प्रत्यक्ष लाभ अंतरण की योजनाओं का प्रबंधन के लिये वेब पोर्टल
Development of Direct Benefit Transfer Portal for DARE Schemes

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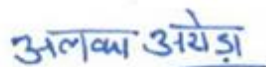LIBRARY AVENUE, PUSA, NEW DELHI – 110012**

2021

आमुख

प्रत्यक्ष लाभ अंतरण (डीबीटी) भारत सरकार की एक पहल है जिसका उद्देश्य मुख्य रूप से बिचौलियों को खत्म करना और लाभार्थियों को सीधा लाभ देना है। कृषि अनुसंधान और शिक्षा विभाग (डेयर) के तहत, विभिन्न योजनाओं में किसान, छात्र और संकाय सदस्य इसके लाभार्थी हैं। डेयर में 20 ऐसी योजनाएं हैं, जहां लाभार्थियों को नकद या अन्य तरह के रूप में लाभ मिलता है। इस परियोजना में डेयर के अंतर्गत डीबीटी योजनाओं के तहत व्यक्तिगत लेनदेन के रिकॉर्ड को इकट्ठा करने के लिए एक वेब आधारित प्रबंधन सूचना प्रणाली (एमआईएस) (https://dbtdare.icar.gov.in) विकसित किया गया है। इस एमआईएस को आईसीएआर के भारतीय कृषि सांख्यिकी अनुसंधान संस्थान के डेटा सेंटर में होस्ट किया गया है। यह ऑनलाइन एप्लिकेशन डॉट नेट फ्रेमवर्क का उपयोग करके विकसित की गई है और यह राष्ट्रीय स्तर डीबीटी भारत पोर्टल के साथ आंकड़ों के आदान–प्रदान के लिए वेब सेवा का उपयोग करता है।

डेयर की सभी 20 डीबीटी योजनाओं को डीबीटी भारत पोर्टल पर दिखाया गया है और डीबीटी डेयर एमआईएस के माध्यम से मासिक प्रगति रिपोर्ट सभी योजनाओं की प्राप्त की जा रही है। इस एमआईएस में कई रिपोर्टें विकसित की गई हैं जिसमें उन संस्थाओं के लिए जो सूचना अपलोड करने के लिए उपयोग करते हैं और दुसरी उन प्रबंधकों के लिए जो एमआईएस में डेटा स्थिति की निगरानी करते हैं। यह एमआईएस समय, ऊर्जा और धन की काफी बचत करता है और प्रभावी एवं कुशलता पूर्वक जानकारी प्रदान करता है। यह डेयर की विभिन्न डीबीटी योजनाओं के तहत फंड ट्रांसफर में स्पष्टता प्रदान करता है। आईसीएआर में कृषि शिक्षा और कृषि विस्तार संभाग इस एमआईएस का उपयोग करके प्रभावी रूप से डीबीटी योजनाओं से संबंधित आंकड़े एवं सूचना का प्रबंधन और निगरानी कर रहे हैं।

हम निदेशक, भा.कृ.अनु.प.–भा.कृ.सां.अ.सं. के ऋणी हैं जिन्होंने इस शोध परियोजना में गहरी दिलचस्ती ली और आवश्यक सुविधाएं जुटाई। धन सहायता के लिए हम कृषि शिक्षा प्रभाग, आईसीएआर के आभारी हैं।

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PREFACE

Direct Benefit Transfer (DBT) is an initiative of Government of India (GoI) for transfer of benefits in all government schemes directly to the beneficiaries. In the Department of Agricultural Research and Education (DARE)-Indian Council of Agricultural Research (ICAR), a total of twenty (20) schemes are covered under DBT wherein the beneficiaries are farmers, students and faculty member and the benefits type are both as cash and in kind. In this project, a web based Management Information System (MIS) (https://dbtdare.icar.gov.in) to manage the DBT records of beneficiary in different schemes of DARE-ICAR has been developed and hosted in the ICAR Data Centre at Indian Agricultural Statistics Research Institute (IASRI), New Delhi. This application is developed using .NET framework and uses web service for data exchange with national level DBT Bharat portal (https://dbtbharat.gov.in).

DBT DARE Management Information System has been developed and integrated with the DBT Bharat Portal through web service. All the 20 DBT applicable schemes of DARE-ICAR identified have been on-boarded on DBT Bharat Portal and are required to upload MPR through DBT DARE MIS. A number of reports formats have been developed in the MIS both for the individual organizations and the scheme managers for monitoring of the information in the system. This system will considerably save time, energy and money through transaction costs reduction and acquire the information in a cost effective manner. Education Division, ICAR is effectively managing and monitoring the DBT Schemes of DARE-ICAR using this MIS.

We are indebted to the Director, ICAR-IASRI for taking keen interest in this Research Project and for providing necessary facilities. Thanks are also due to the Agricultural Education Division, ICAR for providing the funding support.

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CHAPTER I: INTRODUCTION & REVIEW OF LITERATURE

Direct Benefit Transfer (DBT) was started in 2013 in India as a major reform in the government delivery system by re-engineering the existing process in welfare schemes. It was started for simpler and faster flow of information/funds to ensure accurate targeting of the beneficiaries and reducing duplication and fraud in government schemes. The DBT Mission under the Cabinet Secretarial, GoI is the nodal point for the implementation of the DBT programmes across all the ministries in the Government of India. Electronic Payment Framework was laid down for all Ministries/Departments and their attached Institutions/PSUs and is applicable on all Central Sector (CS)/Centrally Sponsored Schemes (CSS) and for schemes where components of cash are transferred to individual beneficiaries. Since aadhaar number provides unique identity and is useful in targeting the intended beneficiaries, aadhaar number is preferred and beneficiaries are encouraged to have aadhaar numbers. DBT is the high priority and focus area of the Government. A DBT Bharat portal (https://dbtbharat.gov.in/) was launched in 2016 as a platform for management of all DBT applicable schemes related information. The portal has information regarding the scheme, beneficiaries and fund transfer details. All the documents pertaining to the DBT are also made available in this portal.

Over the last decade, there has been tremendous global attention on cash transfers from governments to citizens directly as a means of addressing poverty, inequality and other desirable policy goals. The attention was spurred by the success of large cash transfer programmes in the United States of America, which were found to be highly effective. It is evident in some cases that cash transfer programmes have been able to mitigate poverty, reduce inequality, improve school enrolment and increase women's access to health services. The success of such interventions especially in Brazil (through Bolsa Família programme launched in November, 2003) and Mexico led to numerous studies on cash transfer programmes in other parts of the world, making it one of the most studied forms of antipoverty interventions in the recent decades (The World Bank, 2014). The Brazilian government has also developed a portal viz. Portal da Transparência (Union General Controller, 2004) which is dedicated to make all expenditures (including Bolsa Família) of the federal government, public. The portal was aimed to ensure the proper and correct application of public resources. It has a list of all expenses and money

transfers the federal government has made, including the list of all the people receiving Bolsa Família benefits and how much they have received.

Official benefits website of the U.S. government viz. Benefits.gov (formerly GovBenefits.gov) was launched in 2002 to reduce the expense and difficulty of interacting with the government while increasing citizen access to benefit information. Operated, managed and supported by a Federal agency partnership, Benefits.gov provides an innovative, technology-based solution to benefit information delivery. The beneficiaries include U.S. citizens, businesses and Federal and state government entities. Benefits.gov is a cross-governmental collaboration between 17 Federal agencies referred to as 'Partners.' The site's core function is the eligibility prescreening questionnaire or "Benefit Finder." Answers to the questionnaire are used to evaluate a citizen's situation and compare it with the eligibility criteria for more than 1,200 Federally-funded benefit and assistance programs. Each program description provides citizens with the next steps to apply for any benefit program of interest. The site also features a recommendation engine that customizes the user's search for benefits based on their location or interest in a particular category.

