CAPACITY BUILDING COMMISSION

Annual Capacity Building Plan for Department of Agricultural Research and Education- 2023

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List of Abbreviations

Abbreviation	Full Form
ACBP	Annual Capacity Building Plan
AI	Artificial Intelligence
ADB	Asian Development Bank
AJNIFM	Arun Jaitley National Institute of Financial Management
AICRP	All India Coordinated Research Project
ASRB	Agricultural Scientists Recruitment Board
ATARIs	Agricultural Technology Application Research Institutes
B&F	Budget and Finance
CAU	Central Agricultural University
CBC	Capacity Building Commission
CBU	Capacity Building Unit
CGIAR	Consultative Group of Indian Agriculture Research
CNA	Competency Need Analysis
CMFTTI	Central Farm Machinery Training and Testing Institute
CRP	Consortia Research Platforms
DAC	Department of Agriculture & Cooperation
DARE	Department of Agricultural Research and Education
DoPPW	Department of Pension & Pensioners' Welfare
DG	Director General
DDG	Deputy Director General
DDS	Decision Support Systems
DPR	Detailed Project Report
EDP	Executive Development Program
FCI	Food Corporation of India
FGD	Focused Group Discussions
FPC	Farmers Producer Company
FR	Fundamental Rules
FPO	Farmers Producer Organization
GIS	Geographic Information System
GOI	Government Of India
GEM	Government e Marketplace
GFR	General Financial Rules
HR	Human Resource
HRD	Human Resource Development
HRMS	Human Resource Management System
ICAR	Indian Council of Agricultural Research
iGoT	Integrated Government Online Training
IC	International Corporation
ICT	Information Communication and Technology
IFS	Institute of Food Security
IIT	Indian Institute of Technology
IIPA	Indian Institute of Public Administration
IP&TM	Intellectual Property & Technology Management
IPR	Intellectual Property Rights
IR	International Relations

Abbreviation	Full Form
ISTM	Institute of Secretariat Training and Management
KVKs	Krishi Vigyan Kendras
KPI	Key Performance Indicator
MET	Multi-Environmental Trial
MoU	Memorandum of Understanding
MOSPI	Ministry of Statistics and Program Implementation
NAARM	National Academy of Agricultural Research Management
NABARD	National Bank for Agriculture and Rural Development
NAHEP	National Agriculture Higher Education Project
NAIP	National Agricultural Innovation Project
NARP	National Agricultural Research Project
NARS	National Agriculture Research Systems
NASF	National Agricultural Science Fund
NERFMTTI	North-Eastern Region Farm Machinery Training and Testing Institute
NFSM	National Food Security Mission
NMAET	National Mission on Agricultural Extension and Technology
NRLM	National Rural Livelihood Mission
NRFMTTI	Northern Region Farm Machinery Training & Testing Institute
NSTRC	National Seed Research and Training Centre
OEM	Original Equipment Manufacturer
OES	Original Equipment Supplier
POSH	Prevention of Sexual Harassment
PME	Project Monitoring and Evaluation
PPP	Public Private Partnership
PSU	Public Sector Undertaking
R&D	Research and Development
RFID	Radio Frequency Identification
RTI	Right to Information
RGNIIPM	Rajiv Gandhi National Institute of Intellectual Property Management
SAU	State Agricultural University
SR	Supplementary Rules
SMDs	Subject Matter Divisions
SMS	Subject Matter Specialist
SCTP	State Category Training Program
SRLM	State Rural Livelihood Mission
TRIMS	Trade Related Investment Measures
TRIP	Trade Related Intellectual Property Rights
UN	United Nations

1. Executive Summary

1.1. Context

The Union Government launched Mission Karmayogi, also referred to as the National Programme for Civil Services Capacity Building (NPCSCB) in September 2020. The programme aims to create a professional, competent, well-trained, and future ready civil service through extensive capacity building, and is based on the philosophy of creating an ecosystem of “competency driven training and human resource management” by transitioning from a 'rules-based' system to a 'roles-based' system” with the overall aim of democratisation of the competency development opportunities of the civil services. Under this Programme, Capacity Building Commission (CBC) was constituted in 2021 to fulfil the vision of Mission Karmayogi. An integral part of CBC’s mandate is to facilitate the preparation of Annual Capacity Building Plans (ACBPs) of Ministries, Departments, and Organisations of the Government of India.

1.2. Annual Capacity Building Plan

The main objective of creating an ACBP is to understand and document the capacity building needs of a Ministry/ Department at individual, organisational and institutional levels. Once the needs are understood, ACBP development will involve identifying interventions, both training and non-training, that will help bridge the identified gaps. Thus, the ACBP is expected to assist the development and enhancement of capacities of an individual official as well as the capabilities of a Ministry / Department. The content of an ACBP will be based on two aspects: (i) three lenses, comprising of national priorities, citizen centricity and emerging technologies, and (ii) three pillars at individual, organisational and institutional level. Therefore, as a step in this direction, the ACBP for the DARE/ICAR HQ has been prepared.

1.3. ACBP for the Department of Agricultural Research and Education

In order to evaluate the existing skills and training needs at different levels, including individual, organizational, and institutional, a systematic approach was employed to gather data. The process commenced with a Kick-Off meeting that involved high-ranking officials such as the Minister of State for Agriculture and Farmers Welfare, the Secretary of DARE, and other senior officials from DARE/ICAR HQ. To ensure the effective development and implementation of the Annual Capacity Building Plan, a dedicated Capacity Building Unit was established. Once the specific Divisions to be targeted were identified, the team conducted individual meetings with the 08 Deputy Director Generals, each overseeing a different Division within DARE/ICAR Headquarters. During these sessions, the team of consultants presented a comprehensive agenda and methodology for assessing the capacity needs, with a particular emphasis on evaluating the requirements for enhancing skills and knowledge. The Deputy Director Generals actively participated in the discussions, providing valuable insights into the gaps in competencies within their respective divisions.

Simultaneously, the Capacity Building Unit (CBU) distributed an Online survey form to conduct a thorough analysis of capacity needs. The survey form was electronically shared with employees across various Divisions at the DARE/ICAR Headquarters. The purpose was to gather crucial information required for the development of the Annual Capacity Building Plan. To compile the necessary data, the minutes from meetings held during or after individual and group discussions with officers and Deputy Director Generals (DDGs), along with the responses received from the completed Capacity Needs Analysis (CNA) survey forms, were utilized. At an individual level, the competency requirements for each specific role within the institution were identified as follows: (i) Behavioral competency, this includes skills related to behavior, leadership, stress management, communication, and other relevant areas. (ii) Functional competency, this encompasses organization-wide needs within DARE/ICAR HQ, focusing on the functional aspects of the organization. It involves proficiency in

advanced MS Office tools, matters related to establishment, e-office practices, and more. (iii) Domain competency, this pertains to knowledge and expertise specific to the Sector, Division, and respective focus areas. It covers areas such as automation in storage distribution, crop protection, food processing technologies, and others.

At the organizational level, capacity building dimensions extend beyond training interventions and encompass non-training aspects. These dimensions include addressing issues such as No Inter-State KVK interaction, Workshop on Integration of Value Chains with Research Outcomes, enhancements to technical systems, processes mapping and improvements, technology and data handling, resources and assets optimization, personnel management, partnerships and stakeholder engagement methods, use and enhancement of digital tools especially for future, etc.

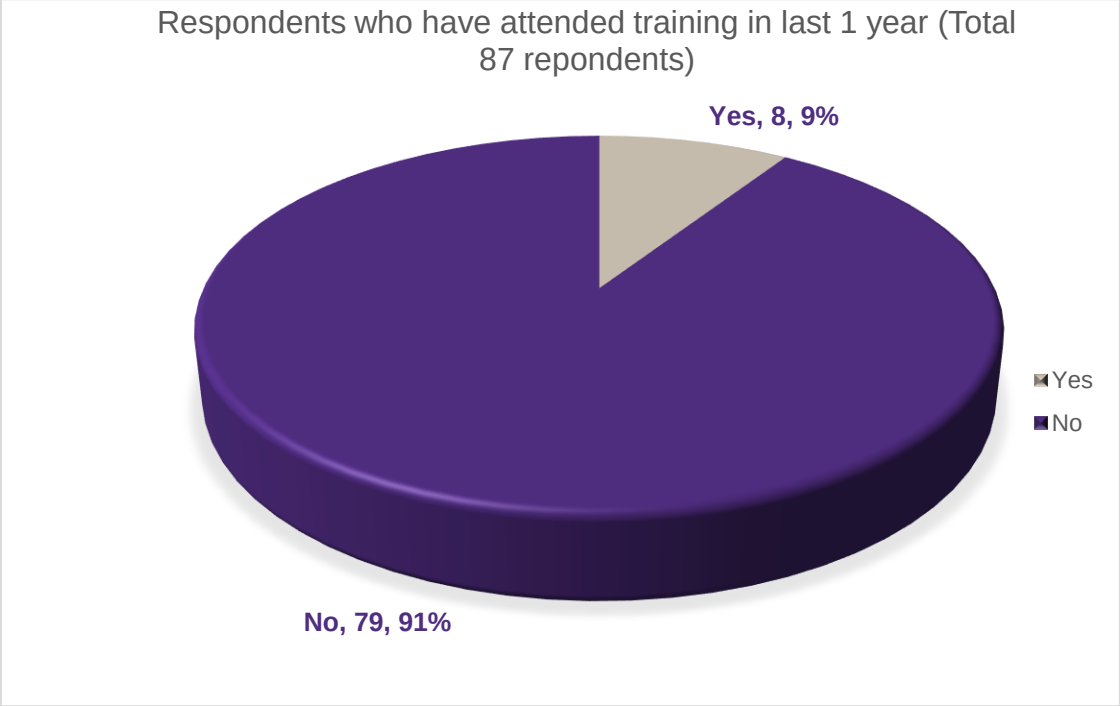
1.4. Quick Wins For DARE/ICAR HQ

Certain immediate and effective strategies have been pinpointed for DARE/ICAR HQ, covering both training and non-training measures. Among the non-training initiatives are immersion programs, seminars, workshops, and brainstorming sessions. Below, we highlight a selection of these identified quick wins, with more detailed explanations available in section 6.2.

- Organizing National / Global Conclaves on:
  - Climate change, carbon positive farming.
  - Storage and value chain management for Millets, Pulses and Cereals.
  - Global best practices, Animal husbandry and fisheries.
  - National conclave on Whole of Government Approach for agricultural transformation.
  - Workshop on mass Implementation of research outcomes.
  - Workshop/training programme on Improving Collaboration with private sector.
- Design Thinking workshop.
- Immersion visits can be organized to NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantapur, Andhra Pradesh; and NERFMTTI, Biswanath, Assam to enhance comprehension of Farm Mechanization and Post-Harvest Engineering.
- Developing inclusive online training modules spanning multiple domains to elevate the skill levels of KVK SMSs, while also providing them with exposure and knowledge in various diverse fields, in collaboration with the regional model KVK. Additionally, the KVK should share these modules to provide training to other KVKs.

1.5. Macro picture of the Capacity Needs Analysis (CNA) Exercise

Figure 1: Graphs depicting respondents who have attended training in last one year.

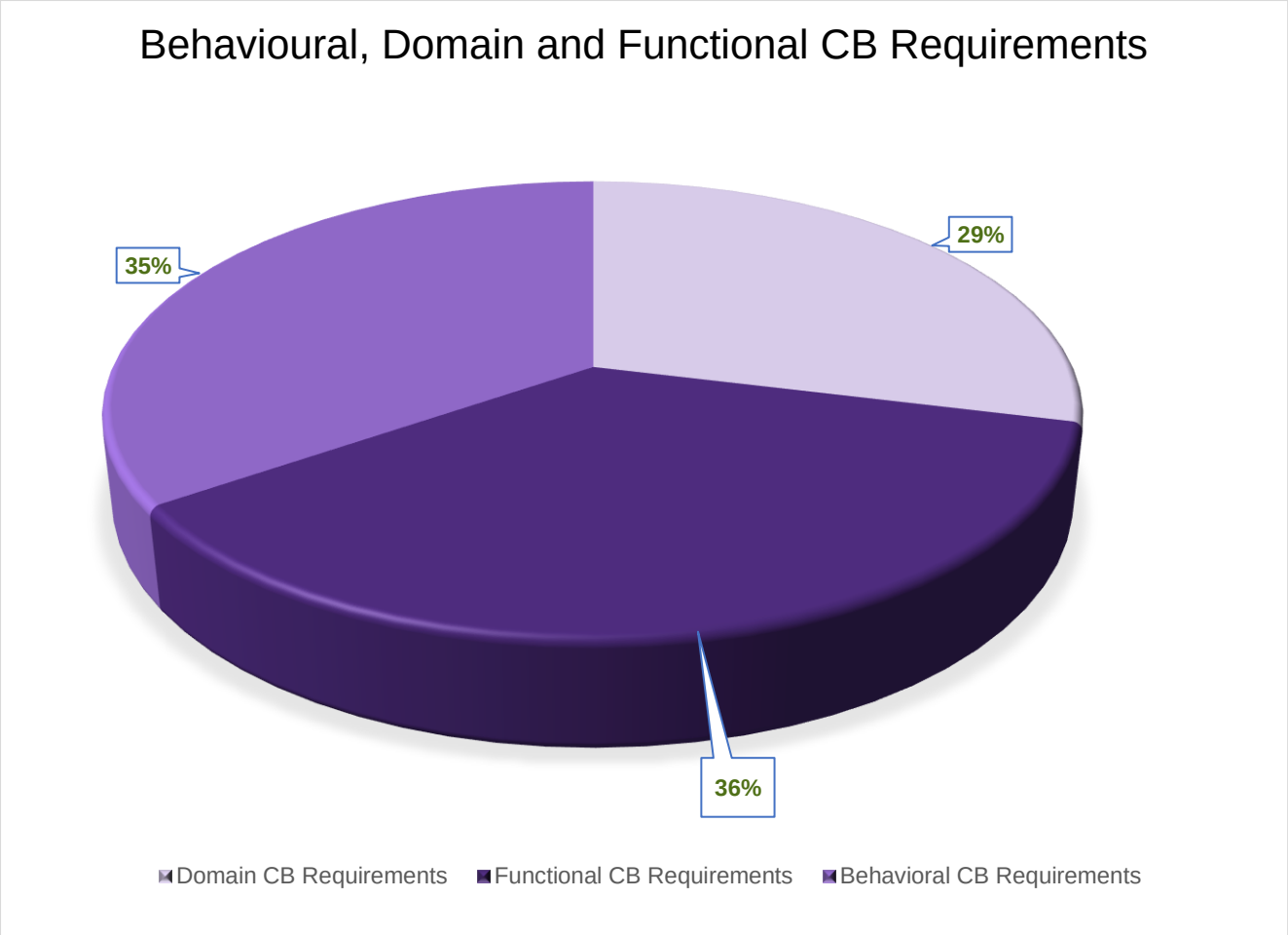


The above pie-chart shows that in the past 1 year only a small proportion, 9% of the 87 survey respondents of the DARE/ICAR HQ officials have attended any kind of training / capacity building program.

It can be said that the survey results are in line with the findings of the focused group discussion as during the capacity needs assessment phase and focused group discussions it was pointed out by several officers of DARE/ICAR HQ that they have not attended any training / capacity building program for more than a year or so.

Hence, during the preparation of the annual capacity building plan for the DARE /ICAR HQ all-out efforts have been made to try to identify the capacity building requirements of the DARE/ICAR HQ officials in the most efficient manner and provide training / capacity building solutions in the most flexible / convenient manner possible.

Figure 2: Total CB Requirements



The above graph shows the proportion of the identified capacity building requirements in terms of percentage of behavioural, functional and domain capacity building requirements.

It can be seen that the major component constitutes functional capacity building requirements – 36%. The Behavioural capacity building requirements contribute 35% to the overall capacity building requirements identified through the capacity needs assessment, interviews and focused group discussions and the remaining 29% contribution is for domain specific capacity building requirements.

1.6. Snapshot of the Training Calendar (Indicative)

The training calendar developed for DARE ICAR has already been finalized and covers a vast component of annual capacity building plan for the entire DARE and ICAR institutions however, the Human Resource Unit of ICAR is actively engaged in organizing various training programs and implementing a systematic approach to enhance individual competencies and capabilities. This is considered essential for effectively achieving the organization's objectives and goals. The unit maintains a continuous commitment to enhancing competencies in terms of skills, knowledge, and attitudes/behaviors among employees through relevant training and development initiatives conducted at regular intervals. To achieve this, the unit creates a competency framework that aligns with the specific requirements of each job within ICAR. The fundamental principle behind this framework is to ensure that individuals assigned to particular roles possess the necessary competencies to perform their duties effectively. Training programs are then designed and delivered based on the identified training needs and competency gaps of the employees. This approach is mutually beneficial, as it not only aids the employees in improving their skills but also contributes to the overall success of ICAR. In the pursuit of strengthening and facilitating training and capacity building for all categories of ICAR employees, the HRM unit plays a pivotal role.

The ACBP being proposed by CBC is applicable only to the DARE/ICAR HQ officials. In line with the internal ACBP for DARE/ICAR institutions the proposed ACBP developed by CBC will be aligned and implemented accordingly.

While developing the training calendar for the DARE/ICAR HQ officials, it was decided to incorporate a flexible mode of learning such that the officers could continue learning in a self-paced environment without any timeline related pressures. Hence, most of training programs have been suggested in digital form. The remaining programs which are not completely digital have been suggested from such institutions that organise the respective training programs in a recurring fashion on a yearly basis. For instance, ISTM organizes the workshop on effective communication skills each year during the 1st quarter of the financial year. Therefore, if for any reason a few officers fail to complete a given course from ISTM / IIPA, the same course can be taken during the same quarter in the next financial year. However, it is advised to complete the training courses as per the given training calendar as the implementation of the ACBP will be monitored the CBC and the Cabinet Secretariat.

The tables below present the training calendars for Behavioral, Functional and Domain competencies. Please refer to Section 6.4 for detailed Training Calendar. As this section just showcases indicative training calendar. The training levels are categorized into four major groups, which are:

- **L1:** Trainings with a duration of up to 2 hours
- **L2:** Trainings lasting up to 6 hours.
- **L3**: Trainings comprising 2 days in person and 3 days online.
- **L4:** Trainings exceeding a 2-days in person.

➢ Behavioral Competency

Table 1: Snapshot of training Calendar depicting various trainings for Behavioral Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants / Designation	Level of Course	Timeline
Citizen Centricity	• Service Delivery Management	• 3.11 hours	• Online	• Indian Institute of Public Administration	• iGOT	• 1,2&3	• L2	• Q3 2023-24
Communication Skills	• iGOT: Module nos. 2,3,4,5,6,7,8,9,10 by Meghna Yadav for grammar, conversations, and official words • Workshop on Communication Skills by ISTM (Gr. A and Gr. B Officers)	• 10.15 hr • 1day	• Online • Classroom	• SVPNPA • Courses offered by IIM B and ISTM can be leveraged.	• iGOT • ISTM	• 1,2&3	• L2	• Q4 2023-24 • Q1 2024-25
Conflict Resolution	• Conflict Resolution and Negotiation	• 1.35 hr	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1&2	• L1	• Q4 2023-24
Critical Thinking	• iGOT course needs to be curated. • Critical Thinking course on	• 20 hrs	• Online	• An interactive module needs to be added on iGOT for critical thinking and the importance of the same.	• iGOT • Free courses of Oxford home study Books	• 1,2&3	• L2	• Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants / Designation	Level of Course	Timeline
	oxfordhomestudy.com • Thinking Critically course on alison.com • Some good reads: ➢ Thinking, Fast and Slow by Daniel Kahneman ➢ Think Again: The Power of Knowing What You Don't Know by Adam M. Grant	• 1.5 – 3 hrs • Self-paced	• Online • Online	• Free courses available on oxfordhomestudy.com and alison.com • Some good reads have also been suggested				
Decision Making	• Problem Solving and Decision Making	• 1:45 hours	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1,2&3	• L1	• Q4 2023-24

➢ Functional Competency

Table 2: Snapshot of training Calendar depicting various trainings for Functional Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Emerging Technologies	• iGOT: Introduction to Emerging Technologies by Wadhwani Institute of Technology and Policy (WITP)	• 2 hr 30 min	• Online	• Module curated on iGOT by WITP to be leveraged.	• iGOT	• 1,2&3	• L1	• Q4 2023-24
Bookkeeping & Accounting	• iGOT: Govt Accounting System • iGOT: Finance and Accounts • iGOT: Accrual Accounting • Accural Accounting by ational Institute of Communication Finance	• 41 min • 41 min • 48 min • 48 min	• Online • Online • Online • Online	• Appropriate coursework available on IGoT • National Institute of Communication Finance	• iGoT	• 1&2	• L1	• Q4 2023-24 • Q4 2023-24 • Q4 2023-24
Budgeting	• iGOT: Budgetary System in Government	• 45 min	• Online	• Defence Accounts Department (DAD)	• IGoT	• 1,2&3	• L1	• Q4 2023-24 • Q3 2023-24

Cabinet Note, EFC, or office order, Noting and Drafting	• Noting and Drafting: ISTM course	• 2 hrs	• Online	• Training to be conducted by ISTM	• ISTM	• 1,2&3	• L1	• Q4 2023-24
Data analytics	• iGOT: Data Analytics Module of Introduction to Emerging Technologies course curated by WITP	• 25 min	• Online	• Module curated on iGOT by WITP to be leveraged.	• iGOT • ISTM • IIPA	• 1,2&3	• L1&L3	• Q4 2023-24
	• ISTM: Data Analytics Using MS Excel	• 3 days	• Online	• Online courses provided by ISTM				• Q4 2023-24
	• ISTM: Big Data Analytics in Government – Basic	• 3 days	• Online					• Q4 2023-24
	• ISTM: Big Data Analytics in Government – Advanced	• 3 days	• Online					• Q4 2023-24
	• IIPA: Data Analytics for Public Administrators	• NA	• Physical	• Course provided by IIPA				• Q1 2024-25

➢ Domain Competency

Table 3: Snapshot of training Calendar depicting various trainings for Domain Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Automation in storage and distribution	• FCI's Digital Learning Module on Storage and Distribution of food grains	• 40 min	• Online	• FCI is preparing a digital module on storage and distribution of food grains. The same can be used for the officials of DARE by collaborating with IFS, Gurgaon.	• IFS	• 1,2&3	• L1	• Q4 2023-24
Agricultural Research Management	• Digital Course on Agricultural Research Project Management	• Self-Paced	• Online	• A digital course on Research Project Management is available on NAARM's Virtual Learning Centre. The course is self-paced and free of cost.	• NAARM	• 1,2&3	• L1	• Q4 2023-24

Basic troubleshooting of lab equipment	• Workshop on troubleshooting of lab equipment at individual institutes	• As decided with OEM / OES	• Physical	• CBU to collaborate with various OEM / OES to curate courses specific to minor troubleshooting for all the Scientists	• NAARM, or other institutes or units under ICAR	• 1,2&3	• L1	• Q3 2023-24
Crop Protection	• Training at the Directorate of Plant Protection, Quarantine and Storage	• 2 days	• Physical	• CBU to collaborate with the Directorate of Plant Protection, Quarantine and Storage and curate a course on crop protection	• Directorate of Plant Protection, Quarantine and Storage	• 1,2&3	• L3	• As per the discussion with the Directorate of Plant Protection, Quarantine & Storage
Fisheries management – global best practices, prevention from overfishing	• National / Global conclave for Best Practices in Fisheries Management and Prevention of Overfishing	• 2 days	• Hybird	• CBU to collaborate with international bodies and foreign institutions from better performing countries in Fisheries Sector and organise a National / Global level	• NAARM, or other institutes or units under ICAR	• 1,2&3	• L3	• As decided by the CBU

				conclave for Best Practices in Fisheries Management and Prevention of Overfishing				

2. Introduction

Efficiency in any large-scale organization hinges upon two essential elements. Firstly, it relies on the technical proficiency of individuals to effectively carry out their assigned tasks. Secondly, it depends on the intangible efficiency of the organization as a cohesive entity, derived from the collective spirit and outlook of its members. This principle holds particularly true for the Indian Civil Services, which bear significant responsibility for public administration and play a critical role in delivering a wide range of public services and essential governance functions. The unparalleled contribution of the government officials to the smooth functioning of the government underscores the necessity of equipping them with the right attitudes, skills, and knowledge that are in line with the vision of a New India.

