGRHYMET RCC-WAS

Branch	Main teaching units	Duration of training (year)	Main fields of application
Agrometeorology	<ul style="list-style-type: none"> - Meteorology Fundamentals - Physical and Dynamic Meteorology - Synoptic Meteorology - Tropical Meteorology - Satellite Meteorology - Climatology - Climate Variability and Change - Climate modeling - Environmental management - Water resources - Conventional and automatic meteorological instruments - Meteorological codes and observations - Mapping and upper air measurements - Basic agrometeorology - Agrometeorological monitoring - Agrometeorological basis for irrigation - Agrometeorological modeling and crop - growth and development simulation models - Plant physiology - Agronomy - Crop water requirements - Water management and soil fertility - Agrometeorological database - Biometeorology and Climate Services - Climate change adaptation and mitigation - Adaptation strategy in agriculture. - Irrigation management software - Climate data analysis - Agrometeorological Data Analysis and Software - Impact of CC in Agriculture 	3 years from BAC+2	<ul style="list-style-type: none"> - Meteorology - Water resources - Agriculture - Livestock - Environment
Hydrology	<ul style="list-style-type: none"> - Watershed (BV) and its complex - Hydrological measurements - Hydrological data analysis and processing - Meteorological sciences - Characteristics and management of water - resources - Hydroclimatic database - General hydraulics 	3 years from BAC+2	<ul style="list-style-type: none"> - Water resources - Agriculture - Livestock - Environment

	<ul style="list-style-type: none"> - Erosion and solid transport - Hydrology task automation - Climate change studies - Natural hazards and disasters - Studies of extreme hydrological events - Regionalization of hydroclimatic characteristics - Hydrological modeling and forecasting - Planning of hydraulic structures - Mobilization and socio-economic use of water - Hydraulic structures - Organization and operation of hydrological - services - Water quality studies: standards and procedures - Urban hydraulics and sanitation - Hydraulics - Environmental and social protection - Development of hydrosystems - Early warning systems - Bioecology of aquatic environments - Studies of natural reservoirs - Groundwater studies 		
Plant Protection	<ul style="list-style-type: none"> - Taxonomy and bioecology of pests - Crop pests - Stored food pests - Taxonomy and bioecology of pathogens - Phytosanitary legislation - Crop pest management - Nematode identification - Weed assessment in the field - Weeds and parasitic phanerogams - Phytopharmacy - Rodentology - Seed protection - Environmental management - Plant pathogen detection - Yield loss assessment - Production and pest management - Mammalogy - Identification of plant nematodes and viruses - Identification of fungi and bacteria - Measurement of pathogen and disease 	3 years from BAC+2	<ul style="list-style-type: none"> - Plant Protection - Agriculture - Livestock - Environment

	<ul style="list-style-type: none"> - Methods Epidemic analysis - Integrated crop protection for cereals - Integrated crop protection for legumes and cotton - Integrated protection of vegetable crops - Management of cereal and legume viroses - Management of nematodes in cereals and legumes - Phytosanitary database - Development modeling and pest management 		
Instruments and Micro-computers	<ul style="list-style-type: none"> - Computer science - Meteorology and climatology - Instrumentation - Electrical engineering - Telecommunications and radiocommunications - Computer systems and networks - Industrial Computing - Automatic weather stations - Algorithms and programming - Signal processing - Database design and development - Electrical signal conditioning - Hydrological station maintenance - Object-oriented programming - Reliability, availability and maintenance management - Computer systems and networks - Radar and remote sensing - Industrial process control and management - Image processing - Microprogrammed systems - Switching electronics - Electronic maintenance - Drones and remote sensing - UNIX operating systems - Computer network connection 	3 years from BAC+2	<ul style="list-style-type: none"> - Meteorology - Water resources - Agriculture - Livestock - Environment

Table 3 : Masters training services by AGRHYMET RCC-WAS

Branch	Main teaching units	Duration of training (year)	Main fields of application
Integrated Water Resources Management & Environment	<ul style="list-style-type: none"> - Climate change and water resources - Governance of natural resources - Natural resources management - Hydrological study tools - Hydrology and Ecology - Integrated Water Resources Management - Geomatics and Applied Statistics - Hydraulic structures and water quality 	1 year from BAC+4	<ul style="list-style-type: none"> - Water resources - Agriculture - Livestock - Environment
Climate Change and Sustainable Development	<ul style="list-style-type: none"> - Statistics and geomatics - Science of climate variability and change - Sustainable development Governance and climate negotiations - Adaptation of agriculture to CC - Climate Change mitigation in the AFOLU sector - Vulnerability analysis - Sectoral impacts of climate change 	1 year from BAC+4	<ul style="list-style-type: none"> - Climate change - Climate services - Agriculture - Livestock - Water resources - Environment
Sustainable Land Management	<ul style="list-style-type: none"> - Ecosystems and populations - Geomatics and land management - Climate change and land use - Environmental governance - Natural resource management - Soil management - Applied statistics - Land evaluation 	1 year from BAC+4	<ul style="list-style-type: none"> - Water resources - Agriculture - Livestock - Environment
Sustainable crop and environmental protection	<ul style="list-style-type: none"> - Management of crop production systems - Population regulation in agrosystems - Taxonomy and bioecology of pests - Pest survey and surveillance - Safe use of pesticides - Integrated production and pest management - Decision support tools for plant protection - Agricultural experimentation and surveys 	1 year from BAC+4	<ul style="list-style-type: none"> - Plant Protection - Agriculture - Environnement - Livestock