In Indian context, various e-governance initiatives have been taken up in the field of agriculture both by ICAR and Department of Agriculture & Cooperation and Farmers Welfare. Krishi Vigyan Kendra (KVK) Knowledge Network (https://kvk.icar.gov.in/), popularly known as KVK Portal (ICAR-IASRI 2016) helps in monitoring the functioning of KVKs at the National level and in providing timely information and advisory to the farmers. The aim of the portal is to transfer the technologies developed by the agricultural scientists to the farmers in a fast and effective manner using web and mobile technology (Pal *et al*. 2019) as well as to monitor the activities of KVKs. National Agriculture Market (eNAM) is a pan-India electronic trading portal (https://enam.gov.in/web/) (Ministry of Agriculture and Farmers' Welfare, Government of India 2016) which networks the existing Agricultural Produce Market Committee (APMC) mandis to create a unified national market for agricultural commodities. The aim of the portal is to promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply. Farmers' Portal (https://farmer.gov.in/) (Ministry of Agriculture and Farmers' Welfare, Government of India 2016) is designed to create one stop

shop for meeting all informational needs relating to Agriculture, Animal Husbandry and Fisheries sectors production, sale/storage of an Indian farmer. Through this portal a farmer can get all relevant information on specific subjects around his village/block/district or state. This information is delivered in the form of text, SMS, email and audio/video in the language the farmer understands. Farmers can ask specific queries as well as give valuable feedback through the Feedback module specially developed for the purpose. KRISHI (Knowledge based Resources Information Systems Hub for Innovations in Agriculture) Portal (https://krishi.icar.gov.in/) (ICAR 2016) is an initiative of ICAR to bring its knowledge resources to all stakeholders at one place. The portal is being developed as a centralized data repository system of ICAR consisting of Technology, Data generated through Experiments/Surveys/Observational studies, Geo-spatial data, Publications, Learning Resources etc.

DARE-ICAR under the Ministry of Agriculture and Farmers Welfare coordinates and promotes agricultural research and education in the country. There are 20 different DBT applicable schemes which are presently running in DARE-ICAR. The schemes include student centric schemes. i.e. various scholarships and fellowships, faculty schemes and farmer centric schemes. Out of the total 20 schemes, 19 are related to agricultural education/ research wherein the benefit type is cash and in agricultural extension scheme, the benefit type is in kind. The schemes are implemented and monitored by the scheme managers and is implemented in various ICAR institutes, Agricultural Universities and other organizations across the country (Table 1.1). Each Institution/agricultural university is required to provide the information with respect to the schemes being implemented at their organization. A Monthly Progress Report (MPR) of each scheme is submitted on DBT Bharat portal on a stipulated date every month. For management and reporting of scheme related information with respect to the beneficiary and transaction for all the twenty on boarded schemes of DARE-ICAR, a Management Information System (MIS) (https://dbtdare.icar.gov.in/) is developed at the national level.

Table 1.1: Schemes of DARE-ICAR integrated with DBT Bharat Portal

S. No.	Scheme Code	Scheme Name	Benefit type	Scheme monitored by
1	A8A18	AgEdn - IASRI scholarship for MSc and PhD	Cash	Director, ICAR-IASRI, New Delhi
2	ASM63	AgEdn - ICAR Emeritus Professor	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
3	A8MN1	AgEdn - ICAR Emeritus Scientist	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
4	A4AF1	AgEdn - ICAR Junior Research Fellowship	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
5	AXDCI	AgEdn - ICAR National Professor and National Fellow	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
6	AB5OP	AgEdn - ICAR Senior Research Fellowship	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
7	AQ20K	AgEdn - India-Afghanistan Fellowship	Cash	Director, DARE & ADG, EQA&R, Ag. Education Division, ICAR, New Delhi
8	AR4YI	AgEdn - India-Africa Fellowship	Cash	Director, DARE & ADG, EQA&R, Ag. Education Division, ICAR, New Delhi
9	A7N6H	AgEdn - Merit Cum Means Scholarship	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
10	ALMOJ	AgEdn - National Talent Scholarship PG	Cash	ADG, EP&HS, Ag. Education Division, ICAR, New Delhi
11	AN084	AgEdn - National Talent Scholarship UG	Cash	ADG, EP&HS, Ag. Education Division, ICAR, New Delhi
12	A5IPK	AgEdn - Netaji Subhas ICAR International Fellowship	Cash	ADG, EQA&R, Ag. Education Division, ICAR
13	AY4IO	AgEdn - Post Matric Scholarship	Cash	ADG, HRD, Ag. Education Division, ICAR, New Delhi
14	AL11P	AgEdn - Student READY	Cash	ADG, EP&HS, Ag. Education Division, ICAR, New Delhi
15	AWU5S	Agriculture Extension	In Kind	DDG, Agri. Extension Division, ICAR, New Delhi
16	A73NS	AS_IVRI_Institute Scholarship for M.V.Sc. And Ph.D.	Cash	Director, ICAR-IVRI, Izatnagar
17	AMVTA	AS_NDRI_Institute Scholarship For MSc And PhD	Cash	Director, ICAR-NDRI, Karnal
18	AYTEW	CS- IARI Scholarship	Cash	Director, ICAR-IARI, New Delhi
19	ATUOB	FS - CIFE -Institutional Fellowship	Cash	Director, ICAR-CIFE, Mumbai
20	AR6F4	ICAR HQ NASF	Cash	ADG, NASF, ICAR, New Delhi

2.1 Technology used in DBT DARE Management Information System (MIS)

The DBT DARE Management Information System (MIS) has been developed based on 3-Tier Architecture using the following technology

a. ASP.NET framework 4.5
b. SQL Server 2012 used for database
c. Visual studio 2013 as Integrated Development Environment (IDE)

The 3-tier architecture which is a form of client-server architecture, has been used to develop the MIS in which the functional processes viz. logic, data access, data storage and user interface are maintained as independent modules on separate platforms. It provides many benefits for production and development environments by modularizing the user interface, business logic, and data storage. In the present system, there are three layers viz.,

a. **Presentation layer:** It is the front end layer in the 3-tier system and consists of the user interface. This layer is built on web technologies such as HTML5, JavaScript and CSS.
b. **Application layer:** This layer is consisting of the functional business logic which drives an application's core capabilities. It has been constructed using C# language.
c. **Data layer:** This layer depicts the database/data storage system and data access layer. In the present system, Microsoft SQL Server 2012 is used. Table 2.1 depicts the name of the database tables along with their brief description. Figure 2.1 shows the ER diagram of the database used in the present system.

