



RFD

Results Framework Document
for
Central Water & Power Research Station, Pune

2015-16



Section 1

Vision, Mission, Objectives and Functions

Vision

Our vision is to build a World Class Centre of Excellence of research in hydraulic engineering and allied disciplines; which is responsive to changing global scenario, and need for sustaining and enhancing excellence in providing technological solutions for optimal and safe design of water resources structures.

Mission

- To meet the country's need for applied and basic research studies in water resources, power sector and coastal engineering with world-class standards.
- To develop competence in deployment of latest technologies, and to undertake new areas of research to meet the future needs for development of water resources projects in the country.
- To disseminate information, skills and knowledge for capacity-building and mass awareness

Objectives

Conducting R&D studies in hydraulics and allied disciplines using one or combination of physical, mathematical, and field studies to :

- carry out applied research to solve specific real time problems for planning and development of water resources, river engineering, power and coastal projects
- carry out necessary basic research for improving and introducing latest developments in the specific studies.
- disseminate research findings by publishing research papers and technical manuals, conducting training programmes, and delivering invited lectures.
- calibrate current/ flow meters, test soil/ rock/ concrete/ fine & coarse aggregate samples, and analyse water quality parameters.
- upgrade the research infrastructure through five year plans.

Section 1

Vision, Mission, Objectives and Functions

Functions

1. Planning, organizing and undertaking applied research studies to evaluate, alter, modify or redesign the proposals and/ or to redefine the objectives therein relating to all phases of water resources development including water-borne transport, environmental aspects with particular emphasis on the requirements of hydraulic systems and the structures associated therewith.
2. Carrying out basic research necessary to support applied research and for furtherance of knowledge pertaining to water resources and related sciences.
3. Rendering consultancy and advisory services to the Central and State Governments and also to private sector companies as may be called upon from time to time.
4. Disseminating research findings and building up of a technical data base in water resources.
5. Promoting/ assisting research activities in States and other institutions concerned with water resources and carrying out training of research manpower.

Section 2

Inter se Priorities among Key Objectives, Success Indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target/ Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100 %	90 %	80 %	70 %	60 %
1. Research studies in the field of hydraulic engineering	45	i) Bringing out technical reports on specific studies conducted	No. of technical reports	No	25 (total)	80	72	64	56	48
		ii) Carrying out basic research to support the specific studies, and bringing out technical papers	No. of technical papers	No.	20 (total)	60	54	48	42	36
2. Field/ project investigations	14	i) Taking up physical/mathematical model/desk/ field studies	No. of investigations taken up	No.	10	125	112	100	88	75
		ii) Testing and calibration studies carried out a) Calibration of current meters	Number of calibrations	No.	1	750	675	600	525	450
		b) Calibration of flow meters / Testing of valves/Pumps	Number of calibrations	No.	1	125	112	100	88	75
		c) Testing of construction material samples	Number of samples	No.	1	200	180	160	140	120
		d) Testing samples for water quality parameters (DO/ BOD/ etc.)	Number of samples	No.	1	500	450	400	350	300

Section 2

Inter se Priorities among Key Objectives, Success Indicators and Targets

Objective	Weight	Action	Success Indicator	Unit	Weight	Target/ Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100 %	90 %	80 %	70 %	60 %
3. Strengthening/ upgrading of laboratories/ facilities	10	Carrying out up-gradation/ modernisation of the facilities in major disciplines at CWPRS.	Utilisation of allotted funds under budget estimate (BE)	Rs lakh	10 (total)	130	117	104	91	78
4. Training and Extension services	10	i) Organizing training programmes	No. of training programmes organised	No.	8	7	6	5	4	3
		ii) IEC activity; Participation in India International Trade Fair & other fairs/ exhibitions	Participation	No.	2	1	-	-	-	-
5. Infrastructure development	10	Up-gradation/ Renovation of lab buildings, canals, roads & residential quarters etc.	Utilisation of allotted funds under budget estimate (BE)	Rs lakh	10	280	252	224	196	168

Section 2

Inter se Priorities among Key Objectives, Success Indicators and Targets

Mandatory Success Indicators

Each RFD must contain the following mandatory indicators to promote enhanced and sustainable organizational performance levels

