

स्टेट फोकस पेपर (2021-22)
STATE FOCUS PAPER (2021-22)

राज्य : हरियाणा
State : Haryana

किसानों की आय में वृद्धि के लिए कृषि उत्पादों का समूहन
Collectivization of Agricultural Produce for Enhancing Farmer's Income



राष्ट्रीय कृषि और ग्रामीण विकास बैंक
National Bank for Agriculture and Rural Development
हरियाणा क्षेत्रीय कार्यालय, चंडीगढ़
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मनोहर लाल
MANOHAR LAL



मुख्य मन्त्री, हरियाणा,
चण्डीगढ़।

CHIEF MINISTER, HARYANA,
CHANDIGARH.

Dated 31/12/2020

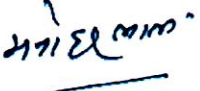
संदेश

हरियाणा एक कृषि प्रधान राज्य है तथा कृषि एवं किसान का विकास राज्य सरकार की प्राथमिकता है। कृषि एवं ग्रामीण क्षेत्र और अधिक उन्नति करें तथा किसानों की आय दोगुनी हो, इसके लिए सरकार द्वारा सकारात्मक प्रयास किए जा रहे हैं। ग्रामीण विकास को बढ़ावा देने की राह पर अग्रसर राष्ट्रीय कृषि एवं ग्रामीण विकास बैंक (नाबार्ड) ने स्टेट फोकस पेपर 2021-22 तैयार किया है, जिसका थीम 'किसानों की आय में वृद्धि के लिए कृषि उत्पादों का समूहन' रखा गया है।

हरियाणा सरकार अपने विजन-2030 के तहत प्रदेश के दीर्घकालीन विकास के लिए लगातार प्रयासरत है। इसी दिशा में कृषि क्षेत्र के विविधिकरण को बढ़ावा देने व घटते भूजल स्तर को नियंत्रित करने के लिए राज्य सरकार ने 'मेरा पानी मेरी विरासत योजना', 'सूक्ष्म सिंचाई परियोजना', बागवानी के अंतर्गत कृषि क्षेत्र को बढ़ावा देने के लिए 'बागवानी विजन', 'मेरी फसल मेरा ब्योरा पोर्टल' व किसानों का जोखिम कम करने के लिए 'भावांतर भरपाई योजना' लागू की है। पशुपालन को बढ़ावा देने के लिए 'हरियाणा पशुपालन अधिनियम, 2019' एवं 'पशु किसान क्रेडिट कार्ड', अति सूक्ष्म, लघु तथा मध्यम इकाइयों के लिए 'आत्मनिर्भर हरियाणा' आदि योजनाओं की शुरुआत की गई है। इसके अलावा, कृषि को व्यावसायिक रूप देने तथा छोटे एवं सीमांत किसानों की आय बढ़ाने के लिए किसान उत्पादक संगठनों के माध्यम से कृषि उपज के समूहन को बढ़ावा दिया जा रहा है।

नाबार्ड द्वारा जिला स्तर पर संभाव्य कृषि एवं अन्य आर्थिक गतिविधियों के आकलन के आधार पर वर्ष 2021-22 के लिए तैयार स्टेट फोकस पेपर में हरियाणा राज्य में बैंकों द्वारा विभिन्न क्षेत्रों के लिए 154295.49 करोड़ रुपये के वित्तपोषण की संभाव्यता का अनुमान लगाया गया है। 'कृषि क्षेत्र में पूंजी निर्माण' पर विशेष बल देते हुए कृषि क्षेत्र के लिए संभावित कुल ऋण का 33 प्रतिशत मियादी ऋण के रूप में संवितरित करने का लक्ष्य रखा गया है।

मैं नाबार्ड को हरियाणा के लिए यह महत्वपूर्ण दस्तावेज तैयार करने के लिए बधाई देता हूँ और सभी बैंकों तथा सरकारी विभागों से आह्वान करता हूँ कि वे स्टेट फोकस पेपर में आकलित वित्तीय संभावनाओं की पूर्ति में अपना पूर्ण योगदान दें और राज्य की प्रगति में सहायक बनें।


