



# **Results-Framework Document (RFD)**

**for**

## **Central Arid Zone Research Institute (2014 - 2015)**

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## **Section 1: Vision, Mission, Objectives and Functions**

### **Vision**

A greener, climate-resilient arid land with well-managed and sustainable agriculture that provides improved livelihood options and conserves the scarce natural resources.

### **Mission**

To strive for providing appropriate, low-cost technological options for sustainable use of natural resources in the arid regions linked to improved livelihood, and also to monitor and combat drought and desertification.

### **Objectives**

- To enhance profitability and livelihood in arid eco-system
- To conserve biodiversity and improve plants and livestock
- To promote awareness and knowledge amongst the stakeholders
- To inventorize natural resources for their assessment and management

### **Functions**

- Assessment and monitoring of natural resources for drought and desertification
- Research for genetic improvement of arid zone plants and production of quality planting materials
- Research for improving arid land farming systems through better stress management in cropping systems and livestock production systems, as also for range improvement
- Research for value addition of arid zone products that may help to create a value-chain linking stakeholders at different levels
- Research for efficient energy management and farm tool development at affordable cost at village level
- Technology dissemination, socio-economic assessment, and capacity building of the stakeholders
- Collaboration with different national and international institutions in the above fields for knowledge sharing and improvement of skill

**Section 2: Inter se priorities among Key Objectives, Success Indicators and Targets**

S. No.	Objectives	Weight	Actions	Success Indicators	Unit	Weight	Target / Criteria Value				
							Excellent	Very Good	Good	Fair	Poor
							100%	90%	80%	70%	60%
1	To enhance profitability and livelihood in arid eco-system	30	Improved package of practices for farming/cropping systems	Farming systems and crop management modules developed/ validated	No.	22	7	6	5	4	3
			Development and improvement of farm implements and renewable energy devices	Farm and energy devices developed	Date	8	January 31, 2015	February 15, 2015	February 28, 2015	March 15, 2015	March 31, 2015
2.	To conserve biodiversity and improve plants and livestock	22	Conservation, enhancement and improvement of plant genetic resources	Genetic resources collected, conserved, evaluated and registered	No.	12	14	12	10	8	6
			Quality planting materials	Quality seed material produced	Kg.	4	3840	3200	2560	1920	1280
				Quality planting material produced	No.	4	54000	45000	36000	27000	18000
			Conservation of arid breed of livestock	Elite small ruminants multiplied	No.	2	50	40	30	20	10
3	To promote awareness and knowledge amongst the stakeholders	20	HRD and capacity building	Trainings organized	No.	6	90	75	60	45	30
				FLDs conducted	No.	8	510	425	340	255	170
				Seminar/symposia/workshop/s ummer/winter schools organized	No.	3	5	4	3	2	1
				Agro-advisory weather forecast	No.	3	90	75	60	45	30

4.	To inventorize natural resources for their assessment and management	8	Monitoring land resources and desertification	Land resources maps/land use plans	No.	8	5	4	3	2	1
*	Publication/Documentation	5	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	3	20	17	14	11	8
			Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	2	30.06.2014	02.07.2014	04.07.2014	07.07.2014	09.07.2014
*	Fiscal resource management	2	Utilization of released plan fund	Plan fund utilized	%	2	98	96	94	92	90
*	Efficient functioning of the RFD System	3	Timely submission of Draft RFD (2014-15) for approval	On-time submission	Date	2	May 15, 2014	May 16, 2014	May 19, 2014	May 20, 2014	May 21, 2014
			Timely submission of Results for RFD (2013-14)	On-time submission	Date	1	May 1 2014	May 2 2014	May 5 2014	May 6, 2014	May 7, 2014
*	Enhanced Transparency / Improved Service delivery of Ministry/Department	3	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	2	100	95	90	85	80
			Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	1	100	95	90	85	80
	Administrative Reforms	7	Update organizational strategy to align with revised priorities	Date	Date	2	Nov.1 2014	Nov.2 2014	Nov.3 2014	Nov.4 2014	Nov.5 2014

			Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC)	% of Implementation	%	1	100	90	80	70	60
			Implementation of agreed milestones for ISO 9001	% of implementation	%	2	100	95	90	85	80
			Implementation of milestones of approved Innovation Action Plans (IAPs)	% of implementation	%	2	100	90	80	70	60

