

Sugar Center Bldg., North Avenue, Diliman, Quezon City, Philippines 1101
TIN 000-784-336
SUGAR REGULATORY

Website: http://www.sra.gov.ph Email Address: srahead@sra.gov.ph

Tel No. (632) 8929-3633, (632) 3455-2135, (632) 3455

MEMO-RDE-OTM-2024-JAN-022

January 22, 2024

SUGAR REGULATORY ADMINISTRATION
RECORDS SECTION

(632) 3455 326

2024

MEMORANDUM CIRCULAR NO. 1. Series of 2024

SUBJECT: GUIDELINES FOR THE DISTRIBUTION OF IRRIGATION EQUIPMENT, AWS (AUTOMATIC WEATHER STATION) AND DROUGHT MONITORING SYSTEM AS EL NINO MITIGATION MEASURES FOR SUGARCANE

I. Policy Statement/Rationale

In the Philippines, dry condition, dry spell, and drought events are associated with the occurrence of El Niño. Its climatic indicators in the country may include delayed onset of the rainy season, early termination of the rainy season, enhanced Southwest (SW) monsoon activity, isolated heavy downpour with short duration, far tropical cyclone tracks, and less number of tropical cyclones entering the Philippine Area of Responsibility (PAR).

El Niño can cause a wide range of impacts to the agriculture and fisheries sector such as reduction in food production, increase in food prices, and reduction in farm incomes. To address these, the food security sector aims to provide ample support services for local production and pursue supply-augmenting measures as necessary,

The El Nino National Action Plan (NAP) is in accordance with Presidential Directive No. PBBM-2023-320 dated April 18, 2023, for concerned government agencies to come up with a whole-of-government strategy in preparation for El Niño. The National Disaster Risk Reduction and Management Council (NDRRMC) created a National El Niño Team on April 18, 2023 tasked primarily to develop a comprehensive national action plan that will outline the government's mitigation activities to address the El Niño phenomenon.

As response to Presidential Directive No. PBBM-2023-320 dated April 18, 2023, the Sugar Regulatory Administration created an El Niño Task Force Committee and Sub-Committees through the Special Order No: 173 series of 2023 which are committed to respond to the possible impact of the above mentioned phenomenon for the Sugarcane Industry. Further, SRA has initiated mitigation projects for the inevitable threat of these phenomena.











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II. Definition of Terms

- 1. RD&E acronym for Research Development and Extension Department;
- 2. ABE acronym for Agricultural and Biosystems Engineering Division;
- 3. RDE OTM acronym for Research Development and Extension Department Office of the Manager III Luzon and Mindanao;
- 4. SRA acronym for Sugar Regulatory Administration, the implementing agency for the El Niño Mitigation Projects;
- 5. DIAMOSS acronym for Drought Indicator and Monitoring System for Sugarcane;
- 6. AWS acronym for Automatic Weather Station;
- 7. DOD acronym for Deed of Donation;
- 8. MOA acronym for Memorandum of Agreement;
- 9. HYV acronym for Sugarcane High Yielding Varieties
- 10. LORAWAN Gateway acronym for Long Range Wide Area Network Gateway

III. Scope and Coverage

The general guidelines will govern the implementation of the following El Nino monitoring and intervention projects for our sugarcane stakeholders. The said projects will be allocated to all the Mill Districts from Luzon, Visayas, and Mindanao.

- 1. Drought Indicator and Monitoring System for Sugarcane;
- 2. Weather-Based Productivity Monitoring thru Automatic Weather Station Data;
- 3. Distribution of units Shallow Tube Well (STWs) Pump with Engine;
- 4. Distribution of Irrigation Hose.

IV. Objectives

1. Development:

- To mitigate the impact of drought and dry spell season brought by the El Niño phenomenon and climate variability;
- To monitor weather-related data as reference for decision and policy making of the SRA;
- To assess the drought risk areas and facilitate SRA Interventions;
- To augment the need for additional irrigation equipment to our sugarcane farmers and stakeholders, prioritizing the seed farms of each district;







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- To determine the magnitude and spatial occurrence of drought conditions on every mill district that will affect the overall crop production output;
- To initiate resiliency measures that will enhance sugarcane productivity amidst extreme weather conditions.