Table 2.1: Description of the database tables used in DBT DARE MIS

S.No.	Table Name	Description
1.	dbt_BeneficiariesTransferDetails	Data on transactions made by the University/College/Institute against the beneficiaries
2.	dbt_FinYear	List of financial years
3.	dbt_general_information_form	Data on general information of the DBT Schemes
4.	dbt_MasterBeneficiaries	Details of master beneficiaries added by the

		University/College/Institute
5.	dbt_MPR_Report	Data on month wise and scheme wise transaction made by the University/College/Institute
6.	Dbt_schemes	Data on all DBT schemes of DARE-ICAR along with their codes
7.	dbt_state_code	Data on all state name along with their codes
8.	Univ_Details	Details of the University/College/Institute
9.	User_profile	Consisting of user credentials and other details of University/College/Institute
10.	Dbt_training	Data on farmer wise training information
11..	Dbt_crop	Data on crop details used in Front Line Demonstration (FLD) and On Farm Trail (OFT)
12.	Farmer_details	Data on general information like address, bank account details of farmers
13.	Dbt_farmer	Data on farmer wise crop information
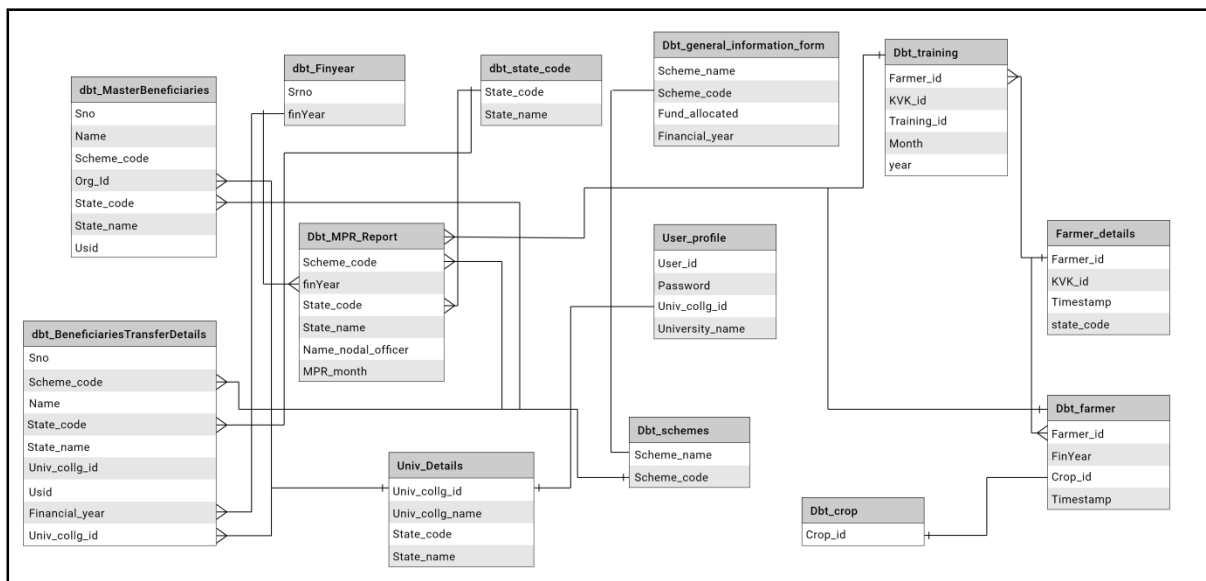
Fig. 2.1 ER Diagram of the DBT DARE MIS

With the introduction of DBT DARE MIS, each university/ institute can upload the information online. First, their authentication is checked in the system followed by uploading of information on respective schemes. The entire process has many steps which are described below:

2.2 Beneficiaries information

For each of the organization, there exists a list of master beneficiaries which are maintained by that organization only. Thus, it is not needed to create/upload details of same beneficiary multiple times. Duplication check has been provided on Aadhaar Number (for Indian citizens), passport number, USID (exclusively for students). For students related schemes, there are two different excel templates for Indian and foreign students through which the beneficiary details can be uploaded in the system. For the schemes like ICAR Emeritus Scientist, ICAR Emeritus Professor, separate excel template has been developed to capture information on Professor/ Scientist/ National Fellow (figure 2.2). After uploading the excel file users can view and edit the uploaded data (in case of any discrepancy) and then submit. Provision to upload individual beneficiary data is also provided in the system (figure 2.3). In case of a beneficiary leaving or already left the organization, for example, passed out students, retired professor etc., a provision to activate/deactivate individual beneficiary at any point of time by the respective organization is provided in the system (figure 2.4).

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Instruction to Upload Beneficiary Details

Steps to Upload

1. Login using user id & password
2. Download the excel template . Data is to be filled in excel template in that particular format only. Excel file contains two sheets out of which only first sheet is required to be filled. After filling the data save the excel file (**Microsoft office 2010 onwards is supported for excel file creation**).
3. For any support or query, please email to dbtdare@icar.gov.in

Download excel template for Indian students

Download excel template for foreign students

Download excel template for Emeritus Professor/Scientist/National Fellow

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Fig. 2.2 Excel template for uploading of beneficiary data

Fig. 2.3 Uploading of individual beneficiary data

Fig. 2.4 Activate/Deactivate beneficiaries

2.3 Transaction Information

After uploading the information on individual beneficiary in the system, transaction details of individual beneficiary can be uploaded in the system on monthly basis. There are two types of provisions in the system to upload this information; transaction details can be filled individually (figure 2.5) as well as bulk transaction information can also be entered. Figure 2.6 shows the bulk transaction uploaded under the scheme AgEdn – IASRI scholarship for MSc and PhD for the month of June in financial year 2018-19.

Fig. 2.5 Uploading of individual transaction details

Fig. 2.6 Uploading of bulk transaction data

Out of total 20 schemes, data for 19 schemes are uploaded in DBT DARE MIS, however, for the Agriculture Extension scheme the data is transferred from the *Krishi Vigyan Kendra Knowledge Network Portal* (https://kvk.icar.gov.in).The individual KVK fills the data related to training, Front Line Demonstration (FLD) and On Farm Trial (OFT) in the KVK Portal. This information is collated in the ATARI (Agricultural Technology Application Research Institute) level and then at the Agriculture Extension Division, ICAR HQ level where the information is approved before its transfer to the DBT DARE MIS.

2.4 Monthly Progress Report (MPR)

The data uploaded by the stakeholders are summed up scheme-wise in the system. This is the Monthly Progress Report (MPR) based on certain parameters viz. total number of beneficiaries (cumulative for the financial year), total number of transactions (monthly basis) and total fund transfer/expenditure (monthly basis). The general information viz. Status of Scheme MIS, Overall Scheme Budget, DBT Applicable Component Fund Allocation etc. for each of the schemes is maintained by the Nodal Officer, DBT Cell, DARE-ICAR (figure 2.7). Thus, a total of twenty (20) MPRs are generated for all the schemes in the system automatically on monthly basis (figure 2.8). This data under each scheme is approved by the DBT Cell (DARE-ICAR) every month before it is transferred to the DBT Bharat portal. Figure 2.9 shows the MPR data approval page for the scheme AgEdn - Student READY for the financial year 2018-19. 'View Data' is appeared for the months against which the MPR have already been approved whereas 'Approve Data' is appeared for the month for which the MPR data has still not approved.

Fig. 2.7 Managing scheme data by Nodal Officer, DBT Cell, DARE-ICAR

S.No.	Scheme Name	Scheme Code	Ministries/Departments	Scheme Type	Location	Benefit Type	Onboarding Status
1	Agriculture Extension	AWU5S	Department of Agricultural Research and Education	Central Sector Scheme	Central	In Kind	Yes
2	AgEdn - Merit Cum Means Scholarship	A7N6H	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
3	AgEdn - Post Matric Scholarship	AY4IO	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
4	AgEdn - ICAR Emeritus Scientist	A8MN1	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
5	AgEdn - ICAR Emeritus Professor	ASM63	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
6	AgEdn - ICAR Junior Research Fellowship	A4AF1	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
7	AgEdn - ICAR Senior Research Fellowship	AB5OP	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
8	AgEdn - National Talent Scholarship PG	ALMOJ	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
9	AS_NDRI_Institute Scholarship For MSc And PhD	AMVTA	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
10	FS - CIFE - Institutional Fellowship	ATUOB	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
11	CS- IARI Scholarship	AYTEW	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
12	AgEdn - ICAR National Professor And National Fellow	AXDCI	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
13	AgEdn - IASRI scholarship for MSc and PhD	A8A18	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
14	AgEdn - India-Africa Fellowship	AR4YI	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
15	AS_IVRI_Institute Scholarship for M.V.Sc. And Ph.D.	A73NS	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
16	AgEdn - Netaji Subhas ICAR International Fellowship	A5IPK	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
17	AgEdn - India-Afghanistan Fellowship	AQ20K	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
18	ICAR Headquarter NASF	AR6F4	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
19	AgEdn - Student READY	AL11P	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes
20	AgEdn - National Talent Scholarship UG	AN084	Department of Agricultural Research and Education	Central Sector Scheme	Central	Cash	Yes