### Section 3: Trend Value of the Success Indicators

S.No.	Objectives	Actions	Success Indicators	Unit	Actual value for FY 12/13	Actual Value FY 13/14	Target value for FY 14/15	Projected value for FY 15/16	Projected value for FY 16-17
1.	To enhance profitability and livelihood in arid eco-system	Improved package of practices for farming/cropping systems	Farming systems and crop management modules developed/validated	No.	5	5	6	6	6
		Development and improvement of farm implements and renewable energy devices	Farm and energy devices developed	Date	-	-	February 15, 2015	February 15, 2016	February 15, 2017
2.	To conserve biodiversity and improve plants and livestock	Conservation, enhancement and improvement of plant genetic resources	Genetic resources collected, conserved, evaluated and registered	No.	7	11	12	12	12
		Quality planting materials	Quality seed material produced	Kg	2500	3000	3200	3200	3200
			Quality planting material produced	No.	40000	40000	45000	45000	46000
		Conservation of arid breed of livestock	Elite small ruminants multiplied	No.	45	40	40	40	40
3	To promote awareness and knowledge amongst the stakeholders	HRD and capacity building	Trainings organized	No.	75	75	75	75	75
			FLDs conducted	No.	-	400	425	425	425
			Seminar/symposia/workshop/summer/winter schools organized	No.	2	2	4	4	4
			Agro-advisory weather forecast	No.	60	60	75	75	75
4.	To inventorize natural resources for their assessment and management	Monitoring land resources and desertification	Land resources maps/land use plans	No.	2	2	4	4	4
*	Publication/Documentation	Publication of the research articles in the journals having the NAAS rating of 6.0 and above	Research articles published	No.	16	17	17	20	21

		Timely publication of the Institute Annual Report (2013-2014)	Annual Report published	Date	-	-	02.07.2014	-	-
*	Fiscal resource management	Utilization of released plan fund	Plan fund utilized	%	98.0	98.0	96.0	98.0	98.0
*	Efficient Functioning of the RFD System	Timely submission of Draft RFD for 2014-2015 for Approval	On-time submission	Date	-	-	May 16, 2014	-	-
		Timely submission of Results for 2013-2014	On-time submission	Date	-	-	May 2, 2014	-	-
*	Enhanced Transparency/ Improved Service delivery of Ministry/ Department	Rating from Independent Audit of implementation of Citizens' / Clients' Charter (CCC)	Degree of implementation of commitments in CCC	%	-	-	95	-	-
		Independent Audit of implementation of Grievance Redress Management (GRM) system	Degree of success in implementing GRM	%	-	-	95	-	-
*	Administrative Reforms	Update organizational strategy to align with revised priorities	Date	Date	-	-	Nov.2, 2014	-	-
		Implementation of agreed milestones of approved Mitigating Strategies for Reduction of potential risk of corruption (MSC)	% of Implementation	%	-	-	90	-	-
		Implementation of agreed milestones for ISO 9001	% of implementation	%	-	-	95	-	-
		Implementation of milestones of approved Innovation Action Plans (IAPs)	% of implementation	%	-	-	90	-	-

#### Section 4(a): Acronyms

S. No.	Acronym	Description
1.	SAC	Space Application Center
2.	MoES	Ministry of Earth Sciences
3.	HRD	Human Resource Development
4.	FLD	Front Line Demonstrations
5.	SAUs	State Agricultural Universities
6.	KVKs	Krishi Vigyan Kendra
7.	MPTS	Multi Purpose Tree Species
8.	NRSC	National Remote Sensing Centre

#### Section 4(b): Description and definition of success indicators and proposed measurement methodology

S. No	Success Indicator	Description	Definition	Measurement	General Comments
1.	Farming systems and crop management modules developed/ validated	Incorporation of various components including livestock and new /improved package of practices (based on the climatic conditions of the region) is the basic requirement for development of a sustainable farming system approach	Farming system is an approach which involves integration of various components e.g. crops, silviculture, horticulture, grasses and livestock to develop sustainability and improve livelihood security of farmers	No. of farming system models and package of practices developed	-
2.	Farm and energy devices developed	Design and develop farm implements suitable for arid farming conditions. Design and develop energy devices utilizing available natural resources (solar energy)	Design and development of implements suitable for arid agriculture can ease farm operations and harness solar energy for development of devices can reduce	No. of implements developed	-