Immediate:

- To safeguard the sources of planting materials (seed farms) against the impending effects of El Nino and prolonged drought through irrigation using STW engine and pumps and irrigation hose.
- To establish and enhance crop monitoring through weather-based productivity index.
- To identify vulnerable areas and provide intervention support for the areas affected by El Niño Phenomenon and prolonged drought.

V. Fund Sources

The funding of the projects may be derived from the following sources:

- 1. SRA internally-generated budget;
- 2. Sugarcane Industry Development Act (SIDA)
- 3. Local government units
- 4. Private sector
- 5. Special purpose fund of the government or other local fund sources

VI. Implementing Guidelines

A. <u>Drought Indicator and Monitoring System for Sugarcane Project:</u> The project aims to install Soil Moisture Sensors with wireless data transmission and LORA Gateway to all the Mill Districts from Luzon, Visayas, and Mindanao. This aims to create an alert system and identify the magnitude of possible drought and dry spell due to El Niño Phenomenon and extreme weather conditions. Additionally, the project goal is to provide a thematic maps on the soil moisture status per Mill District that will serve as a management tool for policy or decision making and other related interventions.

1. Evaluation and Establishment Criteria for Installation Sites:

- a. The proposed data center hub (LORA Gateway installation) shall be in the SRA Mill District Offices;
- b. If the Mill District Office is not suitable with the installation criteria, the MDOs shall facilitate surveying other alternative site/s with the assistance











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from ABE Division. Other alternative sites will be the offices of MDDCs, Block Farm, Sugarcane Planter Association/cooperatives, and small/big planters who are willing to cooperate with this technology/project;

- c. To ensure smooth transmission of data, installation sites must have electricity and internet connectivity for data distribution;
- d. The installation site must be at the center of the major sugarcane area, at least 3 km radius from the LORA gateway.
- e. The final sites will be tagged as reference for the installation of the said equipment.

2. Documentary Requirements:

- a. List of Final Installation Sites with attached Geotag Photos;
- b. Letter of Acceptance signed by the SRA Administrator and the owner or representatives of installation sites;

3. Deployment and Utilization

The SRA-ABE is in charge of the deployment and installation and shall have the following functions:

- 1. Facilitate the sites validation including inspection and evaluation of the implementation readiness of the sites based on above-mentioned criteria to be assisted by the concerned mill district personnel;
- 2. Monitor the installation of LORA in each site;
- 3. Prepare the GIS map of the specific locations of installed LORAs;
- 4. Prepare a monthly thematic map on agricultural drought from the data provided by soil moisture sensors using the satellite image.

B. Weather Based Productivity Monitoring thru Automatic Weather Stations:

The project aims to gather weather-related data and relate to the potential sugarcane production per mill district. This project will serve as a tool by our sugarcane stakeholders and policy/decision makers in providing real time weather data. The same data will be an input for the climate change resiliency actions that will mitigate the inevitable threat of Climate Variability to our sugarcane farmers.

1. Criteria for Installation Sites:

 The site should be established on sugar growing regions and distant from any cover and obstruction to ensure efficient gathering of weather related data;











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- b. Sites should be easily accessible for maintenance and data retrieval with an open space area for accurate data.
- c. The priority sites are within the MDDC compound, Sugar Mills, Block farm areas, or other government compound.
- d. The proposed sites should be in a secured place.

2. Documentary Requirements: Site proposal:

a. The Mill District Officer shall endorse the List of Proposed sites with geotagged images to the Crop Estimate Office.

Evaluation and establishment of the installation sites:

- a. Conduct thorough evaluation surveys based on established criteria;
- b. The Crop Estimate Team will validate and evaluate the proposed sites submitted by Mill District Officers prior to AWS installation;
- c. After Evaluation and Validation, the Crop Estimate Team will endorse the Final Sites for the approval of the SRA Administrator.

Approved sites - the mill district office shall submit the following original document to the Crop Estimate Office:

- a. Signed Letter of Acceptance by the Land Owner/Representative;
- b. Signed Property Acknowledgement Report;
- c. Signed Memorandum of Agreement between the SRA and the Second Party.

3. Deployment and Utilization: Installation:

- a. The Crop Estimate team shall inspect and evaluate the implementation readiness of the sites if suitable for AWS sites following the above mentioned criteria for the installation:
- b. Installation of the AWS in all sites shall be done by Crop Estimate Team.