Objective	Weight	Actions	Success Indicator	Unit	Weight	Target/ Criteria Value				
						Excellent	Very Good	Good	Fair	Poor
						100 %	90 %	80 %	70 %	60 %
Efficient functioning of the RFD system	3	Timely submission of draft RFD for 2015-16	On-time submission	Date	2	15/4/2015	15/5/2015	18/5/2015	19/5/2015	20/5/2015
		Timely submission of Results for RFD 2014-15	On-time submission	Date	1	15/4/2015	4/5/2015	5/5/2015	6/5/2015	7/5/2015
Administrative Reforms	4	Implement ISO 9001 as per the approved action plan	% of implementation	%	2	100	90	80	70	60
		Prepare an Action Plan for Innovation	On-time submission	Date	2	30/7/2015	10/8/2015	20/8/2015	30/8/2015	10/9/2015
Improving Internal Efficiency/ responsiveness/ service delivery of Ministry / Department	4	Implementation of Sevottam	Independent Audit of Implementation of Citizen's Charter	%	2	100	90	80	70	60
			Independent Audit of Implementation of public grievance redressal system	%	2	100	90	80	70	60
TOTAL WEIGHT					11					

Section 3

Trend Values of the Success Indicators

Objective	Action	Success indicator	Unit	Actual value for FY 2013-14	Actual value for FY 2014-15	Projected value for FY 2015-16	Projected value for FY 2016-17	Projected value for FY 2017-18
1. Research studies in the field of hydraulic engineering	i) Bringing out technical reports on specific studies conducted	No. of technical reports	No.	112	113	80	90	90
	ii) Carrying out basic research to support the specific studies, and bringing out technical papers	No. of technical papers	No.	63	62	60	60	60
2. Field/ project investigations	i) Taking up physical/ mathematical model/ desk/ field studies	No. of investigations taken up	No.	152	153	125	125	125
	ii) Testing and calibration studies carried out							
	a) Calibration of current meters	No. of calibration	No.	1031	799	750	750	750
	b) Calibration of flow meters/ Testing of valves	No. of calibration	No.	81	142	125	125	125
	c) Testing of soil/ rock/ concrete/ cement/ fine & coarse aggregate samples	No. of samples	No.	910	545	200	200	200
d) Testing of samples for water quality parameters (DO/ BOD/ etc.)	No. of samples	No.	508	513	500	500	500	

Section 3

Trend Values of the Success Indicators

Objective	Action	Success indicator	Unit	Actual value for FY 2013 – 2014	Actual value for FY 2014-15	Projected value for FY 2015-16	Projected value for FY 2016-17	Projected value for FY 2017-18
3. Strengthening/ upgrading of laboratories/ facilities	Carrying out up-gradation/ modernisation of different laboratories	Completion of planned strengthening/ upgrading by effective utilisation of allotted funds	Rs. in lakh	274.53	199.74	130	700	800
4. Training and extension services	i) Organizing training programmes	No. of training programmes organised	No.	8	09	7	7	7
	ii) IEC activity; Participation in India International Trade Fair & other fairs/ exhibitions	Participation	No.	2	3	1	1	1
5. Infrastructure development	Upgradation/ Renovation of lab buildings, canals, roads & residential quarters etc.	Completion of planned strengthening/ upgrading by effective utilisation of allotted funds	Rs. in lakh	496.65	395.80	280	1000	1200

Section 3

Trend Values of the Success Indicators

Mandatory Success Indicators

Each RFD must contain the following mandatory indicators to promote enhanced and sustainable organizational performance levels.

Objective	Action	Success indicator	Unit	Actual value for FY 2013 –14	Actual value for FY 2014-15	Projected value for FY 2015-16	Projected value for FY 2016-17	Projected value for FY 2017-18
Efficient functioning of the RFD system	Timely submission of Draft RFD for (2015-16) for approval	On-time submission	Date	8/02/2013	27/03/2014	15/04/2015	15/05/2016	15/05/2017
	Timely submission of Results for RFD (2014-15)	On-time submission	Date	1/05/2014	15/04/2015	1/5/2016	1/5/2017	1/05/2018
Administrative Reforms	Implement ISO 9001 as per the approved action plan	% of Implementation	%	*	*	100	100	100
	Prepare an action plan for innovation	On-time submission	Date	16/05/2013	02/05/2014	30/07/2015	30/07/2016	30/07/2017
Improving Internal Efficiency/ responsiveness/ service delivery of Ministry / Department	Implementation of Sevottam	Independent Audit of Implementation of Citizen's Charter	%	100	100	100	100	100
		Independent Audit of Implementation of public grievance redressal system	%	100	100	100	100	100

* Letter for appointing the consultant sent to Ministry on 27/09/2012. Reply is awaited from Ministry.

Section 4 (a) Acronym

SI. No.	Acronym	Description
1	Objectives	CWPRS is a premier hydraulic research organization of the country and extensively involved in the planned development of the nation's water resources. CWPRS became the principal central agency to cater to the R&D needs of projects in the field of water and energy resources development and coastal & offshore engineering. The key objective of research and development (R&D), physical achievements are mainly in the form of technical reports on specific studies, technical papers on basic research, taking up physical/ mathematical/ model/ desk/ field studies, calibration of current meters and flow meters, testing of construction materials and water samples, up-gradation and modernization of facilities in major disciplines, organization of training programmes, IEC activity, up-gradation/ renovation of infrastructure etc.