(मनोहर लाल)

प्राक्कथन

नाबार्ड, संस्थागत ऋण, अभिनव पहलकदमियों, आधारभूत संरचना के सृजन, स्वयं सहायता समूहों के डिजिटलीकरण एवम् कृषि उत्पादक संगठनों आदि के माध्यम से इस विशाल भारत के देहाती इलाकों में दीर्घकालिक खुशहाली लाने के लिए शुरूआत से ही प्रतिबद्ध है। भारत सरकार द्वारा निर्धारित 2024 तक देश को 5 ट्रिलियन\$ की अर्थव्यवस्था बनाने के लक्ष्य एवं हरियाणा राज्य के चहुँमुखी विकास की दिशा में नाबार्ड, न केवल नित्य-नयी योजनाओं से राज्य की प्रगति में अपना सक्रिय योगदान दे रहा है बल्कि कृषि और ग्रामीण विकास के क्षेत्र में कार्यरत अन्य संस्थाओं की योजनाओं के साथ भी ताल-मेल बिठाकर इस दिशा में भरसक प्रयास कर रहा है।

कोविड -19 महामारी के कारण होने वाली आर्थिक मंदी का मुकाबला करने के प्रयोजन से, भारत सरकार ने कृषि के बुनियादी ढाँचे को सुदृढ़ बनाने के लिए कृषि इन्फ्रास्ट्रक्चर फंड, पशुपालन बुनियादी ढांचा विकास फंड, अति सूक्ष्म, छोटी तथा मध्यम एकाइयों के लिए 'आत्मनिर्भर भारत' सहित कई नयी योजनाएं शुरू की हैं। नाबार्ड भी रियायती दरों पर पुनर्वित्त सहायता देने के साथ-साथ पैक्स को बहु-सेवा केंद्रों के रूप में बदलने और उनके कम्प्यूटरीकरण के लिए वित्तीय सहायता देने के लिए आगे आया है।

कृषि व ग्रामीण क्षेत्रों में समग्र व संतुलित संस्थागत ऋण प्रवाह सुनिश्चित करने के उद्देश्य से नाबार्ड द्वारा राज्य के सभी 22 जिलों की संभाव्यतायुक्त ऋण योजनाओं (पीएलपी) का समेकन स्टेट फोकस पेपर 2021-22 में किया गया है और इस दस्तावेज को "किसानों की आय में वृद्धि के लिए कृषि उत्पादों का समूहन" थीम के साथ तैयार किया गया है। इसका उद्देश्य समूहन के माध्यम से बड़े पैमाने पर कारोबार से होने वाली किफायतों की पहुँच किसानों तक बढ़ाकर उनकी समूहिक शक्ति का लाभ उठाते हुए स्थानीय स्तर पर अलग-अलग उत्पादों के लिए कृषि मूल्यश्रृंखला का निर्माण कर कृषि उत्पादों के एकत्रीकरण को बढ़ावा देना, उनका मूल्यवर्धन करना तथा उन्हें सीधे बाजार तक पहुंचाने की व्यवस्था करना है ताकि लघु और सीमांत किसानों को अपनी उपज का अभीष्ट मूल्य मिल सके।

वित्त वर्ष 2021-22 के लिए राज्य के प्राथमिकता क्षेत्रों हेतु 154295.49 करोड़ रु.की ऋण संभाव्यता का आंकलन किया गया है।

इस दस्तावेज को तैयार करने में, विभिन्न सरकारी विभागों, लीड-बैंक, भारतीय रिज़र्व बैंक, अन्य बैंकों, शोध संस्थानों व विकास कार्यों से सम्बद्ध हितधारकों द्वारा दिये गये सहयोग के लिए मैं उनके प्रति हार्दिक आभार व्यक्त करता हूँ। हरियाणा सरकार के कृषि व ग्रामीण विकास से जुड़े सभी विभागों से मैं पुरज़ोर अनुरोध करता हूँ कि वे ऋण के माध्यम से प्रगति व विकास की गति आगे बढ़ाने के लिए निरंतर अपना सहयोग प्रदान करें। मुझे पूर्ण विश्वास है कि सभी सम्बन्धित एजेंसियों के संगठित प्रयासों से इस दस्तावेज में दर्शाई गई राज्य की सम्भाव्यताओं का दोहन कर उन्हें ज़मीनी हकीकत में बदला जा सकेगा। भविष्य में इस महत्वपूर्ण दस्तावेज को और अधिक उपयोगी बनाने के लिए आपके बहुमूल्य सुझाव आमंत्रित हैं।