4. Monitoring and Evaluation of AWS Units and Data:

a. Regular Maintenance: The Field Surveyor/Agriculturist/Mill District personnel or authorized personnel from the Second Party will schedule a monthly maintenance of AWS site for weed cutting and sensor cleaning;











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b. Annual Calibration: Conduct annual maintenance and recalibration of AWS units by the Crop Estimate team.

5. OBLIGATIONS OF THE SRA:

- a. Identify, install, and establish an AWS at the proposed site;
- b. Provide new AWS fence (Materials, Installation and labor) for the additional 80 units of AWS;
- c. Provide data cloud subscription required for data transmission and web portal data dashboard;
- d. Provide access to the AWS data;
- e. Designate Engr. Laverne C. Olalia as the focal person and Crop Estimate Team responsible of monitoring and coordinating activities regarding AWS.

6. OBLIGATIONS OF THE RECIPIENT:

- Allocate a secure space in the identified/approved location of the Mill District to house the AWS, including the establishment of a secure perimeter fence;
- b. Assign personnel for the routine operation and maintenance activities;
- c. Implement measures to guarantee the security and protection of the installed AWS, mitigating the risks of vandalism and theft;
- d. In the event of any vandalism or theft involving the AWS, promptly report the incident to the nearest police station within 24 hours. Additionally, submit the police report to the SRA Mill District Officer within one week from the occurrence of such incidents;
- e. Notify the SRA Mill District Officer promptly in the event of any disorder or malfunctioning of the AWS, ensuring immediate action can be taken;
- f. Employ the data obtained from AWS in the development of sugarcane production technologies for the advancement and benefit of the mill district;
- g. Supervise the collection of data from AWS.

7. OTHER COVENANTS

- a. Ownership of all data obtained during the operation of the AWS, including but not limited to reports, articles, research papers, data banks, tri-media presentations, project outputs, discoveries, inventions, and any income generated thereof, shall exclusively belong to the SRA;
- b. No relocation of the site shall occur without the prior approval of the SRA;







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- c. In the event of site transfer and reinstallation, all associated costs shall be the responsibility of the requesting party/recipient;
- d. The installed AWS, inclusive of all its facilities, shall be the property of the SRA, and upon the expiration or termination of this Agreement, it is obligated to be returned to the SRA;
- e. If the AWS is stolen or damaged due natural calamities, validated report shall be submitted appropriately. On the other hand, if found to be of negligence or fault of the recipient, the cost sharing will be recommended for its repair or replacement.
- C. <u>Distribution of Shallow Tube Well Pumps:</u> The intervention_aims to provide a small-scale irrigation facility to sugarcane farmers to ensure water accessibility amidst the drought and dry spell seasons due to El Niño Phenomenon and extreme dry conditions. This will augment the soil moisture requirement to the crop crucial to its crop establishment, especially in the early stages of sugarcane production. Additionally, this will safeguard and maintain the sources of planting materials to the nearby farms as SRA prioritizes the distribution of STW to the existing seed farms.

1. Eligibility Criteria Requirement

- a. The priority areas of the project are the MDDCs, Block Farms and small planters with existing nursery areas. Evaluation forms will be provided by RD&E Department see "ANNEX A";
- b. Geotagged images of the proposed sites with source of water will be required as part of the evaluation;
- c. The proposed location of the STW must be for communal use and will be primarily serving the seed farm/nursery areas that will be the source for sugarcane HYVs.

2. Documentary Requirements:

- Letter of intent to avail STW addressed to the SRA Administrator thru Mill District Officer;
- b. Filled up evaluation form "Annex A" with attached Geotagged Photos and the following;
 - If the Beneficiary/ies is MDDC provide duplicate copy of Accredited SRA Service Providers;
 - If the Beneficiary/ies is Block Farm Associated provide duplicate copy of Block Farm Accreditation Certificate;











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- If the Beneficiary is Individual farmers provide duplicate copy of RSBSA Registration Number or any government accreditation documents;
- If the Beneficiary/ies is not registered in any organization/associations/cooperatives, the Benefeciary/ies need only to submit the filled up Evaluation Form "Annex A".
- c. List of target farmer-Beneficiaries, farm size and locations with sex disaggregated data and identified gender;
- d. Signed and notarized Deed of Donation (DOD) by the Beneficiary and the SRA Administrator.