The Government of India in its endeavor to build an agile and future-ready Civil Service is striving for the standardization and harmonization of capacity building interventions across the Indian Civil Services landscape through the National Programme for Civil Services Capacity Building (NPCSCB) - Mission Karmayogi. The aim is to create a competent Civil Service rooted in the Indian ethos, with a shared understanding of India's priorities, working in harmonization for effective and efficient public service delivery.

In this context, Annual Capacity building Plan (ACBP) for the Department of Agricultural Research and Education (DARE) Indian Council of Agricultural Research (ICAR) HQ official has been prepared that offers a comprehensive analysis of both individual and collective organizational needs. This plan serves as a foundation for designing, implementing, and monitoring targeted interventions. On the supply side, particular emphasis will be placed on enhancing the government's learning and development ecosystem. The content of an ACBP will be based on the following two aspects:

- Three Lenses: Focus areas for capacity building exercise.
- Three Pillars: Scope of capacity building exercise.

Figure 3: CBC'S Approach to Capacity Building

The figure above shows the three lenses of the ACBP, namely National Priorities, Emerging Technologies, and Citizen Centricity. It also displays the three pillars of ACBP, namely individual, organisational, and institutional capacity building. Each of these has been elaborated in the sections below.

3. Conceptual Framework for Development of Annual Capacity Building Plans

Capacity building is a goal-oriented exercise. The Department is expected to arrive at its own capacity building goals. To facilitate this process, the CBC has identified the following three focus areas:

Contribution to the National Priorities, Ability to assess Emerging Technologies, and Citizen Centricity. These have been elaborated on below:

Three Lenses: focus areas of capacity building exercise

Figure 4: Three Lenses of Capacity Building

❖ Lens 1: National Priorities:

This lens examines how the Department contributes to National Priorities now and in the future. National Priorities includes goals such as creation of a $5 trillion economy and Ease of Living. The vision, mission, goals and objectives of the organisation are studied to understand how these will directly contribute to such priorities over a three-to-five-year time horizon.

The next step is to gauge whether the Department has the capacity to achieve such goals and arrive at gaps in capacity, if any, at the individual and organisational levels. Addressing these gaps through training and organisational interventions then becomes a key goal of the ACBP.

❖ Lens 2: Emerging Technologies:

In continuation with the overall pursuit of being future-ready, the second focus area looks to understand the potential impact of and challenges surfacing due to the key technology trends emerging within the relevant sector in which the Department operates. It then assesses the Department's capacity to regulate these

technologies in an optimal manner — capitalising on the potential impact while mitigating identified challenges. For example, the officials responsible for overseeing the usage of Unmanned Aerial Vehicle (UAV) technology aim to ensure its safe implementation in various operations. This includes the Ministry of Civil Aviation, which intends to introduce UAVs in its operations, as well as the Department of Agricultural Research and Education/Indian Council of Agricultural Research, which seeks to utilize UAVs for crop oversight and safety assessments.

Within the context of the ACBP exercise, the Department will undertake a comprehensive road-mapping exercise to identify relevant technologies. This exercise will serve as a crucial step in evaluating the Department's current capacities and determining the capacities it needs to possess, including the regulation and governance of these technologies. By conducting a thorough assessment, any gaps in capacity related to these technologies will be precisely targeted and addressed through the ACBP. The plan will incorporate specific interventions and measures aimed at bridging these gaps and ensuring the Department is equipped with the necessary competencies and resources.

❖ Lens 3: Citizen Centricity:

This lens is aimed at promoting citizen centricity and customer serviceability as a guiding principle while building government capacity. It involves inspecting the Department’s key citizen centric governance objectives such as transparent and efficient public service delivery, hassle-free citizen experience, representation of citizen interests and inclusion of citizen inputs during policy/scheme formulation, stability and continuity of various citizen centric schemes, maintaining smooth and effective grievance redressal mechanisms, participatory governance and so on. Additionally, it gauges the Department’s contribution to the Prime Minister’s vision of Ease of Living.

In the case of Departments that do not interface with citizens directly but instead serve them as customers, this lens will expand to include customer focus and service excellence.

Once it is established how the Department services the citizens or enables citizen centricity, the next step is to examine the Department's capacity to do this effectively at the individual and organisational levels. This will be done via self-assessment at all levels of the organisation. Addressing capacity gaps found at the individual or organisational level will become a key goal of the ACBP of the Department.

For example, as a part of large-scale capacity building intervention, the Ministry of Railways has recently initiated behavioural training of 1,00,000 of its customer-facing frontline staff to enable ‘People First, Service Excellence’.

It is important to note that the three focus areas are expected to guide the Department in setting capacity-building goals. As such, they are only indicative in nature. Where appropriate, the Department is free to choose goals that are beyond the ambit of the above three areas. However, the Department is also expected to prioritise goals that ensure future readiness.

Three Pillars: Scope of capacity building exercise

Figure 5: The Three Pillars of Capacity Building

❖ Pillar 1: At the Individual Level

Competencies form the basis for individual level capacity building. A competency is defined as the combination of attitudes, knowledge, and skills that enables an individual to perform a job or task effectively. Capacity building at the individual level refers to the process of equipping individual government officials with the competencies required to effectively perform their assigned roles. For example, developing 'project management' as a competency for the role of a Director or developing 'attention to detail' as a competency for an Assistant Section Officer (ASO).

Capacity Building Constituents at the individual level:

There are three categories of competencies for an individual official:

- **Behavioural competencies**: These are a set of benchmarked behaviours displayed (or observed / felt) by individuals across a range of roles within the Corporation. For example, empathy and leadership.

- **Functional competencies**: These competencies help cater to the operational requirements of the Department such as administration, procurement, financial management, and so on. Functional competencies are applicable across a wide range of Ministries / Departments of the Government. For example, Advanced MS Office Tools, project management, Knowledge of networking, PFMS and Contract Management, etc.

- **Domain competencies**: These competencies enable individuals to effectively perform roles within a specialised discipline or field. Domain competencies are generally applicable to the core work of the Department or set of related Ministries/Departments. For example, Food safety, quality control and quality assurance, Post-harvest Technologies - Engineering, Food processing, pest management,

storage, Innovative soil survey technique like SOP developed by NBSS & LUP, Nagpur, soil sampling, Geospatial soil analysis, etc.

a) Building Capacity at the Individual Level:

At the individual level, capacity is built by addressing the competency gaps of individual government officials. Competency gaps refer to the difference between the competencies required for a position and those that an individual official possesses.
In order to identify the competency gap, the competencies required by a position in present times or in the future are compared with the competencies possessed by the incumbent individual. In terms of building capacity at the individual level, we must consider the competencies required for a position. For example, the Chief General Managers / General Manager (Administration) of a division will require competencies such as budget administration, public procurement, etc. These will be based on the roles undertaken by the position.

Once competency gaps are identified at the individual level, they will be addressed through **training interventions.**

Training interventions refer to structured learning opportunities provided to individual officials. These interventions have clearly defined learning objectives (competencies to be developed/enhanced). They are based on design of learning materials, delivery mode/s (for example, instructor-led, peer-to-peer, on-the-job), and assessment/s. Examples of training interventions would include a course on noting and drafting created by Institute of secretariat Training and Management (ISTM), or an immersion program designed by the Ministry of Ports, Shipping, and Waterways with the objective of ensuring officers of the level of a Section Officer learn about the mechanization in the day-to-day functioning of ports.

Once identified, the Department can invest in these training interventions to address the competency gaps of its officials.

❖ Pillar 2: At the Organisational Level

This refers to the **process of building the capacity of collective and shared aspects of the organisation** such as existing processes, digital and physical infrastructure and technological capabilities that enable the organisation to achieve its goals.

a. Capacity Building Constituents at the organisational level:

Capacity at the organisational level is assessed on the basis of the collective aspects of a ministry or Department. Some examples of these aspects include:

- **Technology and Data:** This dimension deals with the technology solutions / tools employed by the Department to improve its functioning. Examples include software that enables shorter turnaround time on repetitive tasks, digital tools that increase efficiency or enable faster resolution of pain points, and PQSoft for management of parliamentary questions for the Department.

- **Systems and Processes**: This dimension includes all the established systems and processes of the Department to carry out its day-to-day functions. Examples include monitoring mechanism for processes / projects / schemes, standard operating procedures, Learning Management Systems, MIS / Dashboards, etc.

- **Resources and Assets**: This includes the resources and assets of the Department such as hard and soft infrastructure that the Department uses for its day-to-day functioning. For example: the physical premises, budgets etc.

- **Partnerships and Relationships**: This dimension includes all external partnerships that the Department is part of such as those with other Ministries/Departments, global organisations and citizen groups.
- **Personnel Management**: This includes all the functions associated with managing human resources of the Department such as performance appraisals, training and development, performance management, succession planning et cetera.

b. Building capacity at the organisational level:

Organizational capacity of Ministries / Departments will be developed through **organisational interventions.** Organisational capacity building interventions are initiatives that improve the shared aspects within which officials operate (e.g., systems and processes, technology and data, resources and assets, et cetera.) - thereby, improving the collective capacity of the Department. Some examples of organisational interventions include automation of repetitive processes within the Department/organisation, procurement of an online collaboration tool, knowledge management etc.

In the context of building capacity at the organisational level, organisational interventions will include initiatives taken by the Department to enhance the capacity of the organisation as a whole by investing in improving one or more of its dimensions (as defined above). Table below lists some organisational capacity building interventions.

Table 4: Organisational Interventions for Capacity Building

Organisational Interventions for Capacity Building			
S. No.	**Intervention**	**Type**	**Use Case / Examples**
1.	Knowledge Bank	Internal Wikipedia, Newsletters, Process documentation, Research papers, Reports	Internal Wikipedia of BITS Pilani documents internal Standard Operating Procedures (SOPs); Ministries / Departments can have a similar encyclopedia with pages that detail SOPs like how to apply for leave using e-Leave, how to use the e-File records management system, et cetera.
2.	Infrastructure	Libraries, Auditoriums, iGOT onboarding, ERP, CRM, Apps	Play2Learn: SBI's game-based learning application
3.	Consultancy	Management, Operational, Domain-expertise, Strategic Planning	Department of Commerce's organisational restructuring by professional services of a management consulting firm
4.	Project Governance	Creation of task forces, Project review cycles	Example: Institutionalise project review cycles (focusing on the successes, failures and distilling lessons learnt for future use)
5.	Community (Citizens & Customers)	Creation of effective feedback mechanism	Taj has a culture of daily morning feedback meetings where customer feedbacks are reviewed • 'Why-Why' analysis is undertaken • Emphasis is always on customer satisfaction • Employees are allowed flexibility to do what is best for customers
6.	Technology	Internet access, Process automation	Online tools for data collection

❖ Pillar 3: At the Institutional Level

Institutional capacity building refers to changes made in the norms, policies and regulations that guide the functioning of individuals and organizations. In the context of the government, institutional capacity building refers to policy level interventions that affect all Ministries and Departments of the Government. For example, The National Training Policy 2012, Mission Karmayogi, creation of the Capacity Building Commission. All these are examples of interventions that affect the government as a whole.

4. About Department of Agricultural Research and Education

The Department of Agricultural Research and Education (DARE), located within the Ministry of Agriculture, was established in December 1973. Its main purpose is to coordinate and advance agricultural research and education initiatives in the country. DARE serves as a connection between the Government and the Indian Council of Agricultural Research (ICAR), which is the leading organization for managing, directing, and guiding agricultural research and education, including horticulture, fisheries, and animal sciences, throughout the nation. DARE provides the necessary Government linkages for the Indian Council of Agricultural Research (ICAR), the premier research organisation for coordinating, guiding, and managing research and education in agriculture including horticulture, fisheries, and animal sciences in the entire country.

It has the following four bodies under its administrative control:

- **Indian Council of Agricultural Research (ICAR) (Autonomous body):** The Indian Council of Agricultural Research (ICAR) is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare, Government of India. Formerly known as the Imperial Council of Agricultural Research, it was established on 16th July 1929 as a registered society under the Societies Registration Act, 1860 in pursuance of the report of the Royal Commission on Agriculture. The ICAR has its Headquarters at New Delhi. ICAR's mandate is to advance agricultural education and research in India, with a focus on increasing food production, improving the livelihoods of farmers, and conserving natural resources. It manages a network of institutes and research centers across the country, which conduct research in various areas of agriculture, including crop improvement, animal science, horticulture, and soil and water management. The Council is an apex body for coordinating, guiding, and managing research and education in agriculture including horticulture, fisheries, and animal sciences in the entire country. With 113 ICAR institutions, viz. 72 research institutes, 6 National Bureaux, 23 Project Directorates and Agricultural Technology Application Research Institutes, and 12 National Research Centres. With over 82 All-India Coordinated Research Projects Network Research Projects spread across the country, this is one of the largest national agricultural systems in the world. The ICAR also provides financial and technical assistance to State Agricultural Universities and other national and international organizations for research and education in agriculture and related fields. It also publishes journals and books on agricultural science and technology.
  The ICAR has played a pioneering role in ushering Green Revolution and subsequent developments in agriculture in India through its research and technology development that has enabled the country to increase the production of food grains by 5.6 times, horticultural crops by 10.5 times, fish by 16.8 times, milk by 10.4 times and eggs by 52.9 times since 1950-51 to 2017-18.[1] Thus, making a visible impact on the national food and nutritional security. It has played a major role in promoting excellence in higher education in agriculture. It is engaged in cutting edge areas of science and technology development and its scientists are internationally acknowledged in their fields.

- **Central Agricultural University (CAU), Imphal (Statutory body):** The Central Agricultural University (CAU) was established under the Department of Agricultural Research and Education (DARE) on 26th January 1993 by an Act of Parliament - the Central Agricultural University Act, 1992 (No.40 of 1992) with its headquarters at Imphal, Manipur. The university has unique features of having jurisdiction over six States of North-Eastern Hilly Region (NEH) of India namely, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, and Tripura. Like other Agricultural Universities of India, the CAU also has integrated programmes of teaching, research, and extension education. As per the mandate, the CAU is offering seven U.G. programmes in Agriculture, Agricultural Engineering, Fisheries, Home Science, Horticulture, Forestry, Veterinary Sciences & Animal Husbandry and Food Process

[1] Source ICAR Website https://icar.org.in/content/about-us

Engineering. The University offers 25 post graduate degree programmes in different subjects. For smooth functioning of various programmes, the University has established seven constituent colleges in different parts of the NEH Region.

- **Dr Rajendra Prasad Central Agricultural University, Pusa, Bihar (Statutory body):** The foundation stone of the Agricultural Research Institute and college was laid by Lord Curzon on 1st April 1905. In the year 1935, the Agricultural Research Institute was shifted to New Delhi due to Bihar Earthquake in January 1934. The Rajendra Agricultural University (RAU) has established (1970) itself at Pusa and has become an important landmark in agricultural research and education in the eastern region of the country. The Rajendra Agricultural University has various faculties and constituent colleges namely, Tirhut College of Agriculture (Dholi) Muzaffarpur, Bihar Agricultural college, Sabour (Bhagalpur), Bihar veterinary college, Patna, Sanjay Gandhi Institute of Dairy Technology, Patna, College of Fisheries, Dholi (Muzaffarpur) College of Home Science, College of Agricultural Engineering, College of Basic Sciences & Humanities, and a postgraduate Faculty at Pusa. In RAU, M.Sc. Degree is awarded in 34 and Ph.D. in 17 disciplines. Considering the importance of this land in agricultural research, Government of India decided to change the status of Rajendra Agricultural University from the State Agricultural University (SAU) to Central Agricultural University (CAU) and was renamed as Dr. Rajendra Prasad Central Agricultural University. To accomplish this a bill was passed by the Parliament on 28th May 2016 which was enacted as Dr. Rajendra Prasad Central Agricultural University Act, 2016 with effect from 7th October 2016.

- **Rani Laxmi Bai Central Agricultural University, Jhansi, UP (Statutory body):** The Rani Laxmi Bai Central Agricultural University (RLBCAU), Jhansi has been established as an Institution of National Importance under Department of Agricultural Research and Education (DARE) by an Act of Parliament (Act No. 10 of 2014) and notified on 5th March 2014. This is the second Central Agricultural University in India established and named in the memory of great freedom fighter known as the warrior queen of Jhansi Late Rani Lakshmi Bai who sacrificed her life at the altar of the freedom. The objectives of the university are to impart education in different branches of agriculture and allied sciences, undertake research in agriculture, programmes of extension education and promote linkages with national and international educational institutes. The University offers undergraduate and postgraduate degree programmes in agriculture and allied sciences.

DARE is the nodal agency for International Cooperation in the area of agricultural research and education in India. The Department liaises with foreign governments, UN, Consultative Group of Indian Agriculture Research (CGIAR) and other multilateral agencies for cooperation in various areas of agricultural research. DARE also coordinates admissions of foreign students in various Indian agriculture universities/ ICAR Institutes.

Other organizations under DARE are:

- **Agrinnovate India Limited (PSU)**: It is a registered company under the Companies Act, 1956 (No. 1 of 1956), owned by the Government of India in Department of Agricultural Research and Education (DARE). It aims to strengthen DARE's Indian Council of Agricultural Research (ICAR) and promote the development and spread R&D outcomes through IPR protection, commercialization, and forging partnerships both in the country and outside for the public benefit.

- **Agricultural Scientists Recruitment Board (ASRB Attached Office):** The Agricultural Scientists Recruitment Board was established with the approval of Cabinet on 1st November 1973 as an independent recruitment agency in pursuance of the recommendations of the Gajendragadkar Committee. The Government of India has approved restructuring Board as per their decision in the meeting of the Union Cabinet held on 1st August 2018 and issued vide Notification No. 25/CM/2018(i) dated 06.08.2018; Case No. 213/25/2018 (Item-7). The decision has been formally notified in the GOI

Gazette on 9th August 2018. Consequently, ASRB has been delinked from ICAR and attached with the Department of Agricultural Research & Education (DARE) under Ministry of Agriculture & Farmers' Welfare, Government of India. Further, the revamped Boards shall have its own Cadre of administrative staff in the secretariat and have independent administrative control on the said Cadre. A separate budget head for ASRB has been created in DARE.

4.1. Vision

Harnessing science and technology to ensure sustained accessibility to food, nutrition, livelihood security and natural resource management.

4.2. Mission

Interfacing agricultural research and technology, higher education, and front-line extension initiatives with institutional, infrastructural and policy support for sustainable growth of agriculture.

4.3. Organisational Structure of the Department

In matters of science, the Director General receives assistance from eight Deputy Director Generals (DDG), with one assigned to each of the divisions listed below. The DDGs are further assisted by Assistant Director Generals and Head their Subject Matter Divisions (SMDs) for the entire country. SMDs are responsible for extending all technical and financial guidance and support to the research Institutes, National Research Centres, and the Project Directorates within their respective Divisions. In addition, Assistant Director General of National Agricultural Science Fund (NASF), Coordination, Plan Implementation and Monitoring, Intellectual Relations and Human Resource Management also assist the Director General in their respective job roles.
The detailed roles and responsibilities of various Divisions are depicted in the table below:

Table 5: Roles and Responsibilities of various Divisions of DARE/ICAR HQ

S. No.	Name of the Division	Role
1.	**Crop Science Division**	The Division has 13 national institutes including one deemed-to-be-university, 3 bureaus, 9 project directorates, 2 national research centres, 27 all-India coordinated research projects, and 5 all-India network projects. Besides, it administers a large number of revolving fund schemes and national research networks and facilitates the technical clearance of externally funded projects and is located at the ICAR Headquarters, The Crop Science Division has several key roles and responsibilities, including: • Conservation and sustainable use of genetic resources of plants, insects and other invertebrates, and agriculturally important microorganisms. • Providing knowledge-intensive advisory and consultancy in crop-science. • Conducting research on crops such as cereals, pulses, oilseeds, horticulture, and medicinal plants to enhance their productivity, quality, and profitability. • Productivity enhancement in field crops.