29 दिसम्बर 2020

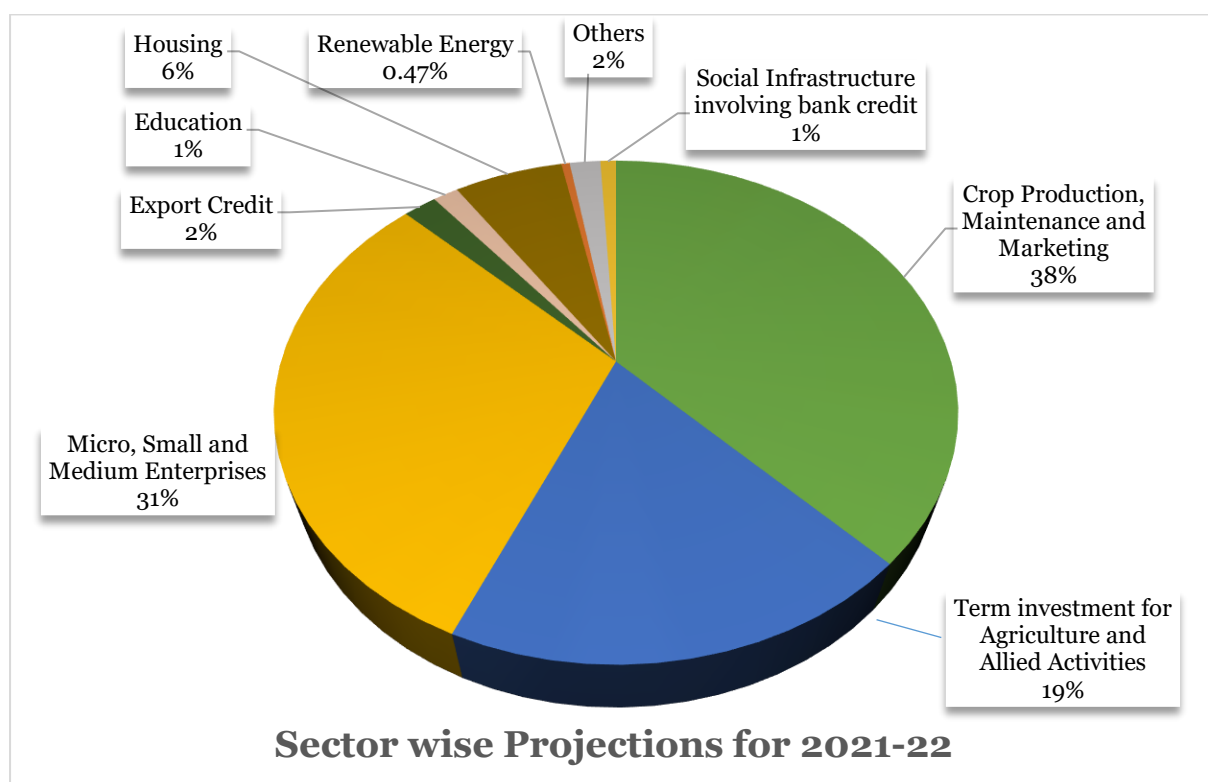
राजीव महाजन
(राजीव महाजन)
मुख्यमहाप्रबंधक

State Focus Paper – 2021-22

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Broad Sector-wise PLP Projections for Haryana for the year 2021-22

		(Rs. lakh)
<i>SN</i>	<i>Sector/Activity</i>	<i>Projection</i>
1	Crop Production, Maintenance and Marketing	58,18,260.49
2	Term investment for Agriculture and Allied Activities	29,01,045.44
	Total Investment under Agriculture and Allied Activities	87,19,305.93
3	Micro, Small and Medium Enterprises	47,47,493.75
4	Export Credit	2,92,979.50
5	Education	2,22,816.60
6	Housing	9,62,264.00
7	Renewable Energy	73,529.72
8	Others	2,72,567.50
9	Social Infrastructure involving bank credit	1,38,592.18
	Total Priority Sector	1,54,29,549.18



Sub-sector wise projections for the State of Haryana for the year 2021-22

		(Rs. lakh)
SN	Particulars	Projections 2021-22
1	Credit Potential for Agriculture	
A	Farm Credit	
i	Crop Production, Maintenance and Marketing (Crop Loan)	58,18,260.49
ii	Water Resources	1,32,449.89
iii	Farm Mechanization	2,85,668.35
iv	Plantation and Horticulture	1,35,148.45
v	Forestry and Waste Land Development	32,687.88
vi	Animal Husbandry – Dairy	5,29,471.34
vii	Animal Husbandry – Poultry	2,20,736.29
viii	Animal Husbandry – Sheep, Goat, Piggery, etc.	40,223.09
ix	Fisheries	22,647.53
x	Farm Credit – Others	4,43,821.58
Sub Total – a (ii to x)		18,42,854.40
B	Agriculture Infrastructure	
i	Construction of storage facilities (Warehouses, Market yards, Godowns, Silos, Cold storage units/ Cold storage chains)	4,04,857.07
ii	Land development, Soil conservation, Watershed development	1,86,631.97
iii	Others (Tissue culture, Agri bio-technology, Seed production, Bio pesticides/ fertilizers, Vermin composting)	86,655.87
Sub Total – b		6,78,144.91
C	Ancillary activities	
i	Food and Agro processing	2,58,049.13
ii	Others (Loans to Cooperative Societies of farmers for disposing of their produce, Agri Clinics/ Agri Business Centres, Loans to PACS / FSS/ LAMPS, Loans to MFIs for on lending)	1,21,997.00
Sub Total – c		3,80,046.13
Total Agricultural Term Loan (a+b+c)		29,01,045.44
Total Agriculture Loan (Crop Loan + ATL)		87,19,305.93
2	Micro, Small and Medium Enterprises	47,47,493.75
3	Export Credit	2,92,979.50
4	Education	2,22,816.60
5	Housing	9,62,264.00
6	Renewable Energy	73,529.72
7	Others	2,72,567.50
8	Social Infrastructure involving bank credit	1,38,592.18
	Total Priority Sector	1,54,29,549.18

Executive Summary

Rural prosperity is primarily dependent upon the growth of critical sectors of the rural economy viz. agriculture, allied sector and rural non-farm sector. With a view to ensuring adequate and balanced flow of institutional credit to such priority sectors, NABARD has been preparing Potential Linked Credit Plans (PLP) annually which are the basis for preparation of Annual Credit Plan (ACP) of banks at the district level. The credit projections made in the PLPs are aggregated in State Focus Paper (SFP) which is presented in the State Credit Seminar. The State Focus Paper also charts out the infrastructure and other requirements needed for achieving the credit projections. The basic objective of such a planning exercise is to assess the credit potential keeping in view the sector specific potential, infrastructure support, forward and backward linkages, local skills, natural resources and credit absorption capacity. The credit projection is also fine-tuned by factoring in the priorities and policies of the Government of India, State Government and RBI. The theme for State Focus Paper 2021-22 is “Collectivization of Agricultural Produce for Enhancing Farmer’s Income”.

1. State Profile

The State of Haryana, which came into existence on 01 November 1966, is situated in the North West of India and covers an area of 44,212 sq. kms, constituting 1.4% of the total geographical area of the country. It is surrounded by Uttar Pradesh in the east, Punjab in the west, Himachal Pradesh in the north, and Rajasthan in the south. The state surrounds the national capital city, New Delhi, from three sides. Historically an agrarian state, Haryana today is a well-developed industrial state, too.

The GSDP at constant (