3. Evaluation and Approval of the Beneficiaries

- a. The SRA ESD personnel shall submit a list of proposed site/s based on the fill up evaluation form and will be endorsed by the MDO to the Chief Agriculturist for the preliminary survey of the ABE Division;
- b. The Interim Agricultural and Biosystem Engineering (ABE) Division shall assess and evaluate the proposed sites identified by the applicants as endorsed by the MDO and submit its recommendation to the Office of the Manager III – RDE, Luzon and Mindanao for its recommending approval;
- c. The RDE Manager III, Luzon & Mindanao also a project leader shall endorsed to R, D & E Deputy Administrator and SRA Administrator for the approval of the final list of eligible beneficiary/ies of Shallow Tube Well Engine Pumps with Accessories;
- d. The approved final list of beneficiaries will be forwarded to SRA Mill District Officers for distribution of the Shallow Tube Well Pumps and Accessories for proper documentation.

4. Implementation of the Project

- a. The SRA MDO shall serve as the project coordinator who shall assist the beneficiary/ies in complying with the documentary requirements;
- A Deed of Donation (DOD) between SRA and the Beneficiary/ies shall be executed prior to the distribution of Shallow Tube Well Pumps and Accessories;
- c. The R, D & E shall design the template of the DOD and ensure that gender and development shall always be part of the DOD provisions;
- d. All irrigation sites of qualified farmer beneficiaries shall be Distribution ready upon the approval of a DOD;









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- e. The cost of Drilling and Installation of the Shallow Tube Well Pumps will be shouldered by the Beneficiary/ies;
- f. The interim ABE Division shall ensure that the pump sets are functional and tested after release.

5. Monitoring and Evaluation

- After the turn-over of STW to beneficiaries, the ABE Division shall conduct onsite monitoring of the STW and submit its monitoring report to the management;
- b. Geotagged images shall be gathered during its operation.
- D. <u>Distribution of Irrigation Hose Project</u>: The project aims to optimize the water conveyance and ensure the efficient irrigation application of our farmers during their irrigation activities. This will also further encourage them to utilize their irrigation facilities. Availability of irrigation facilities or other water-sourcing equipment is critical, especially during Drought and Dry Spell. Also, minimizing conveyance losses could save on the fuel cost and guarantee effective irrigation.

1. Eligibility Criteria Requirement

- a. The priority areas for the Irrigation Hose are the Farmers Planter with existing irrigation facilities such as Shallow Tube Well, Ramp Pump, Deep Tube Well, and other related adequate water source such as River, lakes, etc:
- b. The Beneficiary/ies shall fill up the evaluation form for Irrigation Hose see "Annex B";
- c. Geotagged images of the beneficiaries' field with existing irrigation resources and source of water will be required as part of the evaluation.

2. Documentary Requirements:

- a. Letter of intent to avail irrigation hose addressed to the SRA Administrator thru Mill District Officer;
- b. Filled up evaluation form "Annex B" with attached Geotagged Photos and the following;
 - If the Beneficiary/ies is MDDC provide duplicate copy of Accredited SRA Service Providers;
 - If the Beneficiary/ies is Block Farm Associated provide duplicate copy of Block Farm Accreditation Certificate;









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- If the Beneficiary is Individual farmers provide duplicate copy of RSBSA Registration Number or any proving documents;
- If the Beneficiary/ies is not registered in any organization/associations/cooperatives, the beneficiary/ies need only to submit the filled up evaluation form "Annex B";
- c. List of target farmer-beneficiaries, farm size and locations with sex disaggregated data and identified gender;
- d. Signed Certificate of Turn Over and Acceptance by the beneficiary/ies and the SRA Administrator.

3. Evaluation and Approval of the Beneficiaries

- a. The SRA technical personnel shall submit a list of proposed beneficiary/ies based on the fill up evaluation form and will be endorsed by the MDO to the Chief Agriculturist;
- Submit recommendation endorsed to R, D & E Deputy Administrator and SRA Administrator for the approval of the final list of beneficiary/ies who are qualified to receive the Irrigation Hoses;
- c. Upon the approval of the final list the ABE will disseminate it to Mill District Officers for the Distribution of Irrigation Hoses.