S. No.	Name of the Division	Role
		• Research for developing improved cultivars in field crops (food, fodder, oilseeds, pulses, fiber and sugar crops) with better nutritional quality and tolerance to biotic and abiotic stresses. • Management of plant, microbes, and insect genetic resources. • Production of breeder seed as per indent of DAC. • Strengthening frontier research in identified areas/ programmes. • Adaptive research, technology assessment, and technology transfer to end users to bridge the yield gaps. • Human resource development/capacity building in the frontier areas of research in crop science.
2.	**Horticultural Science Division**	Horticulture Division vested with the responsibility of overseeing the overall accelerated development of horticulture in national perspective for improving nutritional, ecological and livelihood security. Its mandate is to plan, co-ordinate and monitor Research and Development programmes at national level as well as to serve as knowledge repository in Horticulture Sector. The Horticultural Science Division has several key roles and responsibilities, including: • To plan, co-ordinate and monitor Research and Development programmes at national level as well as serve as knowledge repository in Horticulture Sector. • To achieve technology led development of Horticulture. • To achieve technology led development of horticulture. • To increase awareness of production technologies for high yield and quality. • Effective management, enhancement, evaluation and valuation of genetic resources and development of improved cultivars, with high quality characteristics, productivity, resistance to pest and disease and tolerant to abiotic stresses. • Development of technologies to improve the efficiency of breeding to develop cultivars, which meet market needs including taste, freshness, health benefit and convenience beside resistant to biotic and abiotic stress. • Increasing the value of production by reducing variability in yield, quality, reducing crop loss and increasing marketability through development and site-specific technologies for different horticultural crops. • Develop the production system that minimizes the production of wastes and maximizes the re-use of waste. • Improve the understanding of interaction between native ecosystem and production system and develop best practices to conserve biodiversity and sustainable use of resource. • Understand social needs of communities and build the capabilities for practice the change for effective utilization of

S. No.	Name of the Division	Role
		resources and adoption of technologies and respond to needs including bio-security needs.
3.	**Animal Science Division**	Animal Science Division of ICAR coordinates and monitors research activities in its 19 Research Institutes and their Regional Centers/Stations. The Animal Science Division has several key roles and responsibilities, including: • Development of technologies to support production enhancement, profitability, competitiveness and sustainability of livestock and poultry sector for providing food and nutritional security to Indian masses. • Facilitating need-based research in ongoing and emerging areas of livestock and poultry sector to denote productivity increase, reduce gap between potential and actual yield, and to prepare the country for the challenges of globalization. • Conducting research on animal husbandry and dairy sciences to enhance the productivity, health, and welfare of livestock, including cattle, buffalo, sheep, goats, and poultry. • Developing and promoting new technologies and practices for sustainable animal husbandry and dairy production, including those related to animal nutrition, reproduction, genetics, and disease management. • Improvement of utilization of low-quality roughages through in *vivo and in vitro* manipulations. • Molecular signatures for indigenous livestock resources. • Markers for disease resistance and selection. • Providing technical support and advice to farmers, extension workers, and other stakeholders in the agricultural sector on matters related to animal husbandry and dairy production. • Providing education and training to students, researchers, and other stakeholders in the field of animal science, including the development of curricula and training programs.
4.	**Natural Resource Management Division**	Natural Resource Management Division of ICAR is conducting basic and strategic researches to develop technologies for conservation, management and sustainable utilization of the natural resources ensuring food, nutritional and environmental security in the country through 15 research institutes, 10 All India Coordinated Research Projects, 3 network projects and 2 Consortia Research Platforms (CRP) namely on Water Conservation and Agriculture with a wide network of the Cooperating Centres and State Agricultural Universities. The Natural Resource Management Division has several key roles and responsibilities, including: • To plan, coordinate and monitor R & D programmes for sustainable agricultural production and resource conservation and to serve as knowledge repository in the field of natural resource management.

S. No.	Name of the Division	Role
		• To serve as knowledge repository in the field of natural resource management. • Sustainable management of natural resources for achieving food, nutritional, environmental and livelihood security in the country. • To develop location specific, cost effective, eco-friendly conservation and management technologies for higher input use efficiency, agricultural productivity & profitability without deteriorating natural resource base. • Nutrient and Bio-waste Management. • Land Resource Inventory, Characterization & Agricultural Land Use Planning. • Crop Diversification. • Organic Farming. • Mainstreaming Rainfed / Dryland Farming and Agricultural Disaster Management. • Agroforestry Management. • Weed Management. • Hill Agriculture. • Coastal Agriculture. • Nano Technology. • Conducting research on natural resource management and conservation, including soil, water, and biodiversity, to enhance their sustainable use and preservation. • Enhancing productivity, profitability, and livelihoods in different ecosystems. • Enhancing water productivity through multiple uses of water, wastewater utilization and efficient irrigation practices. • Enhancing productivity, profitability, and livelihoods in different ecosystems. • Abiotic stress management including climate resilient agriculture. • Management of Problematic Soils – Saline, Alkaline, Acid and Waterlogged Soils. • Soil and Water Conservation- Participatory Watershed Management. • Soil and Water Conservation- Participatory Watershed Management. • Development of Integrated Farming Systems. • Arid Land Management and Solar Farming. • Conservation Agriculture and Resource Conservation Technologies. • Soil resource characterization and mapping for efficient land use planning. • The Division is conducting research in farmers' participatory mode addressing issues at ground level and developing location specific, cost effective, ecofriendly, socially acceptable scientific farming practices keeping in view the

S. No.	Name of the Division	Role
		farmers' resource availability, traditional indigenous technology knowhow and grassroot farm innovations. • Monitoring and evaluating the impact of natural resource management research and education activities on the agricultural sector and making recommendations for improvement.
5.	**Fisheries Science Division**	Indian fisheries sector represents an economically important and fast-growing production sector and contributing significantly to the national economy in terms of food, nutrition, socio-economic development and providing livelihood to a large section of the society. The **vision** of Fish Science Division is 'Fish for All for Ever' and its mission is Sustainable growth of Indian fisheries and aquaculture by interfacing research, education and extension resulting in a proper fit between the human needs and the habitat, with an important role in global fisheries. The Fisheries Division has several key roles and responsibilities, including: • To formulate and supervise council's policies and work pertaining to fisheries research. • To coordinate and stimulate operational research programmes and demonstration in different fisheries systems. • To serve as knowledge repository and clearing house in fisheries sector. • Development and up-gradation of databases of finfishes, crustaceans, molluscs, and other important aquatic organisms including their molecular aspects. • Mapping potential fishery resources of the country using geospatial data and remote sensing for generating computer-based models on fishery management in open waters. • Development of sustainable management models for open water fisheries resources in the context of changing resource structure and climatic conditions. • Developing/upscaling of seed production and grow-out technologies of important species of commercial and conservation value of freshwater brackish water and marine ecosystems. • Species and system diversification of commercially important fish species for freshwater, brackishwater and marine aquaculture. • Stock improvement of commercially important finfish and shellfish species for growth, disease resistance and other traits of importance through selective breeding and marker-assisted selection. • Breeding and rearing of ornamental finfishes and shellfishes of freshwater and marine origin.

S. No.	Name of the Division	Role
		• Development of cost-effective and nutritive diets for different life stages of diversified fish and shellfish species, including ornamental species. • Undertaking aquatic animal disease surveillance for preparedness against disease outbreak. • Development of diagnostics, vaccines and disease management measures for current and emerging diseases. • Development of genomic resources for important fish and shellfish species through whole genome sequencing and transcriptome analysis. • Water budgeting in inland aquaculture. • Development of eco-friendly fishing craft and gear for responsible fisheries. • Post-harvest value addition from fish and fish wastes. • Development of industrial nutraceutical products from aquatic organisms. • Reduction of harvest and post-harvest losses of fish through mitigation measures. • Development of fish farming technology for inland saline and sodic areas. • Human resource development through higher education and training in different aspects of fisheries and aquaculture. • Policy advisory for addressing various issues of fisheries and aquaculture.
6.	**Agricultural Engineering Division**	The Agricultural Engineering Division has several key roles and responsibilities, including: • The Division is mandated to plan, coordinate, and monitor R&D programmes and serve as an information repository in Agricultural Engineering. • It is involved in the development and demonstration of technologies related to mechanization of production and post-production agriculture using conventional and non-conventional energy sources and includes mechanization of irrigation and drainage activities, and post-harvest and value addition of agricultural products and by products. • To plan, coordinate, and monitor R&D programs and serve as an information repository in Agricultural Engineering. • To make the Indian agriculture sustainable, profitable, and competitive enterprise through engineering interventions of farm mechanization, value addition and energy management in production and post-harvest operations. • Develop and introduce need-based and region-specific engineering technologies to achieve sustainable enhanced productivity and profitability of different farming systems. • Development of precision machinery and strategies for carrying out timely and efficient agricultural operations in irrigated, rain-fed and hill agriculture, horticulture, livestock, and fisheries production.

S. No.	Name of the Division	Role
		• Increasing work efficiency for human, animal and mechanical systems and reduction of occupational hazards in agricultural operations. • Energy management and utilization of conventional and non-conventional energy sources in agricultural production and processing activities. • Utilization of surplus agricultural residues for decentralized power generation. • Reduction of post-harvest losses, value addition to agricultural produce, processing, and utilization of by-products. • Application of robotics and drones in production agriculture, electromagnetic waves in food processing. • Post-harvest management of natural resins and gums; and extraction, processing, and value addition of natural fiber. • Creation of functional / nutraceutical foods and intelligent packaging systems.
7.	**Agricultural Extension Division**	The Agricultural Extension Division has several key roles and responsibilities, including: • The major activities of Agricultural Extension Division are - technology assessment, demonstration, and capacity development through a network of 11 Agricultural Technology Application Research Institutes (ATARIs) and 731 Krishi Vigyan Kendras (KVKs). • Coordination and monitoring of technology application and frontline extension education programmes. • Strengthening agricultural extension research and knowledge management. • Technology Assessment and Demonstration for its Application and Capacity Development. • Develop science and technology-led growth leading to enhanced productivity, profitability, and sustainability of agriculture. • Promote farmer-centric growth in agriculture and allied sectors through application of appropriate technologies in specific agro-ecosystem perspective. • On-farm testing to assess the location specificity of agricultural technologies under various farming systems. • Organize Frontline Demonstrations to establish production potential of technologies on the farmers' fields. • Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies. • Work as knowledge and resource center of agricultural technologies for supporting initiatives of public, private and voluntary sector in improving the agricultural economy of the district. • Provide farm advisories using ICT and other media means on varied subjects of interest of farmers.

S. No.	Name of the Division	Role

8.	**Agricultural Education Division**	The Agricultural Education Division has several key roles and responsibilities, including:
		• Involved in strengthening and streamlining of higher agricultural education system to enhance the quality of human resources in Agri-supply chain to meet future challenges in agriculture sector in the country.
		• Agricultural Education Division through its three sections carries out a number of schemes to support and strengthen the Higher Agricultural Education in the country, which is enumerated here under.
		  ○ Education Planning and Home Science.
		  ○ Human Resource Development (HRD)
		  ○ Education Quality Assurance and reforms
		• Strengthening and Development of Higher Agricultural Education in India.
		• Human Resources Development for leadership roles in agricultural sciences.
		• Improving Quality of Agricultural Education through innovative approaches in teaching, research, outreach activities.
		• To plan, promote and coordinate agricultural education in the country.
		• To enhance the quality and relevance of higher agricultural education in the country.
		• To strengthen the Agricultural University system for developing quality human resource in agriculture and allied sciences.

9.	**Knowledge Management**	The Knowledge Management Division has several key roles and responsibilities, including: • Promote ICT driven technology and information dissemination system for quick, effectual, and cost-effective delivery of messages to all the stakeholders in agriculture. • Keeping pace with the current knowledge diffusion trends, Directorate is delivering and showcasing ICAR technologies, policies and other activities through print, electronic and web mode. • Directorate is the nodal center for design, maintenance and updating of ICAR website along with facilitation of network connectivity across ICAR institutes and KVKs. Besides, Directorate provides public relation and publicity support to the council and its constituents across the country. • Facilitation for strengthening e-connectivity among ICAR institutes State Agricultural Universities and KVKs. • Showcasing and sharing of agricultural knowledge, technologies, and innovation of NARS through inclusive knowledge management approaches. • Publish research journals, semi-technical periodicals, newsletters, books, monographs, handbooks, technical

S. No.	Name of the Division	Role
		bulletins, annual reports, research highlights and other materials • Produce information in the form of compact discs and other forms of electronic publishing • Organize refresher course, training in agricultural communication technologies to update and improve agricultural information system of the ICAR. • Development of e-resources on agricultural knowledge and information for global exposure. • Capacity building for agricultural knowledge management and communication.
10.	**Intellectual Property & Technology Management (IP&TM) Unit**	The Intellectual Property & Technology Management (IP&TM) has several key roles and responsibilities, including: • Assimilation of IPR dimensions in research management has become absolutely necessary in R&D institutions. Accordingly, ICAR has its Guidelines for Intellectual Property Management and Technology, and a decentralized three-tier IP management mechanism is institutionalized in ICAR w.e.f. 2nd October 2006. This system was implemented through XI Plan scheme viz. “Intellectual Property Management and Transfer / Commercialization of Agricultural Technology Scheme”. This scheme has contributed to developing an IP environment in ICAR. Its implementation has led to increased IPR-filing (patents, plant variety rights, copyrights, trademarks, etc.) • To establish / transform agri-business Incubator centres as leaders in NARS that would provide technology and skill up gradation, inputs supply and market support leading to promotion of viable enterprises and sustainable employment to entrepreneurs. • To undertake last mile scale-up from pilot level of value chain in collaboration with stakeholders. • To impart training and capacity building to prospective entrepreneurs; generate value added manpower to compete effectively. • To provide seed money support to potential incubates / entrepreneurs taking up promising innovations or technologies.
11.	**Human Resource Management Unit**	The Human Resource Management Unit has several key roles and responsibilities, including: • Systematic approach to develop and continuously improve individual competencies and capabilities is necessary for achieving the organisational objectives and goals effectively. • Overall coordination, monitoring, implementation and management of training needs and HR policies for the Council. • Evaluate and advice on all strategic HR needs and requirements of the Council.

S. No.	Name of the Division	Role
12.	**National Agriculture Higher Education Project (NAHEP)**	NAHEP has been formulated by ICAR with a total cost of US$ 165 million (Rupees 1100 crores at the exchange rate of ₹ 66.75 = 1US$) for five years starting from 2017-18. The project is proposed on 50:50 cost sharing basis between the World Bank and the Government of India, implemented at the Education Division, ICAR, New Delhi. Overall, the project aims to develop resources and mechanism for supporting infrastructure, faculty, and student advancement, and providing means for better governance and management of agricultural universities, so that a holistic model can be developed to raise the standard of current agricultural education system that provides more jobs and is entrepreneurship oriented and on par with the global agriculture education standards. The mandate of ICAR/DARE includes promotion and coordination of education in agriculture, agro-forestry, animal husbandry, fisheries, home science and allied sciences in the country. ICAR is now embarking upon an ambitious step in further strengthening the National Agricultural Education system in the country through National Agricultural Higher Education Project (NAHEP) with financial assistance of the World Bank by investing on infrastructure, competency, and commitment of faculty, and attracting talented students to agriculture. The NAHEP has several key roles and responsibilities, including: • Ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all – promoting: (a) equal access to affordable vocational training; and (b) greater gender and wealth equity through universal access to quality higher education. Specifically, NAHEP would finance interventions that increase the supply of qualified technicians and teachers. • Promoting inclusive and sustainable economic growth, employment, and decent work for all – seeks higher levels of economic productivity through diversification, technological upgradation, and innovation. NAHEP would foster a stronger innovation culture by twinning participating AUs with other higher-performing centers of learning (both in India and internationally) and strengthening AU-private sector linkages to better orient student learning toward market-relevant skill sets. • Building resilient infrastructure, promoting sustainable industrialization, and fostering innovation – would enhance scientific research, and substantially increase both the research and development (R&D) workforce and its associated budget. • Taking urgent action to combat climate change and its impacts – would improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

S. No.	Name of the Division	Role
		The proposed NAHEP would specifically target AU curricula reform to internalize climate change and resilience in current and future course content and tie this with experiential learning for certificate, undergraduate and post-graduate students for practical career application.
13.	**National Agricultural Science Fund (NASF)**	The NASF has several key roles and responsibilities, including: • Harnessing science at the frontier of current knowledge and beyond for continually replenish the well of scientific knowledge for agricultural development and prosperity of the farmer. • Using frontier science and the national scientific talents to advance the problem-solving capacity of the extended national agricultural research system and the development of a dynamic knowledge base of Indian agriculture. • Fostering research and a research culture that will use and advance the frontiers of scientific knowledge to effectively meet the present, anticipated and unanticipated problems of agriculture through various modes and critical investments in research projects. • Building the capability of the National Agricultural Research System through development of wide partnerships in science through projects. • Building a storehouse of advancement of knowledge in science related to agriculture and awareness of the national importance of basic and strategic research in agriculture. • To provide policy support to the decision makers for use of basic and strategic research in agriculture. • Organizing workshops, seminars, conferences etc. to create awareness, prioritization, scientific popularization, and related issue.
14.	**International Relation**	As the mandate of DARE-ICAR is on research and education in Agriculture and allied fields, the MoUs and Work Plans generally cover areas like advanced Agricultural Research and Education through study visits and training of scientists, exchange of literature, exchange of germplasm and capacity building programmes. During the last five years a total of over 1688 Scientists/science leaders were deputed abroad under the foreign collaborative programmes. The IR has several key roles and responsibilities, including: • To reach beyond borders legitimately for Agri-R&D. • To do global technology foresighting. • To enable research proposals for foreign collaboration and funding. • To facilitate SMD / Institute Interface with DARE as a single-window and vice versa. • To enable expert visitors from foreign countries to ICAR Institutes.

S. No.	Name of the Division	Role
		The IR Division in cooperation with International Cooperation (IC) Section of the Department of Agricultural Research and Education (DARE) has been able to put in place the DARE / ICAR's Foreign Visit Management System to facilitate quick processing of foreign deputation cases. Recently, it has issued a simple guideline for establishing foreign collaborations.
15.	**Administration**	• The Indian Council of Agricultural Research is an apex organization at the national level for promoting Science and Technology Programmes in the agricultural research and education. The ICAR was set up on 16th July 1929, as a Registered Society under the Societies Registration Act 1860, on the recommendations of the Royal Commission of Agriculture. It was reorganized twice, in 1965 and 1973. The headquarters of the ICAR is located at Krishi Bhavan, New Delhi, and its other buildings are Krishi Anusandhan Bhavan I and II, and NASC Complex, New Delhi. • The Union Minister of Agriculture is the President of the ICAR. The Principal Executive Officer of the ICAR is the Director-General, who is also the Secretary to the Government of India in the Department of Agricultural Research and Education. The General Body of the ICAR Society is the supreme authority of the ICAR, and the Minister for Agriculture, Government of India, heads it. Its members are the Ministers for Agriculture, Animal Husbandry and Fisheries, and the Senior Officers of the various state governments, representatives of Parliament, industry, education institutes, scientific organization, and farmers. • The Governing Body is the chief executive and decision-making authority of the ICAR. It is headed by the Director-General. It consists of eminent agricultural scientists, educationists, legislators, and representatives of the farmers. • It is assisted by the Standing Finance Committee, National Agricultural Education Accreditation Board, Regional Committee, Policy and Planning Committee, several Scientific Panels, and Publications Committee. • In the scientific matters, the Director- General is assisted by 8 Deputy Director General, one each for (i) Crop Sciences, (ii) Horticulture, (iii) Natural Resource Management, (iv) Agricultural Engineering, (v) Animal Sciences, (vi) Fisheries, (vii) Agricultural Education, and (viii) Agricultural Extension. The DDGs are responsible for the Institutes, National Research Centres, and the Project Directorates belonging to their respective fields.
16.	**Finance**	• This Division deals with making finance estimates and budget for the Department.