Fig. 2.8 Access of MPR data for all schemes

Scheme Name :	AgEdn - Student READY					
Ministry Name :	Department of Agricultural Research and Education			Scheme Code : AL11P		
Scheme Type :	Central Sector Scheme			Type of transfer (Cash/In Kind/Cash & In Kind) : Cash		
Financial Year :	2019-20 ▾					

Month	Total No. of Beneficiaries(Cumulative for the Financial Year)		Total No. of Transactions(Monthly basis)	Total Fund Transfer/Expenditure(Monthly basis)	Action
	Actual	Cummulative			
April	0	0	0	0.00	**View Data**
May	0	0	0	0.00	**View Data**
June	1	1	1	1200.00	**View Data**
July	107	108	2	961500.00	**View Data**
August	185	293	5	1411064.00	**View Data**
September	97	332	3	471000.00	**View Data**
October	256	632	2	4450500.00	**View Data**
November	194	764	4	872600.00	**View Data**
December	1046	1690	15	10032129.00	**View Data**
January	839	2610	19	7370438.00	**View Data**
February	360	2855	6	4907042.00	**Approve Data**
March	552	3368	12	6656938.00	**Approve Data**

Fig. 2.9 Approval of MPR data

Different Sections on 'Approve Data' page:

- **Section I – General**
  General information of the scheme like scheme budget and other can be seen here (figure 2.10).

Section I-General

View Scheme Data

Scheme Name :	AgEdn - Student READY		
Ministry Name :	Department of Agricultural Research and Education	Scheme Code :	AL11P
Scheme Type :	Central Sector Scheme	Type of transfer (Cash/In Kind/Cash & In Kind) :	Cash
Financial Year :	2019-20	Month :	February

Section I-General	Section II-Beneficiary Detail	Section III-Fund Transfer	Section IV A-Cash Transaction	Section V-Savings

Parameter	Value
Whether notified u/s 7/57 of Aadhaar Act (Y/N)	Y
Beneficiary Digitization (Y/N)	Y
Staus of Scheme MIS	Online system / MIS integrated with DBT Bharat Portal and report sub
Overall Scheme Budget (₹) (in FY 2019-20)	250000000.000
DBT Applicable Component Fund Allocation (₹) (in FY 2019-20)	250000000.000

Fig. 2.10 General section of MPR data

- **Section II- Beneficiary Detail**

  In this section, state wise data for total number of cumulative beneficiaries, number of beneficiaries with Aadhaar seeded (Aadhaar Seeding means linking Aadhaar holders' unique 12 digit Aadhaar number with their Personal Identification Documents or Benefit Cards) and number of beneficiaries having mobile numbers for that particular scheme and particular month are loaded (figure 2.11)

Scheme Name :	AgEdn - Student READY		
Ministry Name :	Department of Agricultural Research and Education	Scheme Code :	AL11P
Scheme Type :	Central Sector Scheme	Type of transfer (Cash/In Kind/Cash & In Kind) :	Cash
Financial Year :	2019-20	Month :	February

Section I-General	Section II-Beneficiary Detail	Section III-Fund Transfer	Section IV A-Cash Transaction	Section V-Savings

Consolidated Beneficiaries information (Pan India)	No. of Beneficiaries	No. of Beneficiary Records Digitized (from Col#15)	No. of Aadhaar authenticated and seeded Beneficiaries (from total mentioned in Col#16)	No. of Beneficiaries having Mobile No. (from number mentioned in Col#16)
	15	16	17	18
Nation wide	2855	2855	2852	2594

Sr.No	State	No. of Beneficiaries		No. of Beneficiary Records Digitized		No. of Aadhaar authenticated and seeded Beneficiaries		No.of Beneficiaries having Mobile No.	
		Actual	Cumulative	Actual	Cumulative	Actual	Cumulative	Actual	Cumulative
1	JAMMU AND KASHMIR	0	0	0	0	0	0	0	0
3	PUNJAB	0	208	0	208	0	206	0	207
4	CHANDIGARH	0	0	0	0	0	0	0	0
5	UTTARAKHAND	0	0	0	0	0	0	0	0
6	HARYANA	0	0	0	0	0	0	0	0
7	DELHI	0	0	0	0	0	0	0	0
8	RAJASTHAN	0	68	0	68	0	68	0	67
9	UTTAR PRADESH	0	191	0	191	0	191	0	179
10	BIHAR	0	193	0	193	0	193	0	192
24	GUJARAT	226	761	226	761	226	761	226	760
25	DAMAN AND DIU	0	0	0	0	0	0	0	0
26	DADRA AND NAGAR HAVELI	0	0	0	0	0	0	0	0
27	MAHARASHTRA	129	293	129	293	128	292	127	291
28	ANDHRA PRADESH	0	0	0	0	0	0	0	0
29	KARNATAKA	5	621	5	621	5	621	5	380
37	LADAKH	0	0	0	0	0	0	0	0

Approve

Fig. 2.11 Beneficiary Detail section of MPR Data

- **Section III – Fund Transfer**

  In this section state wise data for total fund transfer for that particular scheme and particular month is loaded (figure 2.12).

Section III-Fund Transfer

View Scheme Data

Scheme Name :	AgEdn - Student READY		
Ministry Name :	Department of Agricultural Research and Education	Scheme Code :	AL11P
Scheme Type :	Central Sector Scheme	Type of transfer (Cash/In Kind/Cash & In Kind) :	Cash
Financial Year :	2019-20	Month :	February

Section I-General	Section II-Beneficiary Detail	Section III-Fund Transfer	Section IV A-Cash Transaction	Section V-Savings

Funds Transferred Information (cash)/Expenditure (In Kind)(Pan India	Funds Transferred (cash) to Beneficiaries (in ₹)
	19
Nation wide	4907042

Sr.No	State	Funds Transferred (cash)/Expenditure Incurred (In Kind)(in ₹)
1	JAMMU AND KASHMIR	0.00
2	HIMACHAL PRADESH	0.00
3	PUNJAB	0.00
24	GUJARAT	3126990.00
25	DAMAN AND DIU	0.00
26	DADRA AND NAGAR HAVELI	0.00
27	MAHARASHTRA	1708472.00
28	ANDHRA PRADESH	0.00
29	KARNATAKA	71580.00
30	GOA	0.00
31	LAKSHADWEEP	0.00
32	KERALA	0.00
33	TAMIL NADU	0.00
34	PUDUCHERRY	0.00
35	ANDAMAN AND NICOBAR ISLANDS	0.00
36	TELANGANA	0.00
37	LADAKH	0.00

Approve

Fig. 2.12 Fund Transfer section of MPR data

- **Section IV A – Cash Transaction**

  In this section, transaction made using electronic mode and other modes and the respective amount transferred are loaded (figure 2.13).