4. Implementation of the Project

- a. A Certificate of Turn Over and Acceptance which is signed by the Beneficiary/ies and SRA Administrator;
- The R, D & E shall design the template of the Certificate of Turn Over and Acceptance and ensure that gender and development shall always be part of the DOD provisions;
- c. All distribution of irrigation hose shall be executed immediately upon Signing of Certificate of Turn Over and Acceptance.

5. Monitoring and Evaluation

a. After the turnover, the ESD Division shall conduct onsite visit and monitoring of the implemented projects and submit its monitoring report to the management.











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E. Effectivity

The Memorandum Circular will take effect immediately once it is approved by the Sugar Board and signed by the Administrator.

Approved (By the Authority of the Sugar Board)

PABLO LUIS. A. AZCONA Administrator













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"ANNEX A"

Name of Grantee:		Age:		
Government ID:		ID No.:		
Address:		Sex (M/F):		
Farm Location:		Contact Number:		
	TY/MUNICIPALITY			
Sugarcane Area (in hectares):	ha			
Ownership Type:				
[] Registered Owner		[] Others:		
[] Tenant (Name of Land Owne				
[] Lessee (Name of Land Owne				
REQUIRE	D CRITERIA	FOR STW BENEFICIARY		
Parameters:		Baseline Data (with attached geotagged photos)		
With Existing Nursery Area:	Yes []	If Yes, Total Land Area (in hectares):		
	No []			
With Existing Water Source:	Yes []	If Yes, Type of Water Source:		
	No []	[] Well [] Others:		
		[] River/Lake		
		No. of Existing Water Source:		
		If well, depth in meters: m		
		If river/lake, distance from irrigated land:		
Topographic Area:	Elevated []	Estimated Elevation:		
Topographic Area.	Flatland []	Estimated Lievation.		
MDDC Registered Member:	Yes []			
MDDC Registered Member:	No []			
Communal Use:	Yes []			
Communa osc.	No []			
RSBSA Registered:	Yes []	RSBSA No:		
RSDSA Registereu.	No []	RSDSA NO		
Member of any Farmers'	Yes []	If Yes, specify:		
Association/Cooperative?	No []	if ies, specify.		
		ted above are true and correct, and that the		
may be used by the Sugar Regu		stration for the purposes of shallow tube we		
grant.				



Date Signed:



Date Signed:







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"ANNEX B"

IRRIGATION HOSE FORM							
Name of Grantee:			Age:				
Government ID:				ID No.:			
Address:				Sex (M/F):			
Farm Location:				Contact Number:			
BARANGAY, CITY/MUNICIPALITY							
Sugarcane Area (in hectares): ha							
Ownership Type:							
[] Registered Owner [] Others:							
[] Tenant (Name of Land Owner:)							
[] Lessee (Name of Land Owner:)							
REQUIRED CRITERIA FOR IRRIGATION HOSE BENEFICIARY							
Parameters:				aseline Data (with attached geotagged			
				notos)			
With Existing Shallow Tube	Yes []		If	Yes: [] Functional			
Well with Pump:	No []			[] Not Functional			
With Existing Nursery Area:	Yes []		If	Yes, Total Land Area (in hectares):			
	No []			ha			
With Existing Water Source:	Yes []			Yes, Type of Water Source:			
	No []] Well [] Others:			
] River/Lake			
				o. of Existing Water Source:			
	LIE ACE	1		well, depth in meters: m			
			If	river/lake, distance from irrigated land:			
	71			m			
Topographic Area:	Elevated		Es	stimated Elevation:			
MDDCD ' A LW L	Flatland						
MDDC Registered Member:	Yes []						
0 111	No []						
Communal Use:	Yes []						
DCDCA D	No []						
RSBSA Registered:	Yes []						
Manahan of ann Farmand	No []		16	V			
Member of any Farmers' Association/Cooperative?	Yes []		II	Yes, specify:			
	No []		in digat	ad above and two and connect and that			
I hereby declare that all information indicated above are true and correct, and that							
these may be used by the Sugar Regulatory Administration for the purposes of shallow tube							
well grant.		7					
Name and Signature of Benefic	ciary			Name and Signature of MDO			



Date Signed:



Date Signed:



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