Figure 6: Organogram of DARE HQ

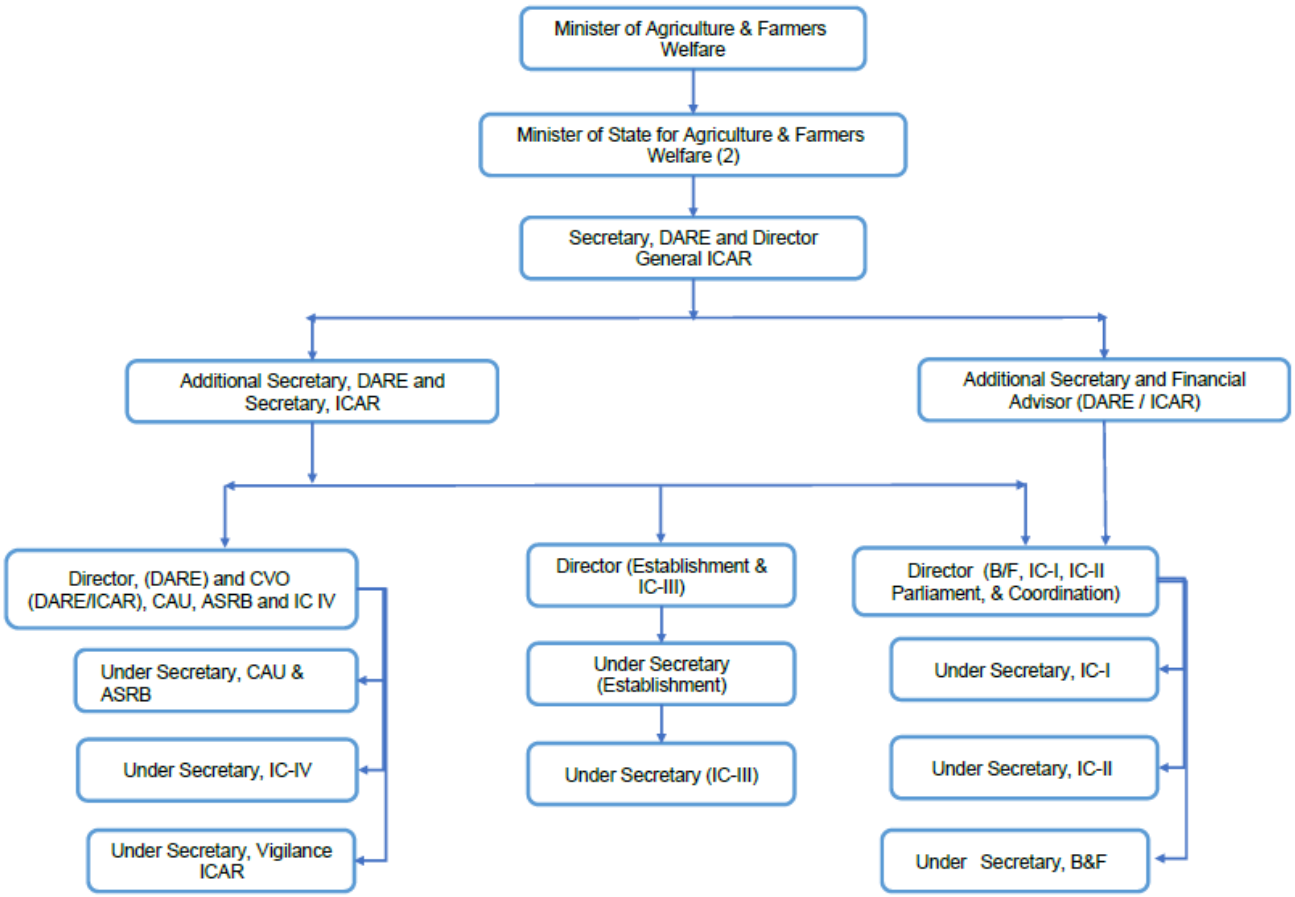
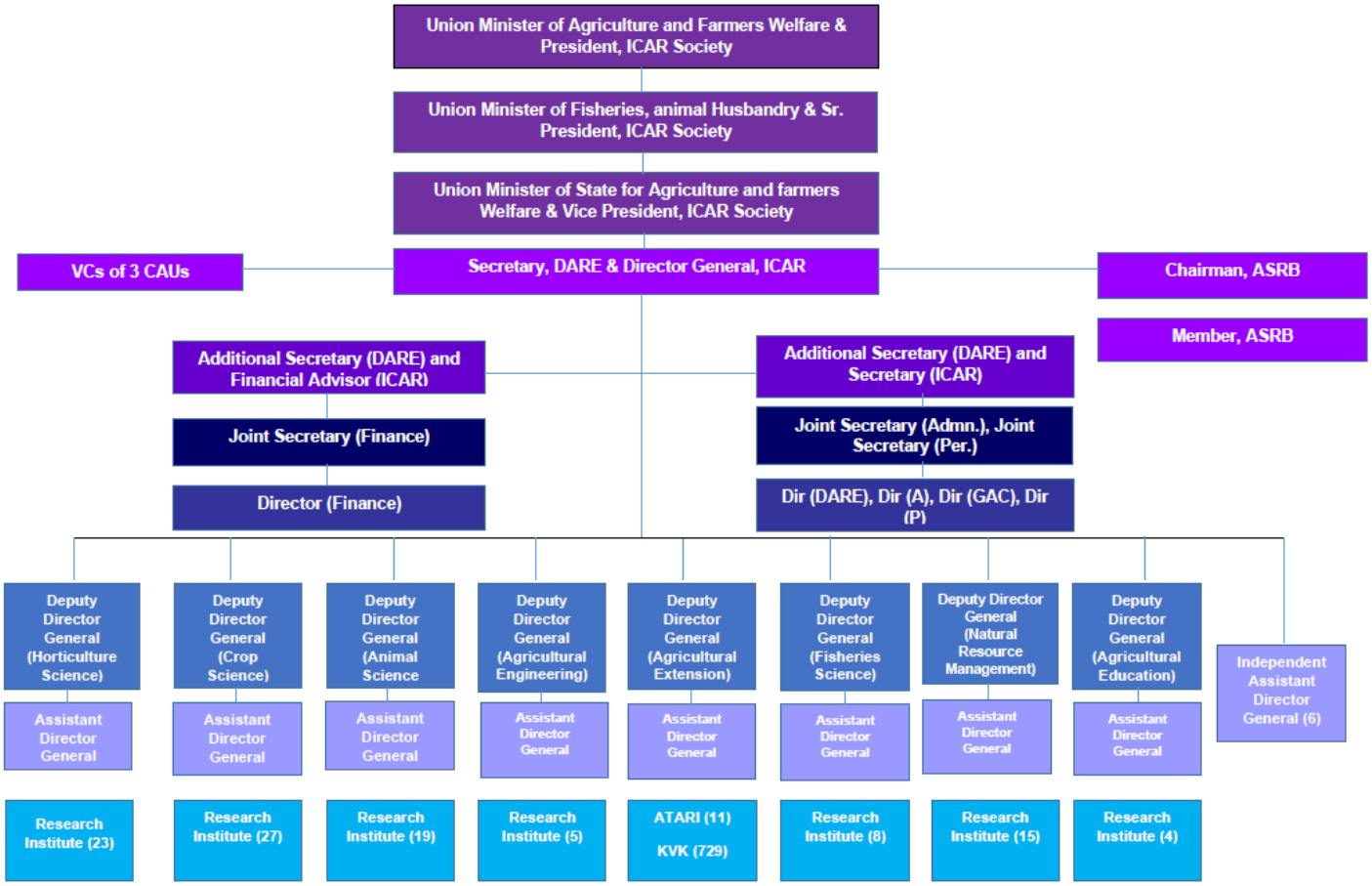


Figure 7: Organogram of ICAR HQ



5. Capacity Needs Assessment of Department of Agricultural Research and Education

This section provides an in-depth analysis of the approach utilized to evaluate capacity requirements, as well as an examination of the behavioral, functional, and domain competencies unique to each Division. Competencies necessary at an organizational level are commonly categorized into three distinct classifications.

- **Behavioral competency:** This includes competencies related to behavior and soft skills such as negotiation skills, self-motivation, interpersonal skills, etc. One of the important competencies under this segment is the citizen centricity / stakeholder focus capability.
- **Functional competency:** This includes competencies related to the functional aspects of the Division such as science of policy designing and implementation, project management, financial planning, etc. and most importantly, technological know-how.
- **Domain competency:** This includes competencies required to build understanding and expertise related to the sector, Division, and the respective focus areas.
- **Institutional and Technological capacity:** These include the capacities required to be developed or augmented in terms of process improvements, knowledge management and resources planning for increasing efficiency. Some of the issues also include high attrition, shortage of staff, limited development opportunities and the performance appraisal criterion. However, this would require a more in-depth study of the institutions, long term capacity building assessment, technological requirements etc. and hence have not been covered in this section presently.

These competencies include combination of theoretical and practical knowledge, cognitive skills, adoption of technology and automation, values, and behavior to improve performance. Based on the goal and focus areas of each Division, competency needs of the Ministry have been identified. These competency requirement ranges from the art of drafting policy, sectoral knowledge to skills related to networking & negotiation and customer-centric capabilities.

5.1. Methodology adopted for Training Needs Assessment

To evaluate the individual, organizational and institutional competency and capacity building necessities, a top-down method of interaction was implemented. This approach commenced with a Kick-Off meeting involving the Minster of State for Agriculture and Farmer's Welfare, Secretary - DARE /DG - ICAR, and many senior officials from the Department.

Following the identification of the Divisions, the team engaged in one-on-one discussions with the all the SMD's, each responsible for leading a different Division within DARE / ICAR HQ. During these sessions, the team presented the comprehensive agenda and approach of the exercise, with a focus on evaluating capacity building requirements. Each SMD was actively engaged in the discussions, offering valuable insights into the competency gaps facing their respective Divisions. Notably, most of the capacity building requirements identified by the SMD's highlighted requirements associated with the following:

- Internal Engineering Course (Art of Living)
- Courses by Sadhguru
- Courses related to Yoga / Meditation (for physical and mental wellbeing at workplace)
- Assigning right job to the right person
- Leadership Skills

- Decision Making
- Communication Skills
- Empathy
- Critical Thinking
- Stakeholder Management
- Time Management
- Task Prioritization
- Stress Management
- Goal fixing in-line with national priorities
- Conflict Resolution
- Rule Consciousness
- Ethical Behavior
- Attention to Detail
- Result Orientation
- Giving Feedback
- Physical and Mental Wellbeing at workplace
- Value Chain Development for Research Outcomes
- Means for Mass Implementation of Research Outcomes
- Basic training for upkeep of scientific equipment
- PPP Model based research methodologies
- Simple guidelines and practices associated with PPP Projects
- Entrepreneurial mindset and Value Chain integration with research outcomes including logistics, storage, and market analysis
- Exposure visits to foreign Universities. Ex: University of Manitoba for Millet Storage
- Applications of RFID to enhance traceability
- Mass Communication in Agricultural Knowledge Management
- Social Media Management for Agricultural Knowledge Management
- Advancements in Printing Technology
- Global best practices in IPR for benchmarking
- Engagement with Rural Livelihood Missions
- Applications of AI/ML/Block Chain/Digital Agriculture/Data Driven Agriculture
- Online Training Modules for SMSs (cross domains)
- Training of KVK Trainers in Packaging, Value Chain Development, and Agricultural Marketing
- Drone Technology and its applications for KVKs

Simultaneously, for Capacity Needs Analysis a survey form was rolled out by the CBU and was circulated amongst the employees across various Divisions of DARE / ICAR HQ located in Krishi Bhawan and Krishi Anusandhan Bhawan I & II.

To collate the necessary information required for developing the Annual Capacity Building Plan, both the minutes of the meetings taken during or after the discussions with the officers and the responses received from the completed CNA survey forms were utilized.

All the Division-wise capacity building requirements collated through the CNA exercise are described in the next section.

5.2. Insights from One-on-one Discussions and Focused Group Discussions (FGDs)

A focused group discussion involves assembling people from similar backgrounds together to discuss a specific topic of interest. It is a form of qualitative research where questions are asked about their perceptions attitudes, beliefs, opinion, or ideas. In focused group discussions participants are free to talk with other group members; unlike other research methods it encourages discussions with other participants. It is a loosely structured discussion for various topics of interest.

FGDs are structured and directed, but also expressive, they can yield a lot of information in a relatively short time. Therefore, FGDs are a good way to gather in-depth information about a group of participants thoughts and opinions on a topic. The course of the discussion is usually planned, and the interviewer / moderator relies on an outline, or guide, to ensure that all topics of interest are covered. The Key features of FGDs, for which it is a preferred choice for collecting data, are stated below:

1. Involves organized discussion with a selected group of individuals to gain information about their views and experiences associated with a topic.
2. Particularly suited for obtaining several perspectives about the same topic.
3. Helps in gaining insights into people's shared understanding of everyday life and the ways in which individuals are influenced by others in a group situation.

The competency need assessment for DARE / ICAR HQ was conducted through focused group discussions of various Divisions. The Divisions participated in the discussions and supported in gathering qualitative information for completing the CNA.

Key insights from FGDs / One-on-One meetings with Division Heads are as follows:

1. One-on-one Meetings with the Divisional head and Focused Grouped Discussions were held with 13 Divisions of the Department **and 3 KVKs (Meerut, Karnal and Delhi, Ujwa).**
2. **Insights from DKMA:** Project Director, DKMA mentioned the following areas of development for the team – Mass Communication using Social Media, Exposure to Social Media Management, Editorial Skills, Managing editing in multiple languages, Advancements in Printing Technology, MS Office suite, noting and drafting, administrative rules and procedures.
3. **Insights from KVKs:** The primary role of the KVKs is to train and educate the farmers by popularizing research outcomes and initiatives through frontline demonstrations etc. KVKs also function as agencies for practical verification for the research outcomes. Moreover, KVKs also take up initiatives of educating the rural women, school dropouts and youth in agricultural sector and latest technologies in practice. The competency building requirements for KVKs are GeM Procurement, drone technology and behavioral competency requirements such as stakeholder management and communication skills.

4. Insights from the meetings and FGDs regarding the high priority competencies of the Divisions are the following:

- **Behavioral:** Communication Skills, Time management, Stress management, Stakeholder Management
- **Functional:** MS Office, Public private partnership, Data analytics
- **Domain:** Post-harvest engineering, Storage of pulses, cereals and millets, Seed production and crop protection

5.3. Survey Response Summary

- **Overall summary:**
    - The survey questionnaire was distributed among the personnel at DARE/ICAR HQ. The ICAR has a total working strength of 365, while DARE has 26 staff members. Out of this combined total of 391 officials, 87 responded to the questionnaire.
    - Average years of experience of the officials in DARE/ICAR = 18.3 years
- **Past trainings:** Out of the 87 individuals who completed the questionnaire at DARE/ICAR HQ, a total of 8 officials have attended one or more training programs during the past one year.
- The most **commonly used** technical **skills** were **MS Office, E-Office**.
- **Behavioral competencies**: Leadership, Time Management, Communication Skills, Attention to Detail, Ethical Behaviour, Result Orientation, Rule Consciousness, Critical Thinking, Decision Making, Empathy, Innovation, Giving Feedback, Leadership, Stress Management, Gender Sensitivity, Citizen Centricity, Stakeholder Management, Negotiation, Conflict Resolution were the most used behavioral competencies identified.
- **Functional competencies**: MS Office (Excel, PPT, Word), Quantitative & Analytical Skills, E-office, Project Management, NIC applications (email, messenger, cloud storage and others), General Financial Rules, 2017 (GFR), Government e-marketplace (GeM), HRMS Rules, Vigilance, Cabinet note, EFC or office order, noting and drafting, Public Financial Management System (PFMS), Establishment Rules & General Administration Matters of Government Departments, Financial Management, Budgeting, Public Private Partnership, Bookkeeping & Accounting, Procurement and Tender Writing, RTI Act, 2005, were the most used functional competencies.
- **Domain Competencies:** Food safety, quality control and quality assurance, Post-harvest Technologies - Engineering, Food processing, pest management, storage, Land use planning, Innovative soil survey technique like SOP developed by NBSS & LUP, Nagpur, soil sampling, Geospatial soil analysis, Textile testing technologies - Fiber Testing And Spinning, Natural fiber processing, Biodegradable packaging, Farm Machinery & Power, Agricultural Process Engineering, Agroforestry, Precision farming - livestock farming, Crop management - crop modeling, Soil spectroscopy, remote sensing and GIS, plant and soil health, seed conservation and botany, Biotechnology in animal agriculture, Basic Parasitological techniques from collection to identification - molecular parasitology., Genomic data analysis, genomic selection, Transcriptome data analysis, Nano fertilizers production and quality assessment, Nanotoxicology, Environmental economics, social economics, Meat borne pathogens- diagnosis, Veterinary Epidemiology, Epidemiological Investigations , Advance Molecular Biology Tools/Techniques (Multi-omics), Dairy chemistry, Recombinant Antibody Production, RNA sequencing,

Mycotoxin determination for feed, food ingredients, Advanced Rainwater Management technologies for enhancing water productivity in rainfed areas were the identified domain competencies.

- **Challenges faced by the officials**: Lack of trained manpower, knowledge transfer between officials, inter-disciplinary understanding and coordination, lack of automation of administrative processes, research infrastructure can be better, Procurement of quality chemicals for analytical work through GeM is difficult, instrument breakdown and unavailability of spares and appropriate funds and a few others as well.

5.4. Grouping of various Designation into Clusters

***Key for Designations:** For conveniently mapping the training and non-training interventions with various Designations / Roles, officers have been divided into various clusters. These clusters include the officers/staff across SMDs, office and units of DARE/ICAR HQ.

Table 6: Various designation of clubbed under various clusters.

Cluster	Designations
1	DDGs, ADGs, Principal Scientists, Joint Secretaries, Director and Senior Scientists
2	Deputy Secretary, Under Secretary, Administrative officer, Deputy Finance and Accounts officer, Finance and Accounts officers.
3	Section Officer, Assistant Section Officer, Chief Technical officers, Assistant Chief Technical officers, Senior Technical officers, Technical officers.

6. Annual Capacity Building Plan

6.1. ACBP Blueprint

Table 7: ACBP Blueprint

ACBP Blueprint Department of Agricultural Research and Education		
Vision for Capacity Building		
By implementing demand-driven capacity building interventions, with a specific focus on technology utilization and partnerships, the officials of DARE/ICAR HQ can enhance their skills and knowledge. This will enable them to become goal-oriented human resources capable of implementing future-oriented programs and policies. Ultimately, this will contribute to the nation's economy by providing sustained benefits to farmers, FPOs, FPCs, and other allied sectors.		
Three Lenses of Capacity Building		
National Priorities	**Emerging Technologies**	**Citizen Centricity**
Enhancing the share of Agri-Sector in GDP by focusing on following SDGs through agricultural research, education, extension and mass implementation of the research outcomes: • End hunger, achieve food security and improved nutrition and promote sustainable agriculture. • Promote sustained, inclusive and sustainable Economic growth, full and productive employment and decent work for all. • Ensure sustainable consumption and production Patterns.	• Preserving and utilizing in a sustainable manner the genetic resources of plants, insects, other invertebrates, and agriculturally significant microorganism. • Providing knowledge-intensive advisory and consultancy in crop-science. • Development of technologies to improve the efficiency of breeding to develop cultivars, which meet market needs including taste, freshness, health benefit and convenience beside resistant to biotic and abiotic stress.	• Citizen centric service delivery through the use of latest technology to reduce the overall turn-around-time. • Improving food security by developing new crop varieties that are more resistant to pests and diseases, or that can be grown in different regions of the country. Effective management, enhancement, evaluation and valuation of genetic resources and development of improved cultivars, with high quality characteristics, productivity, resistance to pest and disease and tolerant to abiotic stresses. • Understand social needs of communities and build the capabilities for practice the change for

• Conserve and sustainably use the oceans, seas and marine resources for sustainable development. • Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	• Technologies such as precision planting, variable rate application, and precision irrigation can help farmers to optimize crop yields and reduce inputs (e.g., water, fertilizer, etc.). • Developing location specific, cost effective, eco-friendly conservation and management technologies for higher input use efficiency, agricultural productivity & profitability without deteriorating natural resource base. • To make Indian agriculture sustainable, profitable and competitive enterprise through engineering interventions of farm mechanization, value addition and energy management in production and post-harvest operations. • Development of technologies to support production enhancement, profitability, competitiveness and sustainability of livestock and poultry sector for providing food and nutritional security to Indian masses. • Technology of intensive carp culture and production levels of 10-15 tonnes/ha/yr. • Developed technology of breeding, seed production and farming of important coldwater species including trout.	effective utilization of resources and adoption of technologies and respond to needs including bio-security needs. • Sustainable management of natural resources for achieving food, nutritional, environmental and livelihood security in the country and by developing new agricultural techniques and technologies that are more sustainable, such as conservation agriculture and agroforestry, which can help to improve soil health and reduce farmers' dependence on inputs like water and fertilizer. • Farmer-centric growth in agriculture and allied sectors through application of appropriate technologies in specific agro-ecosystem perspective. • Encouraging youth participation by providing education and training to young people who want to become farmers, as well as developing programs that encourage them to pursue careers in agriculture and promote agriculture-based entrepreneurship by providing not only trainings but also by providing funding and other support for young entrepreneurs in agriculture sector. • Improving access to information and education by developing new digital technologies, such as mobile apps and online platforms, that can

	• Science and technology-led growth leading to enhanced productivity, profitability and sustainability of agriculture. • Dissemination and sharing of agricultural knowledge and information through value added information products in print, electronic and web mode. • The Intellectual Property and Technology Management Unit in ICAR which oversees all matters related to intellectual properties and technology transfer/commercialization. • Genetic improvement of crops which can be done through conventional breeding methods, or through more advanced techniques such as genetic engineering and gene editing. • Promotion of technologies such as integrated pest management, conservation agriculture, and agroforestry can help farmers to improve soil health and reduce their environmental impact. • Technologies such as precision irrigation, rainwater harvesting, and water-saving irrigation systems can help to optimize the use of water resources in agriculture. • Use of digital technologies like remote sensing, GIS, precision farming, precision	provide farmers with information on weather conditions, market prices, and new agricultural techniques. • Development of e-resources on agricultural knowledge and information for global exposure and facilitation for strengthening e-connectivity among ICAR institutes State Agricultural Universities and KVKs. • Developing new technologies and practices that help to create job opportunities and improve the standard of living for people in rural areas along with promote the practices that reduce the environmental impact of agriculture, such as precision irrigation and rainwater harvesting.

	irrigation, precision horticulture, precision livestock farming, precision fisheries, precision beekeeping, precision aquaculture, precision forestry, precision agroforestry, precision agrometeorology, precision soil and water management, precision nutrient management, precision crop protection, precision post-harvest management, precision agribusiness, precision agri-entrepreneurship, precision agri-extension, precision agri-education, precision agri-health, precision agri-forestry, precision agri-climate, precision agri-genetics, precision agri-bio-technology and precision agri-economics.	
Identifying Capacity Gaps		
Vision, Mission, and Goals of DARE ***Vision*** *Harnessing science and technology to ensure sustained accessibility to food, nutrition, livelihood security and natural resource management.* ***Mission*** *Interfacing agricultural research and technology, higher education, and front-line extension initiatives with institutional, infrastructural and policy support for sustainable growth of agriculture.*		
Three Pillars of Capacity Building		

Individual Capacity Building	Organisational Capacity Building	Institutional Capacity Building
Detailed competency gap assessment for all the officials of DARE/ICAR HQ in terms of: • Behavioural Competencies • Functional Competencies • Domain Competencies	• Organising a Design Thinking workshop. • Organising Learning Hours on a fortnightly/monthly basis to address the issues related to lack of understanding on certain key issues such as PPP mode research projects, integration of value chain with research outcomes, identification of various ways in which mass implementation of research outcomes can be expedited, understanding ways in which PPP Projects can be used for enhancing the agricultural extension efficiency, etc.	**Institutional frameworks for:** • National conclave on Whole of Government Approach for agricultural transformation. • Workshop on mass Implementation of research outcomes. • Workshop/training programme on Improving Collaboration with private sector. • Developing inclusive online training modules spanning multiple domains to elevate the skill levels of KVK SMSs, while also providing them with exposure and knowledge in various diverse fields, in collaboration with the regional model KVK. Additionally, the KVK should share these modules to provide training to other KVKs. • Exploring the possibility of using SAU post-doctoral / doctoral candidates a resource personnel for KVKs facing challenges related to manpower shortage to generate a talent pool while dealing with the systemic challenge.

Capacity Building Interventions	
Training Interventions	**Non-Training Interventions**
• Induction Training Module / Refresher Course Module • Behavioural training at ISTM, IIPA, Mandatory readings, iGOT Karmayogi Platform, etc.	• Design Thinking Workshop. • Enhancing the understanding of Value Chain Integration and promoting its backend integration with research outcomes

• Functional training at ISTM, iGOT Karmayogi Platform, etc. • Training specific to a domain, whether it's at NAARM or other institutes or ICAR units besides NAARM.	• Immersion Visits to identify the extent of Automation in post-harvest activities and explore the applications of RFID in Agriculture. • Initiatives to enhance the scientists' understanding of dealing with basic troubleshooting with scientific equipment. • Organising subject specific "Learning Hours" on a monthly / bimonthly / quarterly basis.