			the dependence of farmers on conventional sources of energy		
3.	Genetic resources collected, conserved, evaluated and registered	Diverse germplasm collection, their evaluation for desired traits and conservation is the basic requirement to bred new varieties	Selection, collection and conservation of genetic variability is necessary for breeding of new lines/varieties with desired traits	No. of genotypes with unique traits collected, varieties developed and plant material evaluated	-
4.	Quality seed material produced	Multiplication of the seed material of varieties developed by the institute and other quality seed material for transfer to farmers	It is a process by which quality pure seed having desired traits is produced for achieving higher productivity	Kg. of seed produced	-
5.	Quality planting material produced	Production of quality planting material of horticultural crops and MPTS trees for transfer to farmers	It is a process by which quality planting material having desired traits is produced either through vegetative and sexual means for large scale cultivation	No. of planting material produced	-
6.	Elite small ruminants multiplied	Multiplication of elite small ruminants for utilization in farmers breeding programmes	Multiplying pure breeds of small ruminants and supplying them to farmers for breeding purposes can enhance their productivity with respect to desired traits	No. of elite small ruminants multiplied	-
7.	Trainings organized	Capacity building activities related to knowledge and skill improvement/development programmes for farmers, rural youth, subject matter specialist and extension personnel	Training is a process by which new skills, knowledge and exposure to advanced techniques is imparted to stake holders for better adoption of new technologies	No. of trainings organized	-

8.	FLDs conducted	Trials and demonstrations conducted for technology testing and proving the technology potential production	Frontline demonstration is the field demonstration conducted on farmers field under the close supervision of the scientists through which improved technologies are demonstrated at farmers fields for adoption	No. of demonstrations organized	-
9.	Seminar/symposia/workshop/summer/winter schools organized	For sharing and acquiring advance knowledge in subject area for better planning and execution of research projects	It provides a platform for sharing scientific knowledge, exchanging ideas and exposes researchers to latest knowledge in area of their work	No. of seminars/workshops organized	-
10.	Agro-advisory weather forecast	Advisories based on weather forecast to help farmers in taking appropriate measures for crop planning	Weather based advisories provide information to farmers on various aspects of crop production	No. of advisories issued	-
11.	Land resources maps /land use plans	Soil resource inventory & characterization is prerequisite for developing land use planning	Soil resource maps are the record of soil units delineated on the basis of similar land resources properties in a readable format	No. of maps developed	-

**Section 5: Specific Performance Requirements from other departments that are critical for delivering agreed results**

<b>Location Type</b>	<b>State</b>	<b>Organization Type</b>	<b>Organization Name</b>	<b>Relevant Success Indicator</b>	<b>What is your requirement from this organization</b>	<b>Justification for this requirement</b>	<b>Please quantify your requirement from this Organization</b>	<b>What happens if your requirement is not met</b>
Central Govt.		Department	NRSC/SAC, Department of space, Govt. of India	Land resource maps/land use plans	For remote sensing data products like satellite images	For accurate and timely assessment and monitoring of state of natural resources	Approximately 290 number of maps at 1:50,000 scale	Number of districts covered for assessment and monitoring of natural resources will be less
Central Govt.		Department	India Meteorological Department, MoES, Govt. of India	Agro-advisory weather forecast	Medium range weather forecast data and observed weather data	For issuing timely advisories to farmers	Weather forecast data twice a week	The number of agro-advisories issued will be less

**Section 6: Outcome/Impact of activities of Department/Ministry**

<b>S. No.</b>	<b>Outcome / Impact</b>	<b>Jointly responsible for influencing this outcome/impact with the following organization (s) departments/ministry(ies)</b>	<b>Success Indicator (s)</b>	<b>Unit</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>	<b>2015-2016</b>	<b>2016-2017</b>
1	Sustainability of agricultural production and livelihood in arid zone	State, SAU's and KVK's in the Region	Annual increase in rainfed crop production	%	3.2	3.3	3.4	3.6	3.7
			Annual increase in livestock production	%	4.1	4.2	4.5	4.6	4.8
			Annual increase in average household income	%	3.7	4.0	4.3	4.6	4.9