Scheme Name :	AgEdn - Student READY		
Ministry Name :	Department of Agricultural Research and Education	Scheme Code :	AL11P
Scheme Type :	Central Sector Scheme	Type of transfer (Cash/In Kind/Cash & In Kind) :	Cash
Financial Year :	2019-20	Month :	February

Section I-General	Section II-Beneficiary Detail	Section III-Fund Transfer	Section IV A-Cash Transaction	Section V-Savings

Transaction Information (Pan India)	Electronic Modes (ABP,NEFT,RTGS,AEPS) Fund Transferred Information		Other Modes (Cash,Cheque,DD,MO) Fund Transferred Information	
	Total No. of Transactions through Electronic Modes (benefit transferred to no. of beneficiaries)	Amount Transferred (in ₹)(out of 19)	Total No. of Transactions through Other Modes(benefit transferred to no. of beneficiaries)	Amount Transferred (in ₹)(out of 19)
	20	21	22	23
Nation wide	6	4907042.00	0	0.00

State	Total No. of Transactions for Electronic Modes	Amount Transferred (in ₹)	Total No. of Transactions for Other Modes	Amount Transferred (in ₹)
JAMMU AND KASHMIR	0	0.00	0	0
GUJARAT	3	3126990.00	0	0
DAMAN AND DIU	0	0.00	0	0
DADRA AND NAGAR HAVELI	0	0.00	0	0
MAHARASHTRA	1	1708472.00	0	0
ANDHRA PRADESH	0	0.00	0	0
KARNATAKA	2	71580.00	0	0
GOA	0	0.00	0	0
LAKSHADWEEP	0	0.00	0	0
KERALA	0	0.00	0	0
TAMIL NADU	0	0.00	0	0
PUDUCHERRY	0	0.00	0	0
ANDAMAN AND NICOBAR ISLANDS	0	0.00	0	0
TELANGANA	0	0.00	0	0
LADAKH	0	0.00	0	0

Approve

Figure 2.13 Cash Transaction section of MPR data

- **Section IV B – In Kind Transaction**
  This section is only applicable for Agriculture Extension scheme. Here, all the fields are having values of 0 or NA (figure 2.14).

Section IV B-In Kind Transaction

View Scheme Data

Scheme Name :	Agriculture Extension		
Ministry Name :	Department of Agricultural Research and Education	Scheme Code :	AWU5S
Scheme Type :	Central Sector Scheme	Type of transfer (Cash/In Kind/Cash & In Kind) :	In Kind
Financial Year :	2019-20	Month :	January

| Section I-General | Section II-Beneficiary Detail | Section III-Fund Transfer | Section IV B-In Kind Transaction | Section V-Savings |

Transaction Information (Pan India)	In kind Benefit Transferred		Total No. of Transactions	Benefit Transferred through Aadhaar Authentication/ Validated Transaction (Bio/Demo/OTP/e-Sign)
	Unit of Measurement	Quantity Transferred		
	24	25	26	27
Nation wide	NA	NA	0	0

Fig. 2.14 In Kind Transaction section of MPR data

The monthly progress report information is pulled by DBT Mission of India (https://dbtbharat.gov.in/) on a prefixed date and time to update the same in the national level DBT Bharat Portal. This data pulling is done by a scheduler through web service. The data exchange between two portals is done through Web Application Programming Interface (WebAPI) (Block *et al*., 2014). In the present scenario, Representational State Transfer (REST) APIs (Kurtz and Wortman, 2014) has been used for sharing of data. In DBT DARE MIS, the WebAPIs have been developed using ASP.NET framework 4.5 Model-View-Controller (MVC) model. The output of the API can be in JavaScript Object Notation (JSON) or Extensible Markup Language (XML) format as per need of the client. In the present system, XML output format is used. To get the ouput in XML, the data needs to be serialised, therefore, XmlSerializer class is used (Bornstein, 2004) for data exchange in the present MIS. This serialization technique turns the data in the application into XML that is transmitted between clients and services. Figure 2.15 shows the architecture of API used in DBT DARE MIS. Figure 2.16 depicts the entire workflow of data uploading in to DBT Bharat through DBT DARE MIS.
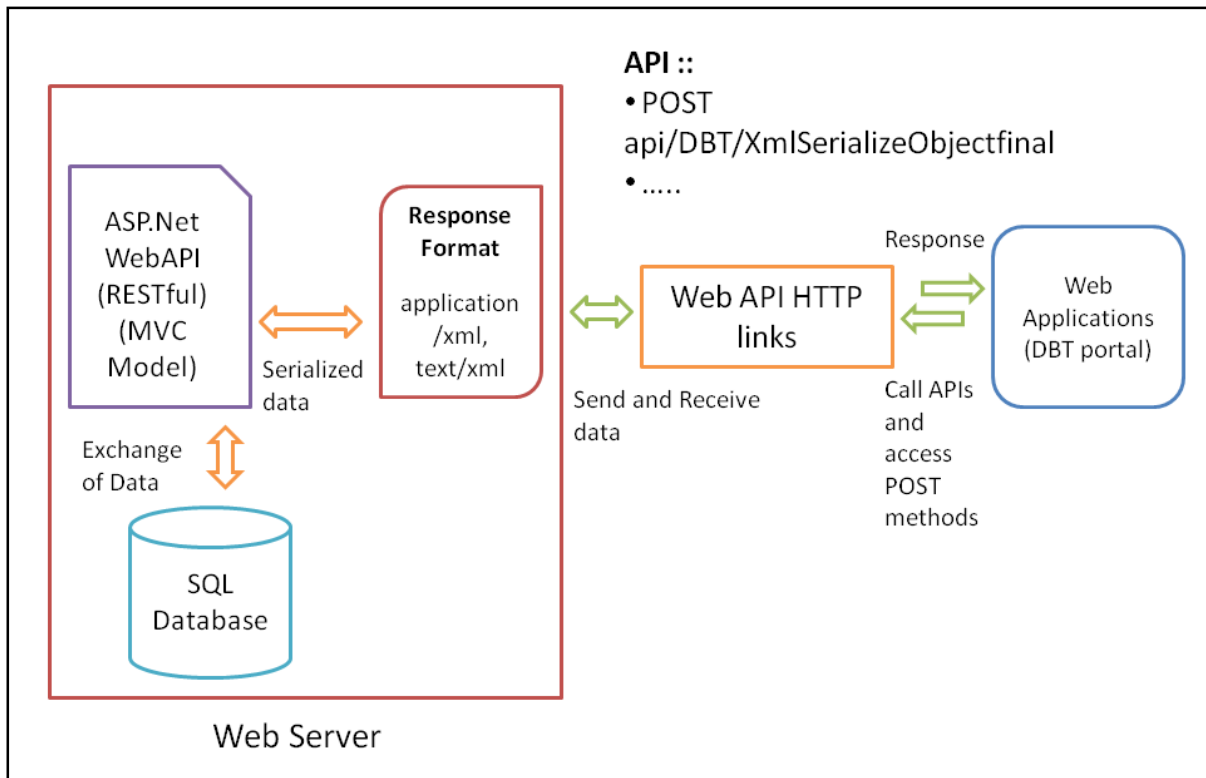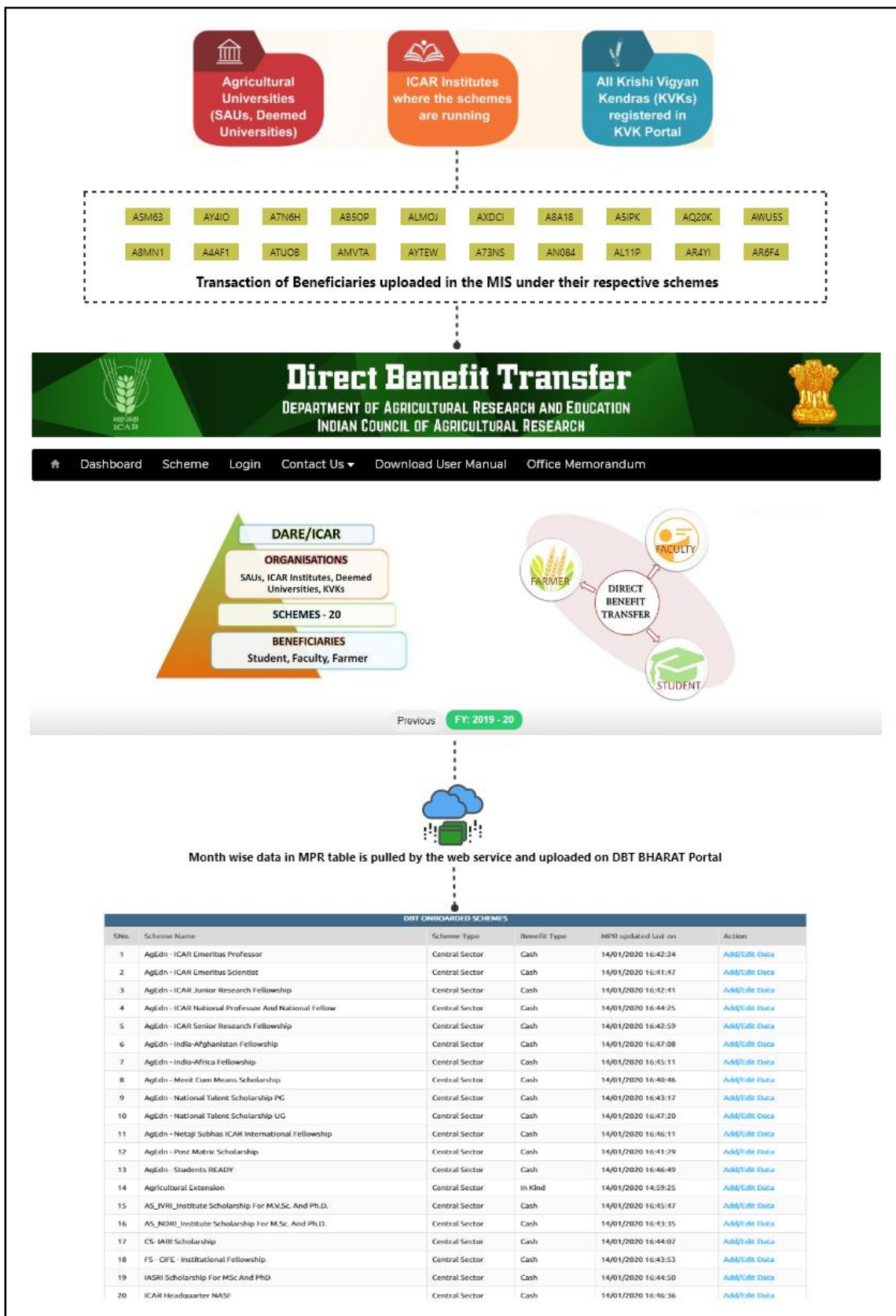
Fig. 2.15 DBT DARE WebAPI Architectural diagram