SMART Goals For Each Intervention **State Specific, Measurable, Attainable, Relevant, Time-based (SMART) goals**		**Year 1**
Provide trainings as per the Training Calendar	A. Establish **CBU** B. Deploy staff. C. Hold regular review meetings (monthly review in first year, and subsequently bi-monthly review) to keep track of the developments. Identify **training partner institutions** to Assist NAARM or any other Central Training Institutes under ICAR in: a) Developing course curriculum and training modules b) Providing online and offline trainings c) Certification in Domain competency, Functional competency D. Develop **Training Calendar** for DARE/ICAR for HQ. staff E. Create **separate Budget Head** for ACBP implementation.	➢ Measure reduction in the turn-around-time with regards to matters related to e-Office, GeM Procurement, e-HRMS cycle, data analyses, etc. ➢ Measure quality of data analyses done using MS Excel ➢ Measure quality of reports generated. ➢ Measure quality of remarks or interpretation or instances of lack of confusion in dealing with matters related to PPP. ➢ Measure quality of Project Management with regards to various projects
SMART Goals For Each Intervention **State Specific, Measurable, Attainable, Relevant, Time-based (SMART) goals**		**Year 2**

Collaborate with training institutions for specific needs	• CBU is responsible for ensuring the inclusion of various institutions identified in the ACBP Report to develop training programs for DARE/ICAR HQ personnel. In this capacity, institutions like NAARM, Hyderabad, or other Central Training Institutes under ICAR, serving as the knowledge hub for the entire DARE/ICAR HQ, have been entrusted with the responsibility of creating numerous courses tailored for DARE/ICAR HQ officers and scientists.	• Design the training calendar with the help of the CBU and the onboarded training institutions and ensure that the officials are timely released to attend the training programs. • Take feedbacks from the participants to find out the quality of the training programs and the learning experience of the officials.
SMART Goals for Each Intervention **State Specific, Measurable, Attainable, Relevant, Time-based (SMART) goals**		**Year 3**
Refer to the ACBP Report and take a note of all the national-level conclaves / seminars / workshops proposed for the DARE/ICAR HQ officials and scientists.	• CBU to enlist the participants of the conclaves / seminars / workshops in consultation with the DDGs and ADGs of various Divisions. • CBU to develop a timeline for organising the events. • CBU to take note of the outcomes / learnings of the events and share a report to the Secretary DARE.	• CBU to submit a list of total number of training programs attended by each official or scientists of DARE/ICAR HQ to Secretary DARE. • CBU to develop a report on the conclaves / seminars / workshops / brainstorming sessions and submit it to the Secretary DARE, for review and effective implementation. • CBU to ensure that all the identified interventions have been implemented. • CBU to observe whether there have been any significant changes in - implementation of research of outcomes, the number of PPP research initiatives, collaboration between inter-State KVKs, MoUs / Tie-Ups with Start-Ups and Private players in enhancing the agricultural extension efficiency, etc.

6.2. Quick Wins

Quick Wins are the initiatives, which have the potential of creating a large-scale impact within a short frame of time and which can be implemented with minimal efforts. The Quick Wins identified for DARE/ICAR HQ under the Annual Capacity Building Plan exercise are as follows:

- **Design Thinking Workshop:** In order to facilitate a design thinking / innovative mindset for the scientific staff at DARE / ICAR HQ. is proposed to organize a workshop in collaboration with the Harvard Digital Lab, Bharat Digital Lab, and IIPA. The proposed Design Thinking workshop would help identify the key issues that need to be considered and dealt with in order to plan for India @ 2047 and further develop a course of action for deal with the challenges facing the Agricultural Research and Education sector. Design thinking is more than just a process as it opens up an entirely new way of thinking, offering a collection of hands-on methods to help apply the new mindset.

  Design thinking is an approach to problem-solving and innovation that emphasizes empathy, collaboration, and creativity. It was originally popularized by design consultancy firms like IDEO and Stanford University.

  At its core, design thinking revolves around understanding the needs and perspectives of end-users or customers and using that understanding to generate innovative and practical solutions. It is a human-centred approach that seeks to identify and address unmet needs or challenges by focusing on the people who experience them. The design thinking process typically consists of several stages, which may vary slightly depending on the source or practitioner, but generally include Empathize, Define, Ideate, Prototype, and Test.

  Design thinking is closely related to innovation because it provides a structured and iterative approach to problem-solving that encourages innovative thinking. By focusing on understanding users and their needs, it helps uncover insights that can lead to novel and meaningful solutions. It promotes a mindset of experimentation, risk-taking, and learning from failure, which are crucial for fostering innovation. By involving multidisciplinary teams and encouraging collaboration, design thinking also leverages the collective intelligence and diversity of perspectives, further fuelling innovation. Ultimately, design thinking offers a systematic framework that can drive the development of innovative products, services, and experiences.

- **Enhancing the understanding of Value Chain Integration and promoting its backend integration with research outcomes:** With an aim to enhance the speed and volume of implementation of research outcomes, and to strengthen the entire agricultural ecosystem in the country, it is being proposed to organize a workshop with all the senior scientists of ICAR institutes and DARE to promote the necessity of integrating an entire value chain for a more efficient implementation of the research outcomes. In this regard suitable agency / organisation needs to be identified to facilitate a brainstorming session on Value Chain Integration with Research Outcomes.

- **Automation in post-harvest activities and applications of RFID in Agriculture:** Through one-one-one discussions with multiple SMDs and the diverse staff at DARE, it has been observed that there is a need for enhancing the public private partnership in research activities. Also, the need for understanding the current state of automation in post-harvest activities has also been highlighted by the DDG, Agricultural Engineering Division. In this regard it is being proposed that DARE should organize a national level seminar on “Automation in Post-Harvest Activities”. Through the proposed seminar, it is expected that various startups in the agricultural automation sector come up with their innovations and discuss the same. Moreover, the representatives from Agricultural Extension Division, KVKs, ATARIs and Agricultural Engineering Divisions will get an opportunity to understand the entire ecosystem and level of automation in the Indian context. An additional participant in the seminar could be Department of Telecommunications and various firms working in the domain of developing RFID tags. The seminar may have an additional component on the applications of RFID tags in Agricultural sector. Additionally, officers from the Agricultural Engineering Division may visit various FMTTIs (Farm and Machinery Training and Testing Institutes under the DA&FW) to observe the level of mechanization and automation in various regions. Thereby getting an opportunity to gauge the level of mechanization

and identify the extent of penetration of latest tools and implements developed by the DARE / ICAR institutes for farm mechanization.

- **Initiatives to enhance the scientists' understanding of dealing with basic troubleshooting with scientific equipment:** In order to ensure that scientists do not waste their precious time in waiting for the service engineers to arrive to deal with basic level troubleshooting, it is being proposed that all the ICAR institutes, at individual levels hold small workshops or seminars on dealing with "Basic Troubleshooting and Efficient Upkeep of Scientific Instruments". The workshops can be organised by respective Original Equipment Manufacturers and/or Original Equipment Suppliers at respective institutes.
- **Topic Specific Digital Training Modules for KVK Staff:** The objective is to develop a series of inclusive online training modules that cover a diverse range of subjects and fields. These modules are specifically designed to enhance the skill levels of Krishi Vigyan Kendra Subject Matter Specialists. KVK SMSs are individuals with expertise in agriculture and related areas, and they play a crucial role in disseminating knowledge and guidance to farmers and agricultural communities. These training modules are not limited to a single domain but instead span multiple domains or areas of expertise. This comprehensive approach ensures that KVK SMSs receive a well-rounded education, making them more effective in their roles. The training content encompasses various subjects, including agriculture techniques, technology adoption, research methodologies, and more. To ensure the success of this initiative, collaboration with the regional Model Krishi Vigyan Kendra is essential. The Model KVK serves as a benchmark or reference point, often recognized for its excellence in training and agricultural practices. This collaboration involves leveraging the expertise and resources of the Model KVK to curate and develop these training modules. Furthermore, the responsibility does not end with the development of these training modules. It extends to the sharing and dissemination of these resources. Once created, these modules should be made available to other KVKs across the region or beyond. This sharing process is crucial because it allows a wider audience of KVK SMSs to access and benefit from these educational materials.
- **Learning Hour:** Organizing specialized "Learning Hours" on a monthly, bimonthly, or quarterly basis, contingent upon the timeline determined by the Secretary of DARE, presents a valuable opportunity. These "Knowledge Sessions" are designed to facilitate senior officials, scientists, and other DARE staff members in acquiring knowledge across diverse subjects. For instance, within the framework of these "Learning Hour," experts who have concluded projects in the Public-Private Partnership (PPP) mode could share their insights. These experts would present their experiences in a case-study format, elaborating on the contractual terms of PPP arrangements using straightforward, easily understandable language. Similarly, another series of "Knowledge Sessions" could focus on "Value Chain Integration with Research Outcomes.". They would highlight their exemplary work and provide valuable lessons that DARE officials can glean from their experiences. Moreover, the scope of topics to be covered during these sessions can be wide-ranging, with suggestions coming from DDGs of various ICAR divisions. These "Learning Hour" can feature speakers from a diverse array of backgrounds, including scientists, entrepreneurs from an agricultural startup, representatives from NGOs, business leaders, philanthropic organizations, academia, startups, foreign institutions, and other distinguished individuals who have successfully integrated new products or services with the existing ecosystem could serve as speakers. These sessions can be conducted in various formats, including online, in-person, or hybrid, ensuring flexibility and accessibility for all participants.
- **Immersion Visits at FMTTIs:** Immersion visits can be organized to NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantapur, Andhra Pradesh; and NERFMTTI, Biswanath, Assam to enhance comprehension and to understand the current state of Farm Mechanization and Post-Harvest Engineering.
- **Organising National / Global Conclaves on:**

- Climate change, carbon positive farming.
- Storage and value chain management for Millets, Pulses and Cereals.
- Global best practices, Animal husbandry and fisheries.
- National conclave on Whole of Government Approach for agricultural transformation.
- Workshop on mass Implementation of research outcomes.
- Workshop/training programme on Improving Collaboration with private sector.

6.3. Capacity Building Requirements identified.

This section highlights the top Behavioral, Functional and Domain Competencies identified during the CNA.

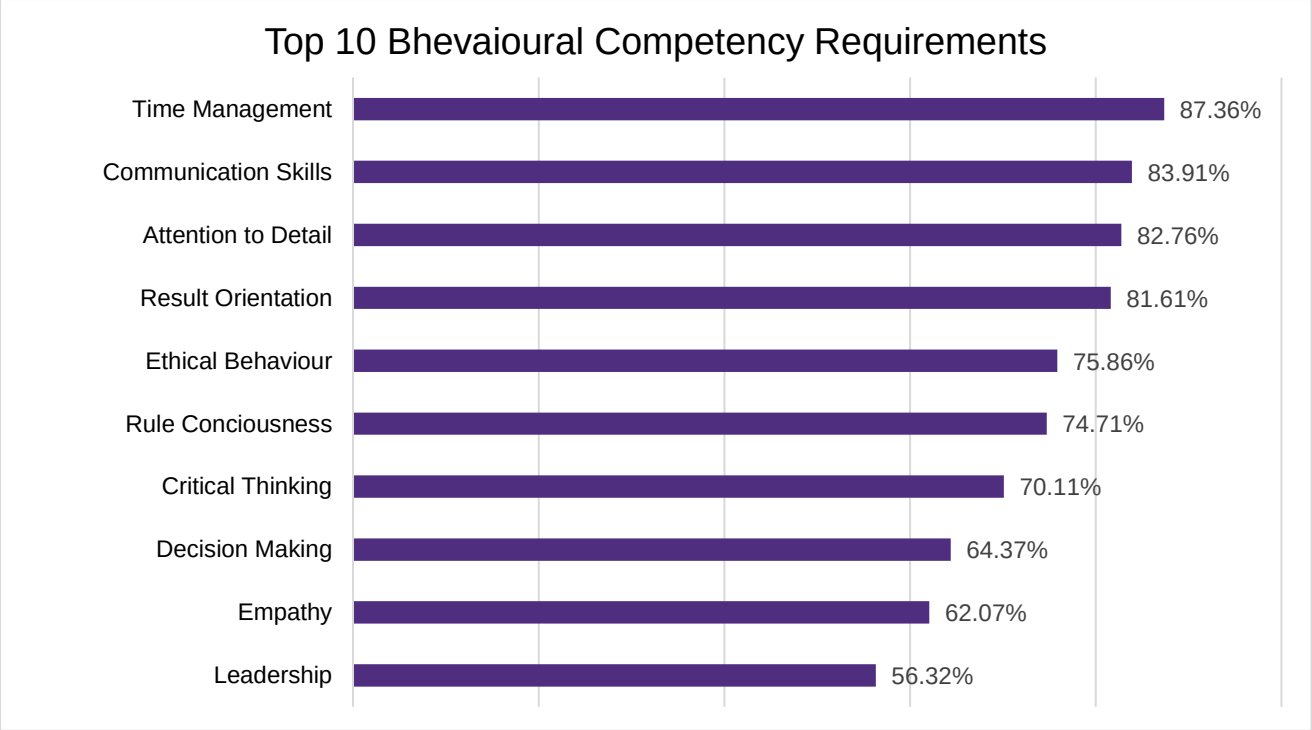
6.3.1. Behavioural Capacity Building

The chart below lists the top 10 Behavioral Capacity Building Requirements that were identified during the CNA. The behavioural capacity building requirements have been identified based on the responses received from 87 staff members belonging to DARE/ICAR HQ.

The top 10 behavioural capacity building requirements are: (i) Time Management, (ii) Communication Skills, (iii) Attention to Detail, (iv) Result Orientation, (v) Ethical Behaviour, (vi) Rule Consciousness, (vii) Critical Thinking, (viii) Decision Making, (ix) Empathy, and (x) Leadership Skills. The figures (Data Labels) or the percentage mentioned in front of each bar represents the proportion of officers, among the survey respondents, who feel that there is a need for capacity building strengthening in the respective aspect. For instance, 87.36% survey respondents feel the need for having better skills in time management, whereas around 84% survey respondents feel that their communication skills need to be improved.

Note: It may be noted that for any survey, at least 10% of the population size should be taken so as to obtain a fair representation of the target population. In the present context, where DARE/ICAR officials in DARE/ICAR HQ do not exceed over 500 in numbers, 87 responses to the CNA questionnaire may be referred to as a fair representation of the DARE/ICAR officials.

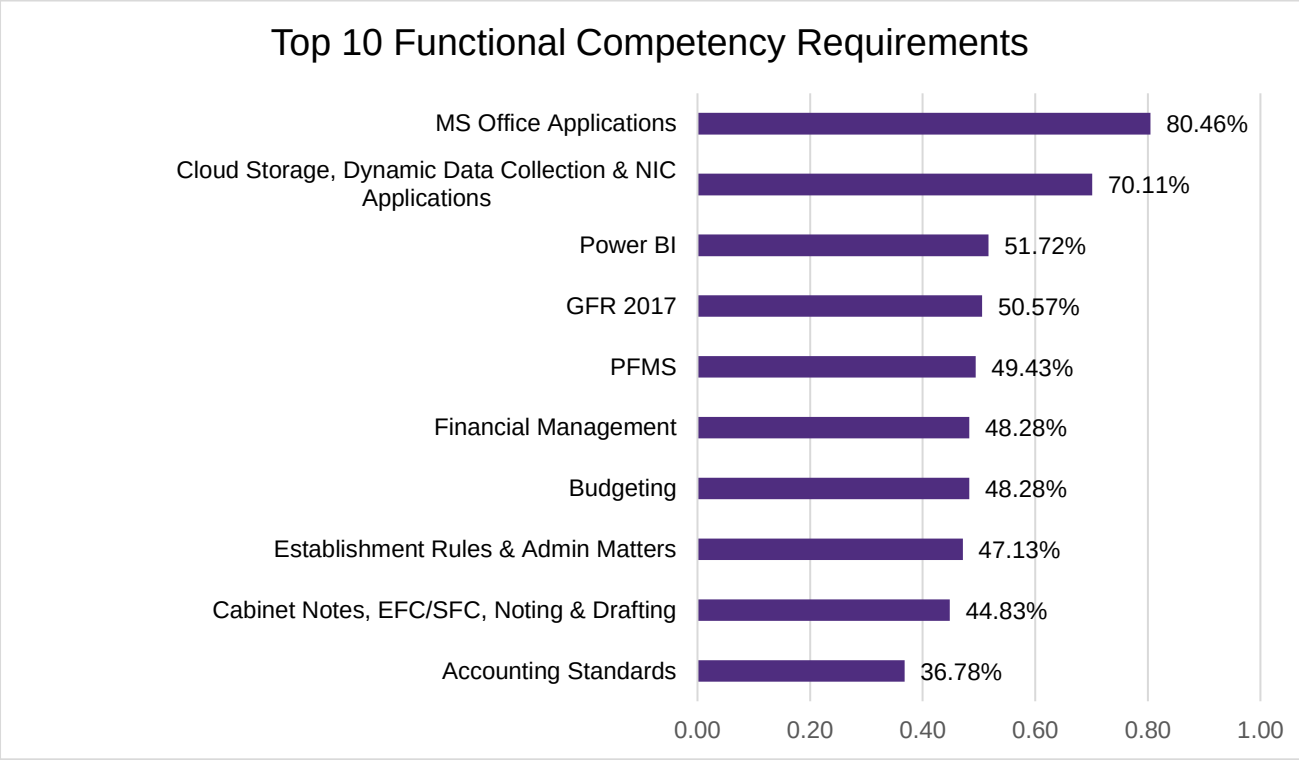
Figure 8: Graph Depicting top Behavioral CB requirement.



6.3.2. Functional Capacity Building

The top-10 Functional Capacity Building Requirements identified during the Capacity Needs Assessment phase are as follows:

Figure 9: Graph Depicting top Functional CB requirement



The chart above depicts the top 10 Functional Capacity Building Requirements that were identified during the CNA. The functional capacity building requirements have been identified based on the responses received from 87 staff members belonging to DARE/ICAR HQ.

The top 10 functional capacity building requirements are: (i) Better understanding and utilization MS Office Applications, (ii) Understanding of Cloud Storage, Dynamic Data Collection and NIC Applications to increase automation in day to day office work, (iii) Knowledge of Power BI and its application, (iv) Better understanding of GFR 2017 to make the officers better equipped in dealing with procurement related matters, (v) Better understanding of PFMS, (vi) Financial Management, (vii) Budgeting, (viii) Establishment Rules and Administration Related Matters, (ix) Cabinet Notes, EFC/SFC, Noting/Drafting, and (x) Accounting Standards. It may be noted that the functional capacity building requirements include topics that can help reduce the turnaround time to carry out day-to-day office activities; moreover, some of the capacity building requirements will reduce/remove doubts associated with financial management, procurement related matters, administrative matters and/or rules associated with administration.

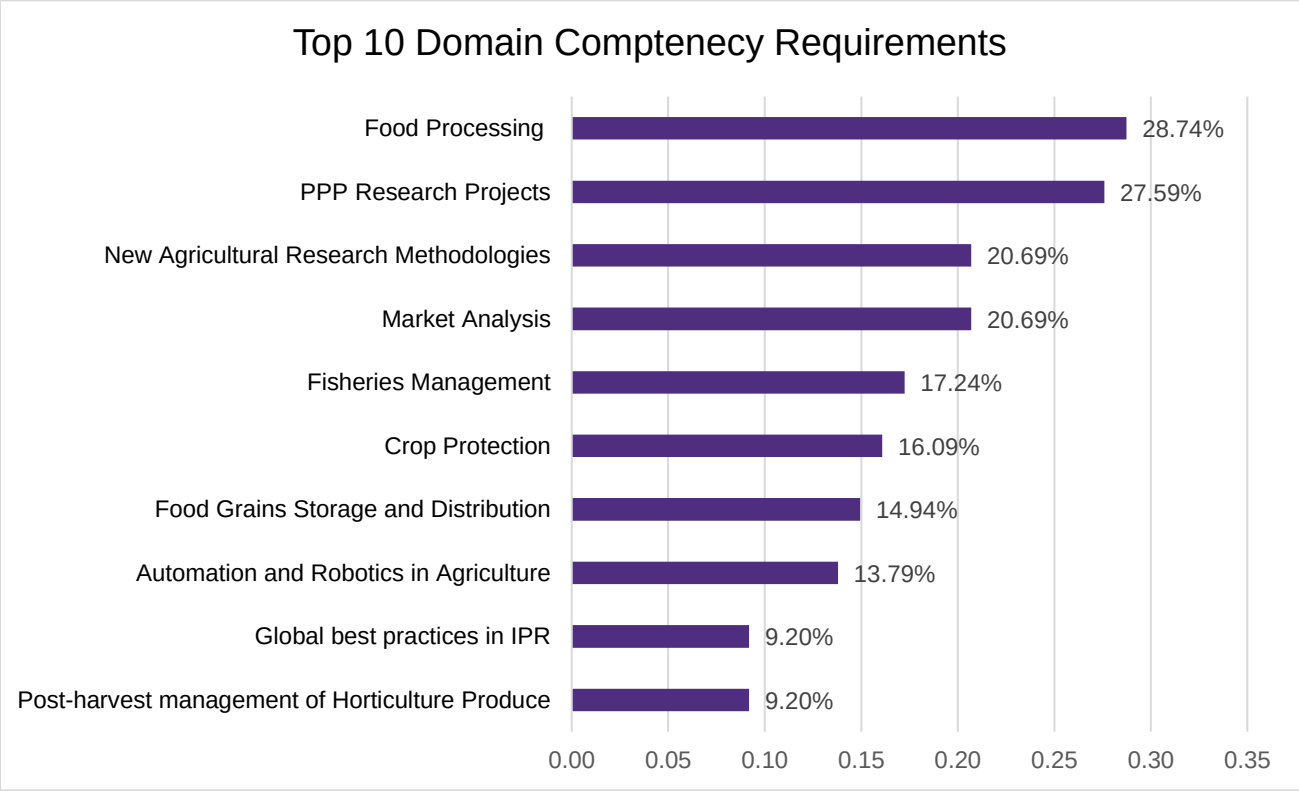
The figures (Data Labels) or the percentage mentioned in front of each bar represents the proportion of officers, among the survey respondents, who feel that there is a need for capacity building strengthening in the respective aspect. For instance, around 80% survey respondents feel the need for having better skills in using MS Office application such as MS Word, MS Excel, and MS PowerPoint; whereas around 70% of the survey respondents feel that there should be specific capacity building initiatives to enhance their understanding of cloud storage, NIC applications and dynamic data collection techniques.

Note: It may be noted that for any survey, at least 10% of the population size should be taken so as to obtain a fair representation of the target population. In the present context, where DARE/ICAR HQ officials, do not exceed over 500 in numbers, 87 responses to the CNA questionnaire may be referred to as a fair representation of the DARE /ICAR HQ officials.

6.3.3. Domain Capacity Building

The top-10 Domain-specific Capacity Building Requirements identified during the Capacity Needs Assessment phase are as follows:

Figure 10: Graph Depicting top Domain CB requirement.