<p>Food Security and Nutrition</p>	<ul style="list-style-type: none"> - Water and food security - Food availability issues - Monitoring food security - Markets for agricultural products in West Africa - Food security policies and projects - Food Security and Nutrition analysis tools - Malnutrition analysis - Geomatics and survey tools 	<p>1 year from BAC+4</p>	<ul style="list-style-type: none"> - Agriculture - Livestock - Health
<p>Pastoralism</p>	<ul style="list-style-type: none"> - Public policies and pastoral development - Geomatics and pastoralism - Pastoralism and global change - Territory and pastoral development - Pastoral crisis management - Pasture management - Applied statistics - Risk management 	<p>1 year from BAC+4</p>	<ul style="list-style-type: none"> - Livestock - Agriculture - Environment -

Annex 3 : Example of a letter/note of request/official request for technical support from AGRHYMET RCC-WAS to a CILSS member state

REPUBLIQUE DU NIGER
MINISTERE DE L'AGRICULTURE
PROGRAMME DE RESILIENCE DU SYSTEME ALIMENTAIRE EN AFRIQUE DE
L'OUEST (FSRP / PRSA)



Niamey, le 08 AVR 2023

Le Coordonnateur National

A

Monsieur le Directeur Général du
Centre Régional AGRHYMET
Niamey

N° 0040 UCP/FSRP/NE

Objet : Appui pour un diagnostic des Stations MESA

Monsieur le Directeur Général,

Dans le cadre de la mise en œuvre du Programme de Résilience du Système Alimentaire en Afrique de l'Ouest (PRSA/FSRP), il est prévu la remise en état des Stations MESA (suivi des ressources en eau et la végétation) au niveau de la Direction Générale du Génie Rural (DGGR) et la Direction Générale du Développement Pastoral, de la Production et des Industries Animales (DGDP/PIA).

Aussi, ai-je l'honneur de solliciter votre appui pour faire un diagnostic de ces deux (2) stations et nous faire des propositions en vue de leur réhabilitation.

Veillez recevoir, Monsieur le Directeur Général l'expression de notre franche collaboration.

AMPLIATIONS

- SG/MAG1 à-t-c-r
- DGGR1 pour suivi
- DGDP/PIA1
- CHRONO.....1


MOUSSA AMADOU

*BP : 11 884- Niamey – NIGER - Tel : 20 34 02 50
Quartier Gamkallé, face au garage de la SNTN
Email : ugppariis_ne1825@yahoo.com*

Annex 4 : Example of a response letter from AGRHYMET RCC-WAS to an official request for technical support from a CILSS member state



50 ANS
1973-2023

COMITE PERMANENT INTER-ETATS DE LUTTE CONTRE LA SECHERESSE DANS LE SAHEL
PERMANENT INTERSTATE COMMITTEE FOR DROUGHT CONTROL IN THE SAHEL
COMITÉ PERMANENTE INTER-ESTADOS DE LUTA CONTRA A SECA NO SAHEL
اللجنة الدائمة المشتركة لمحاربة التصحر في الساحل



« 50 ans d'engagement au service des populations sahéliennes et ouest-africaines »

Centre Régional AGRHYMET

N/Ref. **0922** /DG/CRA/DAT/HS/mm Niamey, le **16 MAY 2023**

Objet : Proposition pour l'opérationnalisation des stations de réception des produits satellitaires – MESA de la DGGR et de la DGDP/IA

Monsieur le coordonnateur National,

Suite à votre courrier relatif à la demande d'appui au diagnostic des stations MESA de la Direction Générale du Génie Rural (DGGR) et de la Direction Générale du Développement Pastoral, de la Production et des Industries Animales (DGDP/IA) une proposition est faite pour la remise en service desdites stations. Il s'agit notamment des actions suivantes :

- L'acquisition d'équipements nécessaires pour le dépannage des stations (disques internes et externes, onduleurs, connexion internet ...)
- La réinstallation et la configuration des stations de réception, de traitement et de visualisation
- L'ingestion des données historiques des catégories de produits
- L'archivage des données sur des disques externes
- L'organisation d'ateliers de formation des administrateurs systèmes des stations
- L'organisation d'ateliers de formation des thématiciens impliqués dans l'utilisation des données des stations aussi bien au niveau central que régional.
- Une assistance technique rapprochée pour la maintenance et l'exploitation des produits pour une période de 12 mois.
- Le renforcement des systèmes d'alimentations pour la continuité de la fourniture d'énergie.

Ces activités proposées tiennent compte de la situation de chaque station MESA. Vous trouverez ci-joint un budget estimatif pour la conduite des activités d'appui pour la remise en service des stations.

Tout en remerciant pour l'intérêt que vous portez à notre institution commune, Veuillez recevoir, Monsieur le Coordonnateur National, nos salutations distinguées.



Le Directeur Général
M. Hamadou
Dr Mahalmoudou HAMADOUN

Monsieur le Coordonnateur National
du projet FSRP-Niger
Niamey, Niger

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INSTITUT DU SAHEL : BP 1530 Bamako, Mali - Tél (+223) 20.22.21.48 / 20.22.30.43 / 20.22.47.06 - Courriel : administration.insah@cilss.int - https://insah.cilss.int/

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