Fig. 2.16 Workflow of data uploading in to DBT Bharat through DBT DARE MIS

CHAPTER III: RESULTS AND DISCUSSION

3.1 DBT scheme reporting module

A number of reports have been developed in the MIS both for the individual organizations and the scheme managers for monitoring of the information in the system.

3.1.1 Reports for individual organization

For individual organization, there are 2 reports available in the MIS:

i)   Beneficiary report (figure 3.1) and

ii)   Transaction report (figure 3.2).

In the beneficiary report, individual organization can select a particular scheme to view the beneficiary details data that has been already uploaded in the online system against that scheme. Figure 3.1 depicts the report of beneficiaries under the IASRI scholarship scheme. Whereas, in the transaction report, individual organization can view transaction details of a scheme which has been uploaded in the online system in a particular month of a financial year. Figure 3.2 shows the transaction report under the same scheme for the month of February in financial year 2018-19.

Figure 3.1: Beneficiary report

Figure 3.2: Transaction report

3.1.2 Reports for managers

There are two types of managers in the system: i) Individual Scheme Manager and ii) Overall Scheme manager.

Individual Scheme Manager is facilitated to monitor the uploading status of information of their respective scheme(s) in the MIS. Figure 3.3 shows the reporting page for Director, ICAR-IASRI for the scheme 'AgEdn - IASRI scholarship for MSc and PhD'.

Fig. 3.3 Monitoring report for Director, ICAR-IASRI

Similarly, figure 3.4 shows the reporting page for ADG (EQA&R), Ag. Edn. Div., ICAR, for the schemes viz. AgEdn - India-Africa Fellowship, AgEdn - Netaji Subhas ICAR International Fellowship and AgEdn - India-Afghanistan Fellowship.

Select Financial Year

2019-20 ▾

Select Month

All ▾

Submit

AgEdn - India-Africa Fellowship

	Organisation Name	No. of Beneficiaries(Cumulative)	Total Amount Transferred (in Rs.)
⊞	Bihar Agricultural University	1	118387.00
⊞	Anand Agricultural University	1	54000.00
⊞	Guru Angad Dev Veterinary and Animal Sciences University	2	132000.00
⊞	Rajasthan University of Veterinary & Animal Sciences	1	100200.00
⊞	Sardar Ballabhbhai Patel University of Agriculture and Technology	5	270000.00
⊞	ICAR-Indian Veterinary Research Institute,Izatnagar	1	18000.00
	Total	11	692587.00

AgEdn - Netaji Subhas ICAR International Fellowship

	Organisation Name	No. of Beneficiaries(Cumulative)	Total Amount Transferred (in Rs.)
No record found			

AgEdn - India-Afghanistan Fellowship

	Organisation Name	No. of Beneficiaries(Cumulative)	Total Amount Transferred (in Rs.)
⊞	Anand Agricultural University	1	46500.00
⊞	Lala Lajpat Rai University of Veterinary and Animal Sciences	4	412200.00
⊞	Guru Angad Dev Veterinary and Animal Sciences University	2	102000.00
⊞	Rajasthan University of Veterinary & Animal Sciences	1	85645.00
⊞	Sardar Ballabhbhai Patel University of Agriculture and Technology	3	135000.00
	Total	11	781345.00

Fig. 3.4 Monitoring report for ADG (EQA&R), Ag. Edn. Div., ICAR

The above monitoring reports can be generated for all months during a financial year or for a particular month in a financial year.

The Overall Scheme Manager i.e. ADG (EP&HS) Agriculture Education. Division, ICAR is facilitated with a dashboard which reflects the data uploading status of a particular scheme for a

given period. Figure 3.5 shows the dashboard consisting of number of beneficiaries and amount of transactions under different schemes.
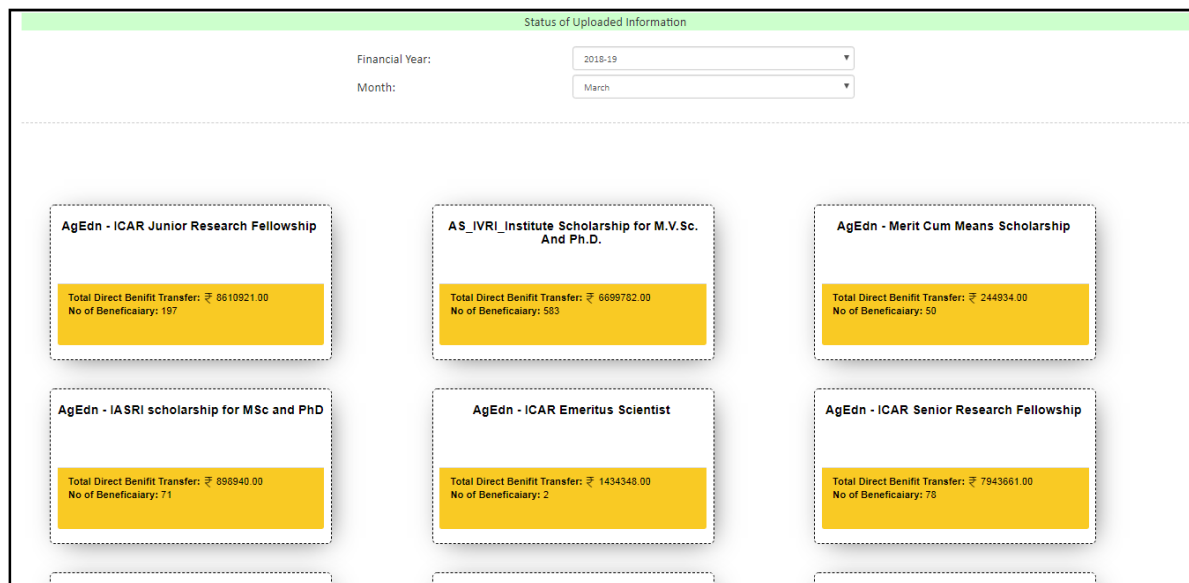

Fig. 3.5: Dashboard for data monitoring

The following reports are available for the Overall Scheme Manager:

- Financial year wise report
- Backlog data entry report
- Combined report
- Overall report
- Overall scheme wise report
- Scheme budget

Financial year wise report: This report can be generated for all the schemes at a time or for a specific scheme in a particular financial year. It includes number of beneficiary and corresponding transaction amount for all the universities in a single report (figure 3.6). Further, the college wise break up under a particular university can also be generated through the link provided with each of the universities (figure 3.7). These reports can be exported into MS-Excel.

Backlog data entry report: The data which was submitted after 31st March 2019 for the financial year 2018-19 in the MIS is present in this report. It includes number of beneficiary and corresponding transaction amount for all the universities in a single report (figure 3.8). Further,

the college wise report under a particular university can also be generated through the link provided with each of the universities (figure 3.9). These data have not been uploaded into DBT Bharat Portal and only present in DBT DARE MIS. These reports can be exported into MS-Excel.

DBT DARE FY wise Report				
		All ● Scheme Wise		Export into Excel
Select Scheme		AgEdn - National Talent Scholarship UG ▾		
Financial Year		2018-19 ▾		
			AgEdn - National Talent Scholarship UG	
Sr.No	University/College Name	University Acronym	No. of Beneficiary	Amount
6	Dr. Rajendra Prasad Central Agricultural University	RAU	8	64000.00
7	Bihar Animal Sciences University	SGIDST	0	0.00
8	Indira Gandhi Krishi Vishwavidyalaya	IGKV	0	0.00
9	Chhattisgarh Kamdhenu Vishvavidyalaya	CGKV	24	402000.00
10	Sardar Krushinagar Dantiwada Agricultural University	SKDAU	0	0.00
11	Anand Agricultural University	AAU	63	1336000.00
12	Navsari Agricultural University	NAU	127	2781933.00
13	Junagadh Agricultural University	JAU	68	1535600.00

Fig. 3.6 Financial year wise report for particular scheme of all universities

| 12 | Navsari Agricultural University | NAU | 127 | 2781933.00 | |

Sr.No	University/College Name	University/College Acronym	AgEdn - National Talent Scholarship UG	
			No. of Beneficiary	Amount
1	Navsari Agricultural University	NAU	0	0.00
2	N. M. College of Agriculture	NMCA	51	1183700.00
3	ASPEE College of Horticulture	ASPEECH	19	376296.00
4	ASPEE Agribusiness Management Institute	ASPEEAMI	0	0.00
5	College of Veterinary Science and Animal Husbandry	CVSAHNGJ	22	498000.00
6	College of Agriculture	CABGJ	13	258300.00
7	College of Agriculture	CAWGJ	5	67509.00

Fig. 3.7 College wise report under particular university

DBT DARE Backlog Data Entry Report								
Sr.No	University/College Name	University Acronym	State Code	AgEdn - ICAR Junior Research Fellowship		AgEdn - ICAR Senior Research Fellowship		AgEdn - National Talent Scholarship PG	
Sr.No	University/College Name	University Acronym	State Code	No. of Beneficiary	Amount	No. of Beneficiary	Amount	No. of Beneficiary	Amount
1	Acharya N.G. Ranga Agricultural University	ANGRAU	AP	0	0.00	0	0.00	0	0.00
2	Sri Venkateswara Veterinary University	SVVU	AP	0	0.00	0	0.00	0	0.00
3	Dr. Y.S.R. Horticultural Univeristy	DrYSRHU	AP	11	970054.00	0	0.00	8	480000.00
4	Assam Agricultural University	AAU	AS	0	0.00	0	0.00	0	0.00
5	Bihar Animal Sciences University	SGIDST	BR	0	0.00	0	0.00	0	0.00

Fig. 3.8 Backlog data entry report for all schemes of all universities

Sr.No	University/College Name	University Acronym	AgEdn - ICAR Junior Research Fellowship		AgEdn - ICAR Senior Research Fellowship		AgEdn - National Talent Scholarship PG	
Sr.No	University/College Name	University Acronym	No. of Beneficiary	Amount	No. of Beneficiary	Amount	No. of Beneficiary	Amount
1	Dr. Y.S.R. Horticultural Univeristy	DrYSRHU	0	0.00	0	0.00	0	0.00
2	Horticultural College & Research Institute	HCRIVAP	8	673170.00	0	0.00	8	480000.00
3	Horticultural College & Research Institute	HCRIAAP	3	296884.00	0	0.00	0	0.00

Fig. 3.9 College wise backlog report under particular university

Combined Report: In this report, the combined data i.e. (actual data + backlog data) of FY 2018-19 is available. This can be exported into MS-Excel file.

Overall report: In this report, scheme wise number of beneficiaries (cumulative) and the respective transaction amount is generated for a particular financial year (figure 3.10). The report can be exported into excel.

Select Financial Year

2019-20

Export into Excel

Sr.No	Scheme Name	Scheme Code	No of beneficiaries	Amount
1	AgEdn - ICAR Junior Research Fellowship	A4AF1	376	35633434
2	AgEdn - Netaji Subhas ICAR International Fellowship	A5IPK	0	0
3	AS_IVRI_Institute Scholarship for M.V.Sc. And Ph.D.	A73NS	370	49031244
4	AgEdn - Merit Cum Means Scholarship	A7N6H	30	179732
5	AgEdn - IASRI scholarship for MSc and PhD	A8A18	72	11076055
6	AgEdn - ICAR Emeritus Scientist	A8MN1	0	0
7	AgEdn - ICAR Senior Research Fellowship	AB5OP	162	28132196
8	AgEdn - Student READY	AL11P	3304	37173411
9	AgEdn - National Talent Scholarship PG	ALMOJ	610	17714130
10	AS_NDRI_Institute Scholarship For MSc And PhD	AMVTA	265	12862189
11	AgEdn - National Talent Scholarship UG	AN084	868	21827900
12	AgEdn - India-Afghanistan Fellowship	AQ20K	11	781345
13	AgEdn - India-Africa Fellowship	AR4YI	11	692587
14	ICAR Headquarter NASF	AR6F4	3	7034443
15	AgEdn - ICAR Emeritus Professor	ASM63	0	0
16	FS - CIFE - Institutional Fellowship	ATUOB	355	43930560
17	AgEdn - ICAR National Professor And National Fellow	AXDCI	0	0
18	AgEdn - Post Matric Scholarship	AY4IO	0	0
19	CS- IARI Scholarship	AYTEW	0	0
20	Agriculture Extension	AWU5S	7403	7813866
	Total		**13840**	**273883092**

Fig. 3.10 Overall DBT DARE report

In addition to this, an overall scheme wise report for the financial year has also been provided. This report can be viewed for all the months (in a financial year) or for a particular month. The scheme wise report can be drilled down further to college wise (student scholarship related schemes) for a particular university. Figure 3.11 shows the college wise beneficiary and transaction details of Navsari Agricultural University under National Talent Scholarship PG scheme uploaded so far in the MIS for the financial year 2019-20.

Overall Scheme Wise Report

Select Financial Year

| 2019-20 | ▼ |

Select Month

| All | ▼ |

Submit

AgEdn - National Talent Scholarship PG

	Organisation Name	No. of Beneficiaries(Cumulative)	Total Amount Tranfered
⊞	Bihar Agricultural University	22	780000.00
⊞	Bihar Animal Sciences University	7	394030.00
⊞	Chhattisgarh Kamdhenu Vishvavidyalaya	6	215000.00
⊞	Anand Agricultural University	10	450000.00
⊟	Navsari Agricultural University	64	1650000.00

University/College Name	Total Beneficiary	Total Amount Transferred (in Rs.)
ASPEE Agribusiness Management Institute	10	300000.00
ASPEE College of Horticulture	6	150000.00
College of Veterinary Science and Animal Husbandry	12	330000.00
N. M. College of Agriculture	36	870000.00

⊞	Junagadh Agricultural University	20	646000.00

Figure 3.11: Overall scheme wise report

Scheme budget: The overall scheme budget and DBT applicable component fund allocation (in Rs.) for the schemes are available in this report (figure 3.12).

Sr.No	Scheme Code	Scheme Name	Overall Scheme Budget (For FY 2019-20 in Rs.)	DBT Applicable Component Fund Allocation (in Rs.)
1	AWU5S	Agriculture Extension	NA	NA
2	A7N6H	AgEdn - Merit Cum Means Scholarship	6000000	6000000
3	AY4IO	AgEdn - Post Matric Scholarship	500000	500000
4	A8MN1	AgEdn - ICAR Emeritus Scientist	104000000	104000000
5	ASM63	AgEdn - ICAR Emeritus Professor	40000000	40000000
6	A4AF1	AgEdn - ICAR Junior Research Fellowship	186000000	186000000
7	AB5OP	AgEdn - ICAR Senior Research Fellowship	250000000	250000000
8	ALMOJ	AgEdn - National Talent Scholarship PG	285200000	285200000
9	AMVTA	AS_NDRI_Institute Scholarship For MSc And PhD	56000000	56000000
10	ATUOB	FS - CIFE - Institutional Fellowship	62468773	62468773
11	AYTEW	CS- IARI Scholarship	89835000	89835000
12	AXDCI	AgEdn - ICAR National Professor And National Fellow	218125000	218125000
13	A8A18	AgEdn - IASRI scholarship for MSc and PhD	11900000	11900000
14	AR4YI	AgEdn - India-Africa Fellowship	216000	216000
15	A73NS	AS_IVRI_Institute Scholarship for M.V.Sc. And Ph.D.	47772000	47772000

Fig. 3.12 Scheme budget report

सारांश

इस परियोजना में, एक वेब आधारित प्रबंधन सूचना प्रणाली (एमआईएस) (https://dbtdare-icar-gov-in) को डेयर—आईसीएआर की 20 डीबीटी योजनाओं के तहत लाभार्थियों के विवरण और लेनदेन की रिपोर्टिंग के लिए विकसित किया गया है। कुल 20 योजनाओं में से 19 कृषि शिक्षा/अनुसंधान से संबंधित है और एक कृषि विस्तार से संबंधित योजना है। इस योजना को देश भर के विभिन्न आईसीएआर संस्थानों, कृषि विश्वविद्यालयों और कृषि विज्ञान केंद्रों में लागू किया गया है। सभी संस्थानो, जहाँ ये योजनाएँ चल रही हैं, इस एमआईएस में अपना डेटा अपलोड करते है। सूचना योजना स्तर पर सम्मिलित की जाती है और एमआईएस में 20 योजनाओं के लिए मासिक आधार पर 20 मासिक प्रगति रिपोर्ट (एमपीआर) तैयार की जाती हैं। यह ऑनलाइन एप्लिकेशन डॉट नेट फ्रेमवर्क का उपयोग करके और 3—टायर आर्किटेक्चर के आधार पर विकसित किया गया है। इस सिस्टम में लाभार्थियों से संबंधित जानकारी को एक्सेल टेम्पलेट के माध्यम से अपलोड किया जा सकता है। लेनदेन विवरण अपलोड करने के लिए, वेब फॉर्म का उपयोग किया जाता है। यह एमआईएस वर्कफ्लो तरीके से संचालित होता है। एडीजी (इपी एबं एचएस), शिक्षा प्रभाग, आईसीएआर डीबीटी सेल के नोडल ऑफिसर है जो हर महीने योजनाओं से जुड़ी डेटा को अनुमोदन करते है। अनुमोदित हो जाने के बाद, इस डेटा को डीबीटी भारत पोर्टल (डीबीटी मिशन ऑफ इंडिया के तहत एक राष्ट्रीय स्तर के पोर्टल) में हर महीने एक निश्चित तिथि पर ले जाया जाता है। दोनो सिस्टम के बीच डेटा विनिमय वेब एप्लिकेशन प्रोग्रामिंग इंटरफेस (वेबएपीआई) के माध्यम से किया जाता है। वर्तमान परिदृश्य में, डेटा को साझा करने के लिए रेस्ट एपीआई का उपयोग किया गया है। एमआईएस में डेटा की निगरानी के लिए संस्थानों और योजना प्रबंधकों दोनों के लिए कई ऑनलाइन रिपोर्ट विकसित की गई हैं। व्यक्तिगत संस्थान एमआईएस में अपने द्वारा अपलोड की गई डेटा देख सकते हैं। योजना प्रबंधक किसी भी समय अपनी संबंधित योजनाओं की डेटा अपलोडिंग स्थिति से संबंधित रिपोर्ट देख सकते हैं। नोडल अधिकारी, डीबीटी सेल, डेयर— आईसीएआर रिपोर्ट और डैशबोर्ड के साथ सभी योजनाओं के लिए डेटा अपलोडिंग स्थिति की निगरानी कर सकते हैं। इस प्रकार, यह एमआईएस समय, ऊर्जा और धन की काफी बचत करेगी और प्रभावी एवं कुशलता पूर्वक जानकारी प्रदान करेगी।

SUMMARY

In this project, a web based Management Information System (MIS) (https://dbtdare.icar.gov.in) has been developed for reporting details of beneficiaries and the transactions under 20 DBT applicable schemes of DARE-ICAR. The schemes include student centric schemes i.e. various scholarships and fellowships, faculty schemes and farmer centric schemes. Out of the total 20 schemes, 19 are related to agricultural education/ research wherein the benefit type is cash and in agricultural extension scheme, the benefit type is in kind. The schemes are implemented in various ICAR Institutes, Agricultural Universities and Krishi Vigyan Kendras across the country. All the organizations, where these schemes are running, are facilitated to upload desired information into this MIS. The information is collated at the scheme level and 20 Monthly Progress Reports (MPRs) are generated on monthly basis for the 20 schemes in the system. This online application is developed using .NET framework and 3-tier architecture has been used. In this system, the information related to beneficiaries can be uploaded into the system through excel template. For uploading of transaction details, web forms are used. The system is operated in workflow manner. ADG(EP&HS), Education Division, ICAR is the Nodal Officer, DBT Cell, DARE-ICAR to approve the schemes related information in every month. Once approved, the information is moved to DBT Bharat Portal, a national level portal under DBT Mission of India, on each month in a fixed date. The data exchange between two portals is done through Web Application Programming Interface (WebAPI). In the present system, Representational State Transfer (REST) APIs have been used for sharing of data. A number of online reports have been developed in the MIS both for the individual organizations and the scheme managers for monitoring of the information in the system. Individual organization can view the information already uploaded by it in the MIS. Scheme Managers can view reports related to data uploading status of their respective schemes at any point of time. Nodal Officer, DBT Cell, DARE-ICAR is provided with reports and dashboard through which the real-time monitoring of the data uploading status for all the schemes can be done. Thus, this system will considerably save time, energy and money through transaction costs reduction and acquire the information in a cost effective manner.

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