The chart above depicts the top 10 Domain-specific Capacity Building Requirements that were identified during the CNA. The domain specific capacity building requirements have been identified based on the responses received from 87 staff members belonging to DARE/ICAR HQ.

The top 10 domain specific capacity building requirements are: (i) understanding of Food Processing activities and the food processing industry, (ii) Modalities of PPP Research Projects including the legal and commercial frameworks, (iii) knowledge of new agricultural research methodologies, (iv) conducting Market Analysis, (v) Global Best practices in Fisheries Management, (vi) prevailing methodologies of Crop Protection, (vii) Food Grains Storage and Distribution ecosystem in India, (viii) level of automation and application of robotics in agriculture in the Indian context, (ix) Global best practices in IPR, and (x) post-harvest management of agricultural produce.

It may be highlighted that the domain-specific capacity building requirements, mostly, focus on providing a chance to observe the ecosystem and in-practice activities in various domains such as – level of automation

and application of robotics in India, global best practices in IPR and fisheries management, prevalent practices in crop protection, PPP research modalities, etc. Such capacity building requirements, when addressed, would provide the DARE/ICAR HQ officials a chance to observe the magnitude of the lag between implementation and ideation/creation/invention. The DARE/ICAR HQ officials would get a chance to explore the possible avenues through which mass implementation of the agricultural research outcomes could be strengthened and expedited in India. Many of the domain-specific capacity building requirements must be addressed through immersion programs, followed by a brainstorming session to explore how can the identified bottlenecks be eliminated.

The figures (Data Labels) or the percentage mentioned in front of each bar represents the proportion of officers, among the survey respondents, who feel that there is a need for capacity building strengthening in the respective aspect. For instance, around 29% of the survey respondents feel the need for having exposure to food processing industry and relevant technologies; whereas around 28% of the survey respondents feel that there should be specific capacity building initiatives to enhance their understanding of PPP based research projects.

Note: It may be noted that for any survey, at least 10% of the population size should be taken so as to obtain a fair representation of the target population. In the present context, where DARE/ICAR HQ, do not exceed over 500 in numbers, 87 responses to the CNA questionnaire may be referred to as a fair representation of the DARE/ICAR HQ officials.

6.4. Training Calendar

In this Section, an exhaustive list of training programs has been prepared and the training programs have been mapped with the internal as well as the external knowledge partners of the DARE/ICAR HQ.
The training programs which have already been mapped with various institutions such as – ISTM, Delhi; iGOT; etc. may be attended by the officials as per the dates mentioned in the calendars below. However, for the specialized needs, the Capacity Building Unit will have to take initiative to connect with the indicated institutions (NAARM, Hyderabad other institutes or ICAR units) and carry forward the discussions to either curate the training programs as per needs or take needful action as indicated in the tables below.

This ACBP is prepared for the officers of DARE/ICAR HQ, Krishi Bhawan, Krishi and Anusadhan Bhawan 1&2. The progarmmes mentioned in the training calendar are indicative for different cadres of DARE/ICAR HQ and can be finalized based on the internal discussion between CBU and HRM unit. The online courses mentioned in the calendar may be executed by discretion of the CBU and HRM unit in consultation with SMDs.

The training levels are categorized into four major groups, which are:

- **L1:** Trainings with a duration of up to 2 hours
- **L2:** Trainings lasting up to 6 hours.
- **L3**: Trainings comprising 2 days in person and 3 days online.
- **L4:** Trainings exceeding a 2-day duration.

While developing the training calendar for the DAREICAR HQ officials, it was decided to incorporate a flexible mode of learning such that the officers could continue learning in a self-paced environment without any timeline related pressures. Hence, most of training programs have been suggested in digital form. The remaining programs which are not completely digital have been suggested from such institutions that organise the respective training programs in a recurring fashion on a yearly basis. For instance, ISTM organizes the workshop on effective communication skills each year during the 1st quarter of the financial year. Therefore, if for any reason a few officers fail to complete a given course from ISTM / IIPA, the same course can be taken during the same quarter in the next financial year. However, it is advised to complete the training courses as per the given training calendar as the implementation of the ACBP will be monitored the CBC and the Cabinet Secretariat.

➢ Behavioral Competency

Table 8: Training Calendar depicting various trainings for Behavioral Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Citizen Centricity	• Service Delivery Management	• 3.11 hours	• Online	• Indian Institute of Public Administration	• iGOT	• 1,2&3	• L2	• Q3 2023-24
Communication Skills	• iGOT: Module nos. 2,3,4,5,6,7,8,9,10 by Meghna Yadav for grammar, conversations, and official words • Workshop on Communication Skills by ISTM (Gr. A and Gr. B Officers)	• 10.15 hr • 1day	• Online • Classroom	• SVPNPA • Courses offered by IIM B and ISTM can be leveraged.	• iGOT • ISTM	• 1,2&3	• L2	• Q4 2023-24 • Q1 2024-25
Conflict Resolution	• Conflict Resolution and Negotiation	• 1.35 hr	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1&2	• L1	• Q4 2023-24
Critical Thinking	• iGOT course needs to be curated.	• 20 hrs	• Online	• An interactive module needs to be added on iGOT for critical thinking and	• iGOT • Free courses of Oxford home	• 1,2&3	• L2	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• Critical Thinking course on oxfordhomestudy.com • Thinking Critically course on alison.com • Some good reads: ➢ Thinking, Fast and Slow by Daniel Kahneman ➢ Think Again: The Power of Knowing What You Don't Know by Adam M. Grant	• 1.5 – 3 hrs • Self-paced	• Online • Online	the importance of the same. • Free courses available on oxfordhomestudy.com and alison.com • Some good reads have also been suggested	study Books			• Q4 2023-24
Decision Making	• Problem Solving and Decision Making	• 1:45 hours	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1,2&3	• L1	• Q4 2023-24
Empathy	• iGOT: Increasing Your Emotional	• 1 hr	• Online	• The Art of Living	• iGOT	• 1,2&3	• L1	• Q4 2023-

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Quotient by Art of Living							24
Ethical Behaviour	• iGOT: Ethics and Values by Aditya Pratap • Ethics and Values in Public Governance: Institute of Secretariat Training and Management (ISTM) • Ethics in Governance course at IIPA	• 50 min • NA • NA	• Online • Physical • Physical	• Appropriate coursework available on iGOT • ISTM training to be provided with Ethics and Value in Public Governance • IIPA provides a course on Ethics under its Advanced Professional Programme for Public Administration	• iGot • To be identified in consultation with ISTM • To be identified in consultation with IIPA	• 1,2&3	• L1	• Q4 2023-24 • Q1 2024-25 • Q2 2024-25
Gender Sensitivity	• Gender Sensitivity	• 00:50 hours	• Online	• Ministry of Power	• iGOT	• All Officials	• L1	• Q1 2024-25
Giving Feedback	• Feedback Survey Feature for CBPs on the iGOT platform	• 00:04:25	• Online	• iGOT	• iGOT • Books • IIPA	• 1&2	• L1	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• Suggested reads: Giving and Receiving Feedback – by Patti Hathaway • Consultation and Consensus Building course by IIPA	• Self-paced • NA	• Self-paced reading • Physical	• Self-paced reading • IIPA provides a course on consultation and consensus building in physical mode				• Q4 2023-24 • Q4 2023-24
Innovation	• IIT Delhi curating a course for iGOT Karmayogi • Innovative Thinking course by IIPA	• Self-paced • NA	• Online • Physical	• An interactive module is being developed by IIT Delhi for iGOT Karmayogi Platform • IIPA provides a course on Innovative Thinking in physical mode	• iGOT • IIPA	• 1,2&3	• L1&L3	• Q1 2024-25 • Q4 2024-25
Leadership	• Department of Personnel and Training DoPT • Karmayogi Prarambha Module: Self Leadership by iGOT	• 1 hr 35 min • 1 hr 16 min	• Online • Online	• Department of Personnel and Training DoPT • Appropriate coursework available on iGOT	• iGOT •ISTM •IIPA	1,2&3	L1&L3	• Q4 2023-24 • Q4 2023024

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• Self-Leadership • Workshop on Team Building and Leadership by ISTM • Leading Others course by IIPA	• 1hr 26 Min • NA • NA	• Online • Physical • Physical	• The Art of Living • Classroom training provided at ISTM • Classroom training provided at IIPA				• Q4 2023-24 • Q4 2023-24 • Q1 2024-25
Negotiation	• Department of Personnel and Training DoPT	• 01:35 Hrs	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1&2	• L1	• Q4 2023-24
Result Orientation	• Mod 1 and 2 of Causing Incredible Performance developed by Prof Balaji • Results Orientation course at IIPA	• 3 days • NA	• Physical • Physical	• Athulya Performance Facilitators • Classroom training provided at IIPA	• Athulya Performance Facilitators • IIPA	• 1,2&3	• L4	• Q4 2023-24 • Q1 2024-25

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Rule Consciousness	• Code of Conduct Rules for Scientists and Technologists. • Ethics and Values in Public Governance: Institute of Secretariat Training and Management (ISTM)	• 02:20:00 • 3days	• Online • Online	• Capacity Building Commission • ISTM course to be leveraged.	• Capacity Building Commission • ISTM	• 1,2&3	• L1&L4	• Q42023-24 • Q4 2023-24 • Q4 2023-24
Stakeholder Management	• Managing Personal Relationships. • Stakeholder Management course on alison.com	• 00:41 hours • 1.5-3 hrs	• Online • Online	• The Art of Living • Free course on Stakeholder Management at alison.com	• iGOT • Books	• 2&3	• L1	• Q4 2023-24
Stress Management	• Karmayogi Prarambha Module: iGOT Karmayogi • Stress Management module of COMMIT Program at iGOT • Stress Management: by DoPT at iGOT Karmayogi	• 2 hr 17 min • 1 hr 10 min • 1 hr 15 min	• Online • Online • Online	• Appropriate coursework available on iGOT Karmayogi Platform	• iGOT	• 1,2&3	• L1	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Time Management	• Department of Personnel and Training DoPT	• 01:15 Hrs	• Online	• Department of Personnel and Training DoPT	• iGOT	• 1,2&3	• L1	• Q4 2023-24

➢ Functional Competency

Table 9: Training Calendar depicting various trainings for Functional Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Emerging Technologies	• iGOT: Introduction to Emerging Technologies by Wadhwani Institute of Technology and Policy (WITP)	• 2 hr 30 min	• Online	• Module curated on iGOT by WITP to be leveraged.	• iGOT	• 1,2&3	• L1	• Q4 2023-24
Bookkeeping & Accounting	• iGOT: Govt Accounting System • iGOT: Finance and Accounts • iGOT: Accrual Accounting • Accural Accounting by ational Institute of Communication Finance	• 41 min • 41 min • 48 min • 48 min	• Online • Online • Online • Online	• Appropriate coursework available on IGoT • National Institute of Communication Finance	• iGoT	• 1&2	• L1	• Q4 2023-24 • Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Budgeting	• iGOT: Budgetary System in Government	• 45 min	• Online	• Defence Accounts Department (DAD)	• IGoT	• 1,2&3	• L1	• Q4 2023-24 • Q3 2023-24
Cabinet Note, EFC, or office order, Noting and Drafting	• Noting and Drafting: ISTM course	• 2 hrs	• Online	• Training to be conducted by ISTM	• ISTM	• 1,2&3	• L1	• Q4 2023-24
Data analytics	• iGOT: Data Analytics Module of Introduction to Emerging Technologies course curated by WITP • ISTM: Data Analytics Using MS Excel • ISTM: Big Data Analytics in Government – Basic • ISTM: Big Data Analytics in	• 25 min • 3 days • 3 days • 3 days	• Online • Online • Online • Online	• Module curated on iGOT by WITP to be leveraged. • Online courses provided by ISTM	• iGOT • ISTM • IIPA	• 1,2&3	• L1&L3	• Q4 2023-24 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Government – Advanced • IIPA: Data Analytics for Public Administrators	• NA	• Physical	• Course provided by IIPA				• Q1 2024-25
Records management	• ISTM: Advanced Course on Records Management	• 2 days	• Online	• Course provided by ISTM	• ISTM	• 1,2&3	• L3	• Q4 2023-24 • Q1 2024-25
E-office	• ISTM: Workshop on E-Office • iGOT: Office Procedure	• 2 days • 1 hr 15 min	• Online • Online	• Online course provided by ISTM • Appropriate course on iGOT	• ISTM • iGOT	• 1,2&3	• L3&L1	• Q1 2024-25 • Q4 2023-24 • Q3 2023-24
Establishment Rules & General Administration Matters of Government Departments	• ISTM: Establishment Rules • ISTM: Training Programme on	• NA • 3 days	• Physical • Online	• Physical classroom training at ISTM	• ISTM • iGOT	• 1,2&3	• L3& L2	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Establishment Rules under SCTP • iGOT: Level-III Training Programme to Develop Functional Competencies • iGOT: PARIMARJATA course	• 16 hr 40 min • 23 hr	• Online • Online	• Online training provided by ISTM • Online course on iGOT • Online course on iGOT				• Q3 2023-24 • Q4 2023-24
Financial Management	• Training Programme on Financial Management under SCTP • Workshop on Analysis of Financial Statements: MDP at ISTM • Course getting curated by CBC in iGOT Karmayogi	• 3 days • NA • TBC	• Classroom • Classroom • Online	• Physical classroom course at ISTM • Physical classroom course at ISTM • ICAI	• ISTM	• 1,2&3	• L3&L1	• Q3 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	on Financial Management							
Functioning of Bhavishya portal	• DoPPW organises frequent workshops on Bhavishya Portal. CBU may collaborate with DoPPW for obtaining the needful understanding	• NA	• Hybird	• CBU to collaborate with DoPPW for needful upskilling	• To be identified in consultation with the DoPPW	• 1,2&3	• L1	• Q4 2023-24
Fundamental Rules (FR)/Supplementary Rules (SR)	• Institute of Secretariat Training and Management • Department of Expenditure	• 00:50:00 • 03:54:00	• Online • Online	• Institute of Secretariat Training and Management • Department of Expenditure	• ISTM • Department of Expenditure	• 1,2&3	• L1	• Q4 2023-24
General Financial Rules, 2017 (GFR)	• iGOT Course: Public Procurement Framework of GOI • iGOT: Mode of Procurement (Service)	• 1 hr 55 min • 1 hr 40 min	• Online • Online	• Appropriate coursework available on iGOT	• ISTM • iGOT	• 2&3	• L1&L2	• Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• iGOT: Mode of Procurement (Product) • ISTM: Workshop on e-Procurement	• 3 hr 20 min • 2 days	• Online • Online	• Course provided by ISTM				• Q4 2023-24 • Q1 2024-25 • Q4 2023-24
HRMS Rules	• iGOT Course: Annual Performance Appraisal Report • ISTM: Competency Based HRM	• 30 min • 3 days	• Online • Online	• Online module on iGOT • Online course at ISTM	• iGOT • ISTM	• 1,2&3	• L1 & L4	• Q4 2023-24 • Q4 2023-24
MS office (Excel, PowerPoint, Word)	• Microsoft Courses (Word, PowerPoint, Excel: Beginner and Advanced) • MS Office Suite: by ISTM	• 21:30 hours • 1 week	• Online • Classroom	• Microsoft • Training also provided by ISTM on multiple MS	• iGoT • ISTM	• 1,2&3	• L2&L4	• Q4 2023-24 • Q4 2023-24 • Q4 2023-

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
				Office modules.				24 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24
NIC applications (email, messenger, Cloud Storage, and others)	• Trainings to be provided by NIC as and when required	• NA	• Online/Classroom	• Trainings to be provided by NIC as and when required	• NA	• 1,2&3	• NA	• NA
Parliamentary matters	• ISTM course: Handling Parliamentary Matters	• 2 days • 2 hr	• Online • Online	• ISTM course to be leveraged.	• ISTM • iGOT	• 1,2&3	• L3&L1	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• iGOT course: Parliamentary Procedures			• iGOT course available in online mode				• Q4 2023-24 • Q4 2023-24
Pay fixation	• iGOT Course curated by ISTM: Pay Fixation • ISTM course: Workshop on Pay Fixation	• 43 min • 3 days	• Online • Online	• Online course curated by ISTM on iGOT • ISTM workshop for 3 days	• ISTM • iGOT	• 1,2&3	• L3&L1	• Q4 2023-24 • Q1 2024-25 • Q1 2024-25 • Q1 2024-25
Procurement and Tender Writing	• Public Procurement Framework of GOI by Susheel Mamgain	• 01:55 hours	• Online	• Department of Expenditure	• iGOT	• 2&3	• L1	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Project Management	• Fundamentals of Program and Project Management • Workshop on Project Management by ISTM for Group A Officers (2 days)	• 17:15:00 • 2 days	• Online • Online	• Quality Council of India • ISTM	• QCI • ISTM	• 1,2&3	• L1&L3	• Q4 2023-24 • Q1 2024-25
Public Financial Management System (PFMS)	• Orientation Training Programme on PFMS by ISTM (Up to Gr. B Officers – 2 days)	• 2 days	• Classroom	• Classroom trainings to be provided by ISTM.	• ISTM	• 1,2&3	• L3	• Q3 2023-24 • Q4 2023-24
Policy formulation	• Basics of Public Policy Research • Evidence in Public Policy • Post Graduate Diploma Programme in Public Policy and Management by MDI	• 02:48:28 • 04:48:14 • 00:15:00 • 00:15:00	• Online • Online • Online • Online	• NACIN National Academy of Customs Indirect Taxes and Narcotics • Indian School of Business • Department of Personnel and Training DoPT	• NACIN • DoPT • ISB • IIPA	• 1,2&3	L1&L2	• Q3 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• Post Graduate Diploma Programme in Public Policy and Management IIM B • Public Policy and the VUCA World	• 02:07:01	• Online	• Department of Personnel and Training DoPT • Indian Institute of Public Administration				
Power BI	• Course provided by Grant Thornton Bharat LLP • Course to be curated by ISTM	• 30 hr	• Online	• Online course offered by Grant Thornton Bharat LLP based on case-studies	• GT	• 1,2&3	• L3	• Q4 2023-24
Report writing	• iGOT course by IIPA: Introduction to the Report Writing	• 5 min	• Online	• Course curated by IIPA	• IIPA	• 1,2&3	• L1	• Q4 2023-24
RTI Act, 2005	• Landmark Judgments- RTI Act, 2005 • Right to Information - Public Information	• 01:10 hrs • 3 days	• Online • Online	• Online training by ISTM • Online training by ISTM	• ISTM	• 1,2&3	• L1&L3	• Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Officers by ISTM (3 days) • Record Management - Right to Information by ISTM (3 days) • Right to Information - Appellate Authority by ISTM (2 days) • Seminar on Right to Information by ISTM (1 day)	• 3 days • 2 days • 1 day	• Online • Online • Online	• Online training by ISTM • Online training by ISTM • Online training by ISTM				• Q4 2023-24 • Q1 2024-25 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24 • Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Taxation – Direct and Indirect	• ISTM course: Workshop on Income Tax • iGOT: GST Applicability on Government Related Activities • iGOT: A Course on TDS Under GST Act • More detailed course to be curated in collaboration with iGOT and AJNIFM	• 2 days • 41 min • 55 min • NA	• Online • Online • Online • Online	• ISTM workshop to be leveraged. • iGOT courses available	• ISTM • iGOT	• 1,2&3	• L3&L1	• Q1 2024-25 • Q4 2023-24 • Q4 2023-24 • Q3 2023-24 • Q4 2023-24
Understanding of climate change	• ADB Free online course: Climate Change and Sovereign Risk • ADB Free online course: Green Investments:	• 40 min • 40 min	• Online	• Free courses from multiple resources – ADB, and UNCC	• ADB	• 1,2&3	• L1	• Q4 2023-24 • Q4 2023-24 • Q3 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Renewable Energy • ADB Free online course: Energy Economics, Environment, and Policy • UN CC Learn free online course: Climate Change: From Learning to Action (uncclearn.org)	• 70 min • 30 min						• Q3 2023-24
Understanding of procedures for foreign visits	• Course to be curated in collaboration with iGOT and CBC and/or MEA	• NA	• Online	• Course to be curated by iGOT	• CBC and MEA	• 1,2&3	• L1	• Q1 2024-25
Understanding of Treasury Single Accounting System (TSA), Single Nodal Agency (SNA), Central Nodal Agency (CNA)	• Course to be curated by iGOT in collaboration with Department of Expenditure, Ministry of Finance	• NA	• Online	• Course to be curated by Igot	• iGOT	• 1,2&3	• L1	• Q1 2024-25

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Vigilance	• Administrative Vigilance: Disciplinary Procedure at ISTM • Administrative Vigilance: Disciplinary Procedure at IFS, Gurgaon • Administrative Vigilance: Role of IP / PO at ISTM • Vigilance Angle • Vigilance Clearance	• NA • 3 days • NA • 09:04 • 12:10	• Classroom • Classroom • Online • Online	• ISTM module available for Administrative Vigilance • IFS Gurgaon Administrative Vigilance Module • Defence Headquarters Training Institute (DHTI) • Defence Headquarters Training Institute (DHTI)	• IFS • ISTM • Defence Headquarters Training Institute (DHTI)	• 1,2&3	• L3&L1	• Q4 2023-24 • Q3 2023-24 • Q4 2023-24