Section 4 (b)

Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl. No.	Success indicator	Description	Definition	Measurement	General comments
1	1.1.1 No. of technical reports	The technical reports are published by CWPRS on the basis of hydraulic model studies, mathematical model studies, laboratory studies, field measurement, site inspection etc. carried out by CWPRS in the various areas such as River Engineering, Reservoirs and Appurtenant Structures, Coastal and Offshore Engineering, Foundation and Structures, Instrumentation, Calibration and Testing Services, River and Reservoir Systems Modelling, Applied Earth Sciences.	The Technical Report is the published document after completion of the technical studies being carried out at CWPRS	No. of technical reports	Maximum numbers of Technical Reports published by the CWPRS is the success indicator.
	1.2.1 No. of technical papers	The new technical experience gained with the studies is used in preparing and publishing research papers with reference to world wide development. The research papers based on the studies carried out in the technical areas such as River Hydraulics, Hydraulic Analysis and Prototype Testing, Bridge Engineering, Hydrometeorology, Surface Water Hydraulics, Water Quality Analysis And Modelling, Spillways and Energy Dissipaters, Control Structures and Water Conductor Systems, Sediment Management, Ports and Harbours, Coastal Hydraulic Structures, Mathematical Modelling for Coastal Engineering, Geotechnical Engineering, Modelling and Analysis Structures, Concrete Technology, Engineering Seismology, Vibration Technology, Geophysics, Isotope Hydrology, are published in the International Journals, Conferences, Symposia and Seminars etc.	Presenting the research outcome of technical studies in seminars, conferences, workshops, memorandums and journals etc. in the form of technical paper in related field.	No. of technical papers	Maximum numbers of Technical Papers published is the success indicator.
2	2.1.2 No. of investigations taken up	Various types of studies referred by different departments of Central Government, State Government, Public Sector, Private Sector are being carried out in various groups of CWPRS viz. River Engineering Group, Reservoirs and Appurtenant Structures Group, Coastal and Offshore Engineering Group, Foundation and Structures Group, Instrumentation and Calibration and Testing services Group, River and Reservoir Systems Modelling Group and the Applied Earth Sciences Group.	Physical / mathematical model / desk / filed studies in the major disciplines of CWPRS.	No. of investigations taken up	Maximum numbers of studies undertaken by the CWPRS is the success indicator.

Section 4 (b)

Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl. No.	Success indicator	Description	Definition	Measurement	General comments
	[2.2.1] No. of calibrations	Water current meters of various types used in hydrometry and oceanography are calibrated at the Current Meter Calibration Laboratory of CWPRS received from various departments all over the country. The accuracy of the measurement is totally based on the calibration chart of a current meter. While using current meters care should be taken that the current meter is properly calibrated by a reliable institution.	Rating of Water current meters of various types used in hydrometry and oceanography	No. of calibrations	Maximum numbers of calibration of current meters undertaken by the CWPRS is the success indicator.
	[2.3.1] No. of calibrations	The Instrumentation Calibration and Testing Services group undertakes calibration of closed conduit flow meters, tests on pumps and hydro-turbines, verification of hydraulic performance of pump intakes, hydraulic designs of pumping systems. The gravimetric calibration system undertakes flow meter calibration studies to establish the flow related performance factor of other flow elements like valves, filters, etc. Studies for volumetric calibration of flow meters evaluate performance of submersible pumps, vertical turbine pumps, etc.	Rating of flow meters/ Testing of valves	No. of calibrations	Maximum numbers of calibration of flow meters/ testing of valves undertaken by the CWPRS is the success indicator.
	[2.4.1] No. of samples	The Foundation and Structures Laboratory undertakes studies relating to soil and rock mechanics for foundation investigations, estimation of engineering properties of construction materials and stability and stress analysis of major structures. The major activities in testing of materials are estimation of properties of rock mass, evaluating the properties of the concrete samples, determine the physical and engineering properties of the soil samples etc.	Testing of construction material samples	No. of samples	Maximum numbers of testing of construction materials undertaken by the CWPRS is the success indicator.

Section 4 (b)

Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl. No.	Success indicator	Description	Definition	Measurement	General comments
	[2.5.1] No. of samples	The testing of water quality analysis is carried out by the Water Quality Analysis and Modeling division. Tests are carried out such as In situ analysis of Electrical Conductivity, pH- Value, Temperature, Turbidity, Dissolved Oxygen, Analysis of Silt and Bed Material, Computation of Water Quality Indices, Laboratory Analysis of Physicochemical/ Biological Parameters.	Testing samples for water quality parameters	No. of samples	Maximum numbers of testing of water samples undertaken by the CWPRS is the success indicator.
3	[3.1.1] Utilisation of allotted funds under budget estimate (BE)	The latest measuring and testing Digital Micro Earthquake Recorder, Force Transducer, Water Quality monitoring (WQM) along with sensor & Digital Compound Microscope with PC, Mike-11, Job work for Passenger Lift, Digital Still Camera, Rating trolley rate contract, AutoCAD Software, Ship Mooring software, Computer peripherals such as PC, Printer, Laptop, Xerox machine etc, would be procured and utilized to facilitate the research work.	Up-gradation and Modernisation of the research facilities in major disciplines by utilising funds allocated under Budget Estimate	Utilisation of allotted funds under budget estimates (BE) (Rs. in Lakhs)	The success indicators would be measured in terms of expenditure incurred on above procurements of Softwares and Equipments
4	[4.1.1] No. of training programmes organised	Numerous training courses each year for dissemination of information to technocrats professionals, field engineers, researchers and officers of various organizations working in field of water resources development and coastal and offshore engineering.	Disseminating expertise and research findings amongst hydraulic research fraternity, and promoting research activities of other institutions by imparting training to their research manpower is a mandate of CWPRS.	No. of training programmes organised	The success indicators would be measured in terms of organizing training programmes by CWPRS.

Section 4 (b)

Description and Definition of Success Indicators and Proposed Measurement Methodology

Sl. No.	Success indicator	Description	Definition	Measurement	General comments
	4.2.1] Participation	Disseminating the knowledge is the mandate of CWPRS and closely involved in demonstrating the facilities to the general public, students, technocrats and research professional, engineers, scientists etc. The models of Ports and harbours, Rivers, Desilting basins etc. are exhibits in the International Trade Fair every year.	Participation in National / International Trade Fair & other fairs/ exhibitions	Participation in National / International Trade Fair & other fairs/ exhibitions	The success indicators would be measured in terms of participation in the International Trade Fair organized by Government of India.
5	[5.1.1] Utilisation of allotted funds under Budget Estimate (BE)	The CWPRS has to create world class infrastructure facilities to serve the nation better and fulfil the requirements of clients or project sponsored studies. The infrastructure such as construction of hanger & office building for river and sediment mitigation studies and Construction of Sump and Pump house for development of Multipurpose Wave Basin facility for Estuarine & Tidal Hydrodynamics, Renovation of A & C type Staff Quarters, workshop building, Seismological labs, CDC hall, IB guest house, colony gate and toilets in office/Field buildings, Re-carpeting and widening of roads, Boundary Wall Electrical & ICT infrastructure development. Horticultural works, Misc. works in office and staff colony, would be carried out.	Up gradation / Renovation of lab buildings, canals, roads & residential quarters etc.	Utilisation of allotted funds under Budget Estimate (BE) (Rs. in Lakhs)	The success indicators would be measured in terms of expenditure incurred on creation of various infrastructures.

Section 5

Specific Performance Requirements from other Departments

Location Type	State	Organisation Type	Organisation Name	Relevant Success Indicator	What is your requirement from this organisation	Justification for this requirement	Please quantify your requirement from this Organisation	What happens if your requirement is not met.
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Note: This section may not be applied to CWPRS as we are not directly dependent on any other Departments.

Section 6

Outcome / Impact of activities of organisation

No	Outcome/Impact of Department/Ministry	Jointly responsible for influencing this outcome / impact with the following department (s) / ministry(ies)	Success Indicator	FY 2013-2014	FY 2014-2015	FY 2015-2016	FY 2016-2017	FY 2017-2018
1	CWPRS carries out basic and applied R&D works in hydraulics and allied disciplines to provide solutions with economical and safe design of hydraulic structures with the help of hydraulic model studies; thus meeting inter alia the national/ international research needs in water resources, power sector and coastal engineering. Research findings are disseminated by publishing technical reports, papers, manuals, guidelines, etc., as also by delivering lectures and conducting training programmes/ workshops. Thus, the deliverables emanating from the research activities include technical reports based on applied/ basic research studies, field/ project investigations and training programmes. To retain the competitive edge in R&D, the research infrastructure is being upgraded/ modernised systematically under plan and other funding modes.	Project Authorities, CPWD and MoWR	No. of Technical reports	88	113	80	90	90
			No. of technical papers	36	62	60	60	60
			No. of investigations taken up	135	153	125	125	125
			No of training programmes organised	9	9	7	7	7
			Infrastructure development - Completion of planned strengthening/ upgrading by effective utilisation of allotted funds (Rs. Lakh)	274.53	199.74	130	700	800
			Strengthening/ upgrading of laboratories/ facilities- Completion of planned strengthening/ upgrading by effective utilisation of allotted funds (Rs. in Lakh)	496.65	395.80	280	1000	1200