➢ Domain Competency

Table 10: Training Calendar depicting various trainings for Domain Competency

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Automation in storage and distribution	• FCI's Digital Learning Module on Storage and Distribution of food grains	• 40 min	• Online	• FCI is preparing a digital module on storage and distribution of food grains. The same can be used for the officials of DARE by collaborating with IFS, Gurgaon.	• IFS	• 1,2&3	• L1	• Q4 2023-24
Agricultural Research Management	• Digital Course on Agricultural Research Project Management	• Self-Paced	• Online	• A digital course on Research Project Management is available on NAARM's Virtual Learning Centre. The course is self-paced and free of cost.	• NAARM	• 1,2&3	• L1	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Basic troubleshooting of lab equipment	• Workshop on troubleshooting of lab equipment at individual institutes	• As decided with OEM / OES	• Physical	• CBU to collaborate with various OEM / OES to curate courses specific to minor troubleshooting for all the Scientists	• NAARM, or other institutes or units under ICAR	• 1,2&3	• L1	• Q3 2023-24
Crop Protection	• Training at the Directorate of Plant Protection, Quarantine and Storage	• 2 days	• Physical	• CBU to collaborate with the Directorate of Plant Protection, Quarantine and Storage and curate a course on crop protection	• Directorate of Plant Protection, Quarantine and Storage	• 1,2&3	• L3	• As per the discussion with the Directorate of Plant Protection, Quarantine & Storage
Fisheries management – global best practices, prevention from overfishing	• National / Global conclave for Best Practices in Fisheries Management and Prevention of Overfishing	• 2 days	• Hybird	• CBU to collaborate with international bodies and foreign institutions from better performing countries in Fisheries Sector	• NAARM, or other institutes or units under ICAR	• 1,2&3	• L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
				and organise a National / Global level conclave for Best Practices in Fisheries Management and Prevention of Overfishing				
Food processing technologies	• Course by Institute of Good Manufacturing Practices India, registered under GoI	• 2-3 days	• Physical	• CBU to collaborate with the Institute of Good Manufacturing Practices India (www.igmpiindia.org) to curate a 2-3 days' course on food processing technologies	• Institute of Good Manufacturing Practices India (http://www.igmpiindia.org/)	• 1,2&3	• L3	• As decided by the CBU
Food safety and quality assurance	• Course by Institute of Good Manufacturing Practices India, registered under GoI	• 2-3 days	• Physical	• CBU to collaborate with the Institute of Good Manufacturing Practices India (www.igmpiindia.org) to curate a 2-3 days' course on food processing technologies	• Institute of Good Manufacturing Practices India (www.igmpiindia.org)	1,2&3	L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Post-harvest Engineering	• Immersion Visits at NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam to understand the level of automation in fields in North, South, Central and North-Eastern Parts of India	• 2-3 day (each visit)	• Physical	• CBU to collaborate with the institutes - NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam to prepare the schedule for the visits	• NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam	• 1,2&3	• L3	• As decided by the CBU
Seed Production	• Quality Seed Production of Vegetables • Training at National Seed Research and Training Centre, Varanasi	• 5 days • 2-3 days	• Physical • Physical	• Training at NSTRC, Varanasi • CBU to collaborate with the NSRTC, Varanasi to curate a training module for officers of Horticulture Sciences Division of DARE	• NSTRC, Varanasi	• 1,2&3	• L3&L4	• Q3 2023-24 • As decided by the CBU
Storage of Pulses, Cereals, and Millets	• CBU to collaborate with International Institutions, Foreign Universities (University of	• 2-3 day	• Physical	• CBU to collaborate with International Institutions, Foreign	• CBU to collaborate with International Institutions, Foreign Universities (University of Manitoba), SAUs,	• 1,2&3	• L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	Manitoba), SAUs, CAUs, and ICAR Institutes to organise a National / Global Conclave on Best Practices in Storage of Pulses, Cereals, and Millets			Universities (University of Manitoba), SAUs, CAUs, and ICAR Institutes to organise a National / Global Conclave on Best Practices in Storage of Pulses, Cereals, and Millets	CAUs, and ICAR Institutes to organise a National / Global Conclave on Best Practices in Storage of Pulses, Cereals, and Millets			
Traceability through RFID tags	• Workshop with Department of Telecommunications and Industry Players to understand and brainstorm on usage of RFID tags for enhancing traceability in agriculture sector	• 2 days	• Physical	• CBU to collaborate with the Department of Telecommunications and Industry players to organise a national conclave to understand and brainstorm on various ways in which RFID Tags can be used to enhance traceability in the Agriculture Sector for farm to market / end-user traceability	• CBU to collaborate with the Department of Telecommunications and Industry players to organise a national conclave to understand and brainstorm on various ways in which RFID Tags can be used to enhance traceability in the Agriculture Sector for farm to market / end-user traceability purposes. The conclave may pave a path for needful policy formulation / amendments.	• 1,2&3	• L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
				purposes. The conclave may pave a path for needful policy formulation / amendments.				
Understanding of farm mechanization	• Immersion Visits at NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam to understand the level of automation in fields in North, South, Central and North-Eastern Parts of India	• 2-3 day (each visit)	• Physical	• CBU to collaborate with the institutes - NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam to prepare the schedule for the visits. The Visits may help understand the extent of mechanization in agriculture in various parts of India as FMTTIs are citizen facing institutions responsible for farm mechanization and automation.	• CBU to collaborate with the institutes - NRFMTTI, Hissar; CMFTTI, Budni; SRFMTTI, Anantpur, AP; and NERFMTTI, Biswanat, Assam to prepare the schedule for the visits. The Visits may help understand the extent of mechanization in agriculture in various parts of India as FMTTIs are citizen facing institutions responsible for farm mechanization and automation.	• 1,2&3	• L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
Understanding of global best practices of IPR and technology management	• MDP on Intellectual Property Valuation and Technology Management (In-Person Mode)	• 5 days	• Physical	• In-person 5-days course at NAARM, Hyderabad	• NAARM	• 1,2&3	• L3	• Q4 2023-24
Understanding of post-harvest management of the commodities related to horticultural produce	• Post Harvest Management of Horticulture Crops – e-course on e-Krishi Siksha Portal at ecourseonline.iasri.res.in	• Self-Paced	• Online	• Digital learning module on e-Krishi Siksha portal.	• e-Krishi Siksha portal.	• 1,2&3	• Self-Paced	• Q3 2023-24
Understanding of IPR policies, copyrights and trademarks	• Training at Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM) Nagpur, a Central Government Institute under the Ministry of Commerce & Industry	• 1 day • 5 days	• Physical	• Classroom training on IPR policies, copyrights, trademarks, and various procedures for technology transfer.	• Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM) Nagpu • NAARM	• 1,2&3	• L3&L4	• Q4 2023-24 • Q1 2024-25

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
	• MDP on Intellectual Property Valuation and Technology Management (In-Person Mode)			• In-person 5 days course at NAARM, Hyderabad				
Market Analysis	• Market Research and Analysis course on Swayam Portal – Curated by Department of Management Studies at IIT Roorkee	• 8 weeks	• Online	• Online course on Swayam Portal – developed by the Department of Management Studies at IIT Roorkee.	• Online course on Swayam Portal – developed by the Department of Management Studies at IIT Roorkee.	• 1,2&3	• L4	• Q4 2023-24
Logistics & storage	• Digital module curated by FCI on Procurement, Storage and Distribution of Food Grains	• 40 min	• Online	• IFS, Gurgaon – internal training institute of the FCI has curated a digital learning module on transportation, storage and procurement of food grains. The CBU may collaborate with IFS, Gurgaon to benefit from the course	• IFS	• 1,2&3	• L1	• Q42023-24
Data Collection	• YouTube videos on use of Google Forms,	• 45 min	• Online	• Short videos on creation of google	• YouTube	• 1,2&3	• L1&L4	• Q4 2023-24

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
and Analysis Techniques	Google Sheets, Microsoft Forms, for creation of digital - dynamic data collation tools • Training Programme on Analysis of Experimental Data using R (Online Mode)	• 5 days	• Physical	forms, google sheets, Microsoft forms for dynamic data collation – to bring in uniformity in data collected from multiple sources (States, ICAR institutes, etc.) • Online course on Analysis of Experimental Data Using R	• Online course on Analysis of Experimental Data Using R			• Q1 2024-25
Automation and robotics	• Conclaves / Expo to be organised in collaboration with various private sector firms and startups to understand the nuances of automation and robotics in agriculture	• 1 day	• Physical	• CBU to organise a brainstorming session to identify the participants of the conclave / workshop / Expo	• CBU to organise a brainstorming session to identify the participants of the conclave / workshop / Expo	• 1,2&3	• L3	• As decided by the CBU
New Research Methodologies	• Course to be curated by NAARM or or other institutes or units under ICAR	• 3 days	• Hybird	• Course to be curated by NAARM, Hyderabad or other institutes or units under ICAR	• NAARM or other institutes or units under ICAR	• 1,2&3	• L3	• As decided by the CBU

Competency Addressed	Name of Course / Training / Module/Intervention	Duration (Hours/Days)	Mode of delivery	Training Institute/ Partner Organization	Platform/Location	Target Group of Participants/ Designation	Level of Course	Timeline
				in consultation with the CBU				
Public Private Partnership	• Public Privare Partnerships (PPP) for Infrastructure Projects • Workshop on Public Private Partnership: Institute of Secretariat Training and Management (ISTM) (Group A Officers)	• 02:24:00 • 2 days	• Online • Online	• Indian Institute of Public Administration • Online course for 2 days with ISTM faculty	• Indian Institute of Public Administration • ISTM	• 1,2&3	• L1&L3	• Q4 2023-24 • Q1 2024-25

7. ACBP Standardized Templates

7.1. Responsibility Allocation

The responsibility allocation matrix mentioned below serves as a guideline for the CBU to effectively and efficiently implement the ACBP plan. This ACBP is prepared for the officers of DARE/ICAR HQ, Krishi Bhawan, Krishi and Anusadhan Bhawan 1&2. The online courses mentioned in the calendar may be executed by discretion of the CBU and HRM unit in consultation with SMDs.

Table 11: Responsibility Allocation Matrix

#	Activities	Responsibility of	Reporting and Accountable to	In Consultation of	Approval by	Informed to
1	Organisational Interventions	CBU head	Nodal Officer*	CBU/Senior Leadership DDG, ADGs and Director	Hon'ble Secretary	CBC
2	Institutional Interventions	CBU head	Nodal Officer*	CBU/Senior Leadership DDG, ADGs and Director	Hon'ble Secretary	CBC
3	Divisional Trainings	CBU head	Nodal Officer*	Divisional Head	Hon'ble Secretary	CBC

* The Organizational Head will entrust the responsibility to the CBU Head to choose members based on their judgment and will appoint an appropriate Nodal officer.

7.2. Monitoring and Evaluation Matrix

The CBU will assess the performance of all trainings based on the matrix provided below. An indicative entry has also been included for future reference, allowing for evaluation and comparison. This matrix serves as a tool to gauge the effectiveness and efficiency of the training.

Table 12: Monitoring and Evaluation Matrix

#	Date of Entry	Intervention/ Course Name	Institute Name / Partner Organization	Recommended Participation (As per ACBP)	No. of Estimated Participants (Target)	No. of Actual Participants	Source of Data (eg: attendance sheet, IGOT records, etc.)	Start date	End date	KPI Completed (Y/N)	General feedback for the course
1	26-May-23	Office Procedure	IGOT	Cluster 1,2, &3*	DDG, ADG, Director, Principal Scientists, Under DS, US, Assistant Director, SO, ASO etc.	ADG, Director	IGOT Records	1-April-23	26-May-23	Yes	The course included cover all the aspects of Office procedure

*The key for various clusters has been discussed in section 5.4 of this ACBP and can be referred from the said section.

Annexure – Kick off Meeting with Minister

Meeting Minutes

Annual Capacity Building Plans Kick Off Meeting with Department of Agricultural Research and Education

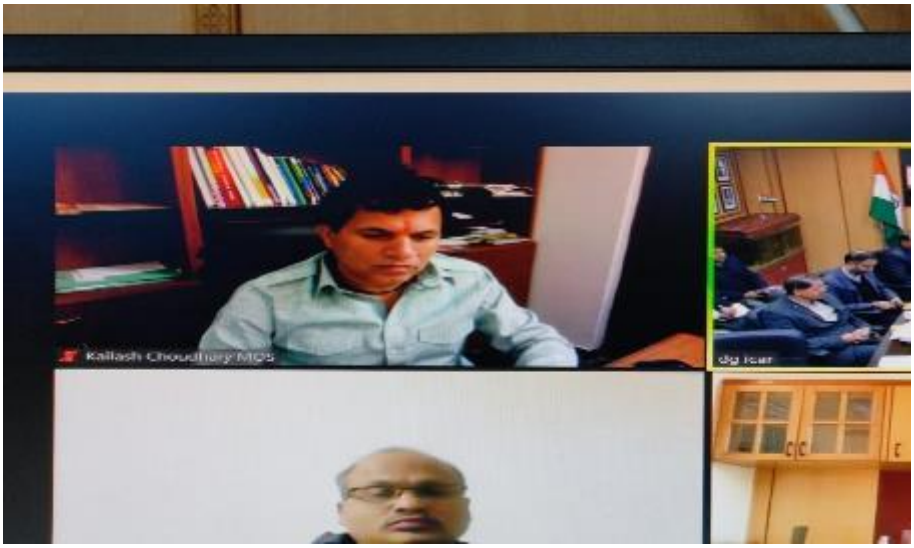
1. Kick off meeting for Department of Agricultural Research and Education along with Indian Council of Agricultural Research was held on 18th January ,2023 at IST 3:00pm. The meeting was participated by:
    a. Sh. Kailash Choudhry, Hon'ble Minister of State for Agriculture and Farmers Welfare.
    b. Sh. Himanshu Pathak, Secretary DARE & DG, ICAR
    c. Ms. Alka Nangia Arora, Addl. Secretary DARE & FA, ICAR
    d. Dr. RC Agrawal, DDG (Agri Edn), ICAR
    e. Sh. Sanjay Garg, Addl. Secretary DARE and Secretary ICAR
    f. Sh. Rajeev Lal, Joint Secretary (Admin), ICAR
    g. Dr. Ch Srinivasa Rao, Director, ICAR-NAARM & Chairperson, Capacity Building Unit for DARE/ICAR
    h. Dr. G Venkateshwarlu, Joint Director, ICAR-NAARM & Member, Capacity Building Unit for DARE/ICAR.
    i. Sh.Hemang Jani, Secretary CBC
    j. Consultants from CBC
    k. Consultants from Grant Thornton.
2. The meeting was started by the introductory and welcoming comments from the Dr. Ch Srinivasa Rao.
3. Sh. Hemang Jani shared the objectives of Mission Karmayogi, CBC, and its approach to creation of Annual Capacity Building Plans. The focus is to enhance competencies of individual and evolve a harmonious understanding of DARE and ICAR key priorities, functions, and challenges.
    a. The exercise will identify goals of DARE via three lenses of (i) national priorities (ii) emerging technologies and (iii) citizen centricity.
    b. Competency needs are identified through a self-assessment exercise called Competency Needs Analysis (CNA)
    c. Post the CNA exercise, training and non-training capacity building interventions are identified.

4. The 8 pillars of Accreditation Framework launched by CBC for all training institutes may be applied to institutions like The National Academy of Agricultural Research Management (NAARM) which was established by ICAR. The framework captures various important elements such as, training needs analysis, impact assessment of trainings, and faculty development.
5. It was communicated that ICAR have 113 research institutes which includes 4 deemed universities.
    - 63 SAU
    - 3 CAU
    - 11 ATARI's
    - 732 KVK's
6. It was further told that by Dr. G Venkateshwarlu that NAARM serves as a think tank for HR management in Agriculture and hosts various training in summer school and winter school.
7. NAARM follows their own Annual Capacity Building Plan and launch various training and immersion programs for their staffs and employees across various levels.
8. Mr Hemang Jani suggested to employees of DARE and map few training institutes of ICAR in order to study competency gaps.
9. The honorable Minister also appreciated the efforts made by the Capacity Building Commission under Mission Karamyogi and communicated the benefits of the same to the whole agricultural sector of the country.

Key action points:

a. An interface of producer organization with Agri startups can be created.
b. Visioning exercise and focused group to be scheduled between CBC team and DARE/ICAR in coming weeks.
c. Department to initiate the accreditation of NAARM as per the national accreditation.
d. Capacity building plans to be linked with Sustainable Development Goals.
e. Consultant to share questionnaire to CBU.

Snapshots of the meeting



Annexure – Minutes of Meeting of FGDs with various SMDs

Minutes of the meeting with Additional Secretary, DARE

Meeting Date & Time	:	7th March 2023
Meeting attendees	:	Mrs. Alka N Arora, Additional Secretary – DARE
		Mr. G P Sharma, JS – Finance
		Mr. Chirag Jain, Partner – GT
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary
- CNA form was released on 24th Feb and that over 350 responses had been received, so far.
- AS, DARE told the consultants that in order to conclude the process within the timeline, Finance, Technical and Scientific officers need to be included in the meetings. Mr. G P Sharma, JS – Finance to function as the SPoC for Finance Division, Mr. Rajeev Lal, JS – Admin. to function as the SPoC for Administration Division and Dr N K Jain and Prof S K Sharma to function as the SPoCs for Scientists.
- JS, Finance told the consultants that the meeting schedule will be communicated post 18th March as the Division was busy an upcoming event. The meeting would be in the form of a FGD in which officers may be present in hybrid mode.

Minutes of the meeting with DDG, Fisheries

Meeting Date & Time	:	9th March 2023
Meeting attendees	:	Dr J K Jena, DDG, Fisheries
		Dr Mohanty, ADG, Fisheries
		Dr Yasmeen, ADG, Fisheries
		Dr Prem Kumar, Principal Scientist
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- DDG, Fisheries gave an overview of the Division's functions, roles and responsibilities. The Division oversees the functioning of 8 Fish Research Institutes; CMFRIs, CIFRI, etc.. The Division also oversees Research Management in terms of priority fixation as per GoI's directives and focus.
- DDG, Fisheries highlighted the following capacity gaps:
  - Task Prioritization
  - Stress Management
  - Strategic Planning
  - Time Management
  - Priority Setting
  - Advanced applications of MS Office tools including PowerPoint, Excel, Word
  - Power BI
  - Fast typing for young officers especially SOs and Under Secretary (as people spend a lot of time in typing slowly)
  - The officers should be given exposure to upcoming technology and the initiatives being taken up by other countries through visits / immersion programs at international level. For example, recently Ecuador surpassed India in exporting Shrimps; the Scientists would want to know what is being done differently at such places.
  - Senior officers of the Division should undergo training on Human Capital Management
  - The Scientists should become aware of basic troubleshooting with regards to the equipment being used by them at labs
  - A workshop should be conducted to discuss the PPP model projects in simple and easy to understand language. A handbook may also be prepared for the same to give an overview of the guidelines of the PPP projects as the Department is considering PPP model-based contract research.

Minutes of the meeting with DDG, Agricultural Engineering

Meeting Date & Time	:	9th March 2023
Meeting attendees	:	Dr S N Jha, DDG, Agricultural Engineering
		Dr Panna Lal Singh, Principal Scientist
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview of the ACBP exercise, and the steps involved in capacity needs assessment.
- DDG, AE gave a brief overview of the Division's roles, responsibilities, and functions, which include initiatives related to farm mechanisation, automation, robotics, post-harvest processing, automation in storage/distribution, testing machines manufactured by OEMs / industry partners, and standard formulation. The Division works on research, demonstration, and implementation of research outcomes through training and capacity building.
- Behavioural level capacity gaps include training on:
    - Team Building
    - People Management
    - Leadership
    - Motivation
    - Stress Management
    - Stakeholder Management
    - Mental and physical well-being
    - Time Management – Task Prioritization
    - Dealing with mental fatigue
    - Exposure visits to universities / institutes to understand upcoming trends in automation, robotics, and AI/ML technologies.
    - Exposure visits to understand ground level situation of storage of cereals, pulses, and millets
    - Training on – "Assigning the right job to the right person at the right time"
    - Institutional mechanism for mass implementation of new research initiatives
    - Visit to the University of Manitoba to understand the technology used in Millet Storage
    - Applications related to traceability through utilization of RFID tags
    - Young professionals should be sent to ISTM for training on service-related matters
    - Refresher courses on:
        - E-office
        - Advanced MS Office applications

Minutes of the meeting with Project Director, DKMA

Meeting Date & Time	:	9th March 2023
Meeting attendees	:	Dr S K Malhotra, Project Director – DKMA
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- Dr S K Malhotra highlighted the following capacity building requirements:
    - **Mass Communication**
    - **Exposure to Social Media Management**
    - **Editorial Skills**
    - **Managing editing in multiple languages**
    - **Advancements in Printing Technology**
- Apart from the above-mentioned requirements, Dr S K Malhotra also highlighted that refresher courses for **noting and drafting, administrative rules, government procedures, and use of MS Office tools** should also be provided to the staff.
- The Staff includes 1 Deputy Secretary, 2 Under Secretaries, 6 Senior Technical Officers and 2 Young Professionals (consultants)
- A few training programs focusing on **increasing efficiency at workplace** and **motivation** were also highlighted.

Minutes of the meeting with DDG, Animal Science

Meeting Date & Time	:	9th March 2023
Meeting attendees	:	Dr B N Tripathi, DDG, Animal Science
		Dr Pramod Raut, ADG, Animal Science
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- ADG, Animal Science highlighted the following capacity building requirements:
    - **Goal fixing with respect to national priorities and SDGs both – output and outcome based.**
    - **Policy Formulation**
    - **Applications of AI and ML**
    - **Climate Change impact across India**
    - **Stress Management**
    - **Mental and physical wellbeing at workplace**
    - **Productivity Enhancement – increasing productivity of employees at workplace**
    - **Time Management**
    - **Team Management**
    - **Leadership Skills**
    - **Decision Making and Critical Thinking**
    - **Data Analytics – for young officers**
- Apart from the above requirements, following requirements were also highlighted:
    - **Immersion Program for Junior Staff** to make them able to appreciate what they manage on a day-to-day basis. For instance, few officers oversee affairs related to various institutions, however, they have never visited the institutions and do not have a good understanding of what do the institutes do.

Minutes of the meeting with ADG, Intellectual Property and Technology Management

Meeting Date & Time	:	10th March 2023
Meeting attendees	:	Dr Neeru Bhooshan, ADG, IP&TM
		Dr Shiv Dutt, IP&TM
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- ADG, IP&TM apprised that the Division regularly carries out internal workshops on regulatory frameworks and IP laws and their amendments for knowledge updation of staff.
- The Division carries out following activities:
    - Technology Validation
    - Technology Refining
    - Providing GTM strategy and support to entrepreneurs
    - Providing guidance on financial matters
- ADG, IP&TM highlighted the below mentioned capacity building requirements:
    - **Internal Engineering course of Art of Living** – for ensuring physical and mental wellbeing at workplace.
    - **Stress Management**
    - **Time Management**
    - Exposure to **IPR and Technology Management – Global Best Practices:** for benchmarking purpose, through visits to foreign countries

Minutes of the meeting with DDG, Horticulture Science

Meeting Date & Time	:	14th March 2023
Meeting attendees	:	Dr A K Singh, DDG, Horticulture Science
		Dr Patel, ADG, Horticulture – Fruits & Plantations
		Director Horticulture – Admin
		Mr. Sanjeev Kumar, US
		Mr. Rajeev Kumar, Assistant Chief Technical Officer
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- DDG, Horticulture Science apprised that the Division oversees matters related to Perennial and Annual fruits, plantations, coconut, cashew nut, arecanut, vegetables, flowers, medicinal plants, and spices. The Divisions also oversees functioning of 23 institutions – pan India and 800-900 scientists working in these institutions.
- DDG, Horticulture Science informed that:
  - **focus has largely been on increasing yield and not on processing of the produce.**
  - There is a **lack of backend integration with various ministries.**
  - There is need for Capacity building on **PPP-Based / Contract Research**
  - Scope for **engagements with National Rural Livelihood Mission** may be explored.
  - **AGRINNOVATE: commercial arm of ICAR can help in exploring engagements with MORD, DAY-NRLM or SRLMs**
  - Main **trainings required on application of AI, ML, Digital Agriculture, Data Driven Agriculture**
  - **There is a requirement of focusing on value added activities on agriculture. Value added activities include production of quality seeds and plantation material – which not only help in increasing the production but also give farmers additional income through sale of both the agricultural produce and the seeds / plantation material.** This may also lead to reduction in agri-input costs.

Minutes of the meeting with DDG, Agricultural Education

Meeting Date & Time	:	14th March 2023
Meeting attendees	:	Dr RC Aggarwal, DDG, Agricultural Education
		Prof SK Sharma, ADG, HRM Unit
		Dr NK Jain Principal Scientist
		And many other officials from the division
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview of the ACBP exercise, and the steps involved in capacity needs assessment. The consultants also requested DDG, Horticulture Sciences to provide a convenient time slot for holding focused group discussion for the Division.
- DDG, Agricultural Education and his team of officials discussed the following points:
    - NAHEP's recipients consist of 74 institutions that constitute the ICAR-AU System. This system encompasses 63 State Agricultural Universities, 4 Deemed Universities, 4 Central Universities with Agricultural Faculties, and 3 Central Agricultural Universities.
    - The division is overseen by the Deputy Director General and comprises three sections: Education Planning and Home Science (EP&HS), Human Resources Development (HRD), and Education Quality Assurance and Reforms (EQA&R). Each of these sections is led by an Assistant Director General (ADG).
    - The development of the scientific community's capacity has already been established.
    - They also support students in form of grants, fellowship etc.
    - They engage in capacity building at various levels, spanning from students to the secretary.
    - There are 16 COE across country.
    - HRD unit take up training of both students and scientists whereas HRM unit only take up training for scientific staff.
    - Funding poses a significant obstacle to establishing an exponential learning unit.
    - The institution's accreditation system needs to be expedited.
    - There are 550 vocational courses.
    - The World Bank has also collaborated with NAHEP.
    - Funds are required for human resource purposes.

Minutes of the meeting with DDG, Agricultural Extension

Meeting Date & Time	:	14th March 2023
Meeting attendees	:	Dr Udham Singh Gautam, DDG Agricultural Extension
		Dr Keshav Kumar, Principal Scientist
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- DDG, A.E. discussed the following points:
    - Agricultural Extension Division plays an important role in empowering the Rural Youth, School Dropouts, and women farmers.
    - The Division also provides support in providing guidance related to Financial Assistance
    - KVKs play a major role in Agricultural Extension and come under the Administrative Control of State Agricultural Universities, ICAR, and NGOs or various other autonomous institutions such as NDRI.
    - The Division plays important role in information broadcasting; informing farmers about latest more productive varieties or seeds; new tools and implements; capacity building of farmers, rural youth, women farmers, etc.
- Post the discussion with DDG Agricultural Extension, Dr Keshav guided the consultants to visit KVKs to assess the capacity building requirements on field.
- Contact details of various ATARIs and KVKs were shared with the consultants.

Minutes of the meeting with Head, KVK – Meerut

Meeting Date & Time	:	22nd March 2023
Meeting attendees	:	Dr Omveer Singh, Head – KVK, Meerut
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary. Further, various details related to discussion with the DDG, Agricultural Extension were also shared with the Head, KVK.
- Head, KVK highlighted the following points:
    - 100% funding of KVK, Meerut comes from ICAR. The administrative control of KVK, Meerut is with Agricultural University.
    - The Vice Chancellor of the State Agricultural University approves the recruitment related work.
    - The Staff of KVK, Meerut including 6 Subject Matter Specialists (SMSs), 1 Technical Staff person, 3 Technical Assistants, 1 Computer Operator, 1 Field Expert and Support Staff including – 1 Driver, 1 Stenographer, 1 Office Superintendent and 1 Class 4th employee are on the payroll of the Agricultural University.
    - The mandate of the KVKs includes
        - Technology Assessment
        - Demonstration
        - Popularization
    - Popularization of various initiatives is carried out through:
        - Field Trials or farm trials: for new varieties; feedback is then given to the R&D team
        - On campus and off-campus (at various public places) training programs
        - Engaging Rural Youth / School Dropouts for various income generating sources identified through new research initiatives.
    - Training programs for: farmers, women farmers, rural youth/school dropouts, and Extension Functionaries are organised by the KVK Staff
    - KVK, Meerut must organise at least 12 Trials and 100 Demonstration Programs for successful trials in a year.
    - On an average, 5000-6000 farmers are trained by the KVK in a year.
    - Farm Advisory services of the KVK include:
        - Disease Control
        - Technology Promotion; through WhatSapp, Youtube Channel, Newspapers, Paphlets, Mobile Applications, etc.
    - **Use of Kisaan Saarthi mobile application is not much popular as through this Application farmers can place direct calls on various SMSs**. The SMSs usually remain busy with the day-to-day work because of which SMSs find difficulty in responding to the calls. More often than not, the calls arrive at odd hours, further creating hassles in effective service delivery.

- It was also highlighted that the day-to-day reporting work has increased significantly due to which reporting and online update work has increased significantly, thereby leaving the SMSs completely occupied with the work and leaving very less space for works related to Kisaan Saarthi.
- Head, KVK agreed that **internship opportunities can be created at KVKs, wherein students from the Agricultural University can gain direct exposure** to the problems facing the farmers and the students can act as Solution Experts for the farmers**. Such intervention can cater to two problems simultaneously, (i) the problem of shortage of staff; and (ii) generating a talent pool for Agricultural Subject Matter Specialists.**
- **Few SMSs lack domain knowledge and need required domain specific trainings for daily activities of the KVK.**
- Training, right after recruitment, is given to new SMSs at Agricultural Universities and ATARI. Such training focuses on communication and teaching methodology.
- **Training modules for each area of expertise should be developed with the help of various KVKs having expertise in particular domain**. For instance, KVKs at Lucknow might help in developing training modules related to Sugarcane. These training modules should be made accessible to all the SMSs of various KVKs for their knowledge upgradation as farmers tend to ask questions from diverse domains to any specialist available in front of them.
- Farmers do not use smartphones for taking benefit of applications such as – mKisaan, Kisaan Saarthi, IFFCO Kisaan, etc. **Initiatives should be taken up for enhancing the popularization of such applications.**
- **Major problem areas for farmers appear in post-harvest activities** as concrete value chains have not been developed for post-harvest activities.
- **Farmers should be made aware of post-harvest activities, marketing, packaging, etc. and institutional mechanism should be developed to provide farmers the right platform to access the market.**
- **Regular Domain specific Capacity Building of KVK SMSs should be taken up, especially in the field of new technological advancements such as Drone Application, natural farming, etc.** Such training programs should be facilitated at KVKs having the required expertise in various domains.
- As the reporting work has increased significantly, the quality of reports should also be improved. In this regard, **training programs should be made available for effective reporting/drafting**
- There are **no specific touch points between KVKs and NRLMs/SRLMs**. Linkage between KVKs and MoRD – NRLMs and SRLMs would help in livelihood generation and development of value chains useful for farmers.
- **Intra-State KVKs connect with each other for various matters related to trainings/demonstrations, etc. However, Inter-State KVKs do not interact with one another**.

Minutes of the meeting with Head, KVK – Karnal

Meeting Date & Time	:	23rd March 2023
Meeting attendees	:	Dr Ramesh Chandra – Senior Scientist (I/C KVK Karnal)
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary. Further, various details related to discussion with the DDG, Agricultural Extension were also shared with the Head, KVK.
- In-Charge KVK highlighted the following points:
    - 100% funding of KVK, Karnal comes from ICAR. The administrative control of KVK, Karnal is with National Dairy Research Institute (NDRI), Karnal.
    - The Director, NDRI approves the recruitment related work.
    - The Staff of KVK, Karnal including 4 Subject Matter Specialists (SMSs), 9 Technical Staff persons, 1 Administrative Staff, and 3 Support Staff are on the payroll of NDRI, Karnal.
    - **The KVK, Karnal Staff is not permanent, and SMSs are arranged from NDRI, Karnal on need basis.**
    - The activities of the KVK includes demonstrations and applications of the following:
        - Technology Assessment
        - Yield Assessment
        - Vermicompost
        - Honeybee
        - Plat pathology
        - Demonstration
        - Popularization, etc.
    - The Annual Action Plan for the KVK is developed for a Calendar year and is approved by the Director, NDRI along with State Representatives. The works as per the Annual Action Plan are reviewed from time-to-time during the year.
    - Local farmers reach out to the institute for various training needs and training programs are developed according to the inputs received from the farmers when at least 30 farmers are available for a given training program.
    - **The current staff of the KVK is overburdened due to shortage of SMSs** and the situation has been the same for a long time.
    - <u>One benefit of the proximity between the KVK and NDRI is that new research initiatives are readily accessible to farmers and SMSs</u>. KVKs which are located far from the Research Institutions do not have such an access to new research initiatives.
    - **The main attraction for the farmers at KVK, Karnal is not KVK but NDRI**. That is why major focus remains in cattle related trainings. Farmers from various parts of India reach out to KVK, Karnal.

- KVK, Karnal does not have programs focusing on Rural Youth empowerment/school dropouts. This is because the entrepreneurship development program is full-time on-campus module for which the participants need to pay for their stay and training. More often than not very few participants come up for such programs.
- **One of the recurring problems in day-to-day functioning come from Parliamentary questionnaire that are sent to KVKs**. Officers from the Headquarters simply forward the parliamentary matters to KVKs without considering whether it is related to KVK or not. Such back and forth documentation work creates problems for the KVK Staff.
- Other problem is related to **non-permanent nature of staff**. Currently, Horticulture and Processing Staff are not available at the KVK. For various training programs, relevant faculty are called from nearby institutes.
- **Linking KVK, Karnal with nearby Agricultural University would prove to be beneficial** as relevant staff required for training programs can become readily accessible under such an arrangement.
- **No specific domain and/or cross-domain trainings are provided to the Trainers / SMSs.** The SMSs, however, take same domain trainings at ICAR through Summer or Winter Schools at NAARM or other ICAR institutes.
- **GeM procurement and Contract Management related training is required** for ensuring that right quality services/goods are procured in a timely manner.

Minutes of the meeting with Head, KVK – Delhi, Ujwa

Meeting Date & Time	:	24th March 2023
Meeting attendees	:	Dr P K Gupta, Head – KVK, Delhi, Ujwa
		Dr Ritu Singh, SMS – Home Science
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary. Further, various details related to discussion with the DDG, Agricultural Extension were also shared with the Head, KVK.
- Dr Ritu Singh highlighted the below mentioned points:
    - The activities of KVK include technology assessment, technology selection, demonstration, training – farmers, women farmers, rural youth, and school dropouts.
    - The KVK also consults with GB Pant University and IARI for various matters on need basis.
    - The Staff at KVK includes 6+1 SMSs associated with the fields of: Home Science, Horticulture, Plant Pathology, Agronomy, Agricultural Extension, and Animal Husbandry. Apart from the above-mentioned, there are two Program Assistants – 1 for Computer and 1 for Soil Science. Additionally, there are – 1 Farm Manager, 1 OS cum Accountant, 1 Agromet Observer, 2 Drivers and 1 Attendant. The Staff is permanent in nature and hence, no manpower related challenges are there.
    - The KVK covers South Delhi and North Delhi districts and trains on an average ~ 25,000-30000 farmers through various activities.
    - The KVK also provides Vocational Training in the fields of Gardening, beekeeping, etc. Most of the beneficiaries are people from urban areas.
    - Farm Trials, demonstrations, and trainings are carried out in the form of informal trainings
    - Recruitment of the Staff of KVK is carried out by the NGO based on ICAR guidelines. 100% funding is received from ICAR.
    - NHRDF is the governing body for the KVK
    - Development of Annual Action Plan:
        - Annual Action Plan development begins from area selection; 2-5 villages are selected for at least 3 years
        - PRA (Participatory Rural Appraisal) survey is conducted to identify issues related to: crops, natural calamities, seasonal crops, requirements of women farmers, etc.
        - Major problems are identified along with best possible interventions and then based on the entire activity focus area/annual action plan is designed.
    - ICAR trains SMSs post recruitment, however, trainings are not provided on a regular basis and sometimes trainings get delayed also.
    - Apart from post-recruitment training, scheduled trainings are provided through Summer and Winter Schools through ICAR.

- Multiple Applications – mKisaan, Kisaan Saarthi, IMD App have been in use. However, popularity of applications is very low. KVK also runs awareness campaigns for the benefits of the above-mentioned applications.
- **Behavioural Trainings are not provided to the SMSs or KVK staff**
- **GeM Procurement training is required for KVK Staff**
- **Training on Drone technology and its applications** should also be provided to KVK Staff
- Crop Insurance: **No/very few banking and finance institutions are available for providing crop insurance to farmers of Delhi.** The State Government is not playing any significant role in the field of Agriculture.
- Farmers of Delhi have to purchase fertilizers from Haryana to take benefit of subsidy. **Fertilizers are not available on subsidized rates in Delhi**.
- KVK focuses on entrepreneurship development and has helped several entrepreneurs in the field of: Food Processing, Mushroom Cultivation, Beekeeping, and Gardening.
- **The Narela and Naggi villages have huge potential for Dairy Development**, however, the area identified for Dairy Development is located far from Narela and Naggi. Because of which the potential is not being fully utilized.

Minutes of the meeting with DDG, NRM

Meeting Date & Time	:	28th March 2023
Meeting attendees	:	Dr S K Chaudhary, DDG - NRM
		Dr Vela Murugan, ADG – NRM
		Dr Rajshri, Director – NRM
		Dr B P Bhatt, Principal Scientist
		Dr Meera Arora, Principal Scientist
		Dr Hemlata Kapil, Assistant Chief Technical Officer
		Mr. Hajari Lal, SO
		Mrs. Rajni Anand, SO
		Mr. Jyotish Rai, ASO
		Mr. Rakesh Kathane, PPS
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- DDG, NRM gave a brief overview of the Division and informed the consultants that the Division looks after the technical aspects related to soil health, water, weeds, sustainability, and environmental ecosystem.
- The Division also takes care of the: Financial Management, funding, Project Management work related to various research projects carried out by various institutions along with the Capacity Building of scientists.
- The Division's officers need **training in Financial Management of various institutions and Projects**
- The officers also need to get acquainted with various **tools to streamline the process of data collection and reporting such as Google forms, or similar tools of Microsoft for Dynamic Data Collection**
- **Contractual staff needs to be trained in Basic Data Entry work**
- **PPS/PS need training in Noting and Drafting along with other tools such as Audacity, or tools to convert voice into text**
- **SOs and Under Secretaries need Immersion Programs focusing on common functions across various Divisions, through a digital Induction Module –** highlighting the overview of each Division's activities
- Previously, US and above officers used to be sent to **ISTM for training on Parliamentary Matters, Assurances, Questionnaire and Private Party Bills.** However, no such trainings are being organised currently. All the US and above officers should be provided refresher course on the above-mentioned topics.
- 1 week-long mandatory Orientation / Induction training program should be designed for people getting promoted from feeder cadre to other senior ranks

- ❖ Refresher courses for all the officers of the Division up to the rank of Directors on the following topics should be organised:
    - **FR/SR**
    - **Conduct Rules**
    - **Parliamentary Matters**
    - **Noting / Drafting**
- ❖ Employees getting promoted from **Clerical Staff should attend training on Personality Development and Effective Communication Skills – verbal and written**
- ❖ An introduction to **Litigation Management** should also be provided to all the officers of the Division.

Minutes of the meeting with DDG, Crop Science

Meeting Date & Time	:	28th March 2023
Meeting attendees	:	Dr Tilak Raj Sharma, DDG - Crop Science
		Dr Sanjeev Gupta, ADG - Crop Science
		Dr Girish Bhatt, Director
		Dr Devendra Kumar Yadava, ADG - Seeds
		Mr. Neeraj Sharma, Manager – GT
		Mr. Jaivardhan Janartha, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- DDG, Crop Science highlighted the following capacity building requirements for Directors and above:
    - **Stress Management**
    - **Leadership Skills**
    - **Internal Engineering (Art of Living)**
    - **Database Management**
    - **E-File Management**
    - **Record Management (electronically)**
    - **Advanced course on MS Office tools – Excel, PowerPoint, and Word**
    - **Efficient browsing / searching using Google or other tools.**
- For officers below the rank of Director, following capacity building requirements were highlighted**:**
    - **Effective Communication Skills – verbal and written.**
    - **Personality Development**
    - **Motivations**
    - **Ethics and Integrity**
    - **GFR Rules**
    - **FR/SR**
    - **Noting and Drafting**

Minutes of the meeting with Director, DARE (IC)

Meeting Date & Time	:	28th March 2023
Meeting attendees	:	Mr. Rajeev Lal, JS - Admin.
		Mr. Rajesh Gupta, Director DARE
		Mr. Neeraj Sharma, Manager – GT
		Mr. Bharat Mathur, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- Mr. Rajesh Gupta apprised the consultants about the activities of IC 1 and 2 Divisions:
    - Division looks after the foreign travels of various Scientists of ICAR and other institutes.
    - Scientists visit foreign institutions for knowledge updation (PhDs) or to attend seminars, workshops, etc.
    - DARE is also a part of various international forums – FAO / World Bank related. Scientists need NoC through ICAR to visit foreign countries.
    - Other activities looked after by the Division's officers include Swachh Bharat Mission whose nodal officer is Mr. Shaleen Agarwal – Director, DARE
    - The Division uses FVMS (Foreign Visit Management System) tool. A committee approves all matters related to foreign visit.
    - The junior officers of the Division require training on following:
        - **GFR Rules**
        - **Ethics at workplace**
        - **Personality Development**
        - **Stakeholder Management**
        - **Effective Communication Skills – verbal and written**
        - **Use of MS Office tools – Word, Excel, and PowerPoint**
        - **Cabinet Notes preparation**
        - **GeM Procurement**

Minutes of the meeting with Director, DARE (IC | Admin | Vigilance)

Meeting Date & Time	:	29th March 2023
Meeting attendees	:	Mr. Shaleen Agarwal, Director – IC | Admin. | Vigilance
		Mr. Balraj Singh, US DARE
		Mr. Neeraj Sharma, Manager – GT
		Mr. Bharat Mathur, Assistant Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- Following capacity building requirements were highlighted during the discussion:
  - **Communication Skills**
  - **Stress Management**
  - **Task Prioritization**
  - **Strategic Planning**
  - **Understanding of procedure of foreign deputations and various types of visits**
  - **Understanding of various clearances required for foreign visits.**
  - **Conducting enquiries and various SOPs associated with vigilance matters.**
  - **CVC training module for various steps of enquiry proceedings**
- Director, DARE also highlighted the need for having access to short training modules for various guidelines. The list of such guidelines will be shared with the consultants by the Director, DARE

Minutes of the meeting with Director, DARE (IC3 | Admin)

Meeting Date & Time	:	5th April 2023
Meeting attendees	:	Mr. K K Guite, Director – IC | Admin.
		Mr. Balraj Singh, US DARE
		Section Officers
		Assistant Section Officers
		Mr. Neeraj Sharma, Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- Following capacity building requirements were noted during the discussion:
    - **Stress Management**
    - **Leadership Skills**
    - **Task Prioritization**
    - **Strategic Planning**
    - **Time Management**
    - **MS Office Tools – Excel, Word, PowerPoint, and Power BI**
    - **Functioning of Bhavishya Portal for managing matters related to pensioners**
    - **Explore development of user manuals for various NIC portals, such as e-Office, HRMS, Bhavishya, and e-Visitors**
    - **Hindi translation tools**
    - **GeM Procurement**
    - **GFR Rules**
    - **DFPR**
    - **Working in a matrix structure in an organisation**
    - **Use of cloud storage for data management**
    - **Use of dynamic data collation tools such as Google forms, google spread sheets, etc.**
    - **Giving Feedback**
- During the discussion, it was learned that the Intranet is being promoted in various Ministries and Department and that use of internet is being stopped in government offices. Moreover, **"Anydesk" software cannot be used in the MDOs. NIC may develop or suggest another tool which can replace "Anydesk"** so that IT Department may access the PCs not functioning properly
- It was also learned that the **PCs currently in use in DARE officers are very old** and **need to be replaced with the latest operating systems and PCs** to ensure smooth functioning in offices
- The Division is acutely understaffed and that only 23 officers are deployed against a sanctioned strength of 54

Minutes of the meeting with Joint Secretary, Finance DARE

Meeting Date & Time	:	11th April 2023
Meeting attendees	:	Mr. G P Sharma, JS - Finance
		Entire Staff of 21 officer including Section Officers and Assistant Section Officers
		Mr. Neeraj Sharma, Manager – GT

Key discussion points:

- The consultants gave a brief overview about the ACBP exercise and the main steps of the process of capacity needs assessment (CNA) including – one on one discussions, CNA form filling and focused group discussions (FGDs)
- The consultants also discussed about the kick-off meeting under the chairmanship of Secretary, DARE and Hon'ble MoS Mr. Kailash Choudhary.
- JS, Finance highlighted the below mentioned capacity building requirements:
    - **Budgeting**
    - **Accrual Accounting**
    - **IT Tools – Advanced MS Office: Excel, Word and PowerPoint and Power BI**
    - **FR/SR**
    - **Pay Fixation**
    - **Administrative Rules and Guidelines for various Procedures – TA/DA Bills, Medical Claims, NPS, etc.**
    - **GFR Rules**
    - **AI/ML applications in Finance and Accounting**
    - **PFMS**
    - **TSA – Treasury Single Accounting System**
    - **Single Nodal Agency (fund flow monitoring related)**
    - **Central Nodal Agency (fund flow monitoring related)**
    - **Taxation – Direct and Indirect Taxes**
    - **Stress Management**
    - **POSH**
    - **Noting and Drafting**
    - **UBIS – Union Budget Information System portal usage**
    - **APMS – Audit Para Monitoring System usage**
    - **NPS Rules and Investment Management**
    - **Development of an Induction Module for Finance Division along with case studies**
    - **Report writing especially for internal audit purposes**

Annexure – Snapshot of one-on-one Discussions and FGDs with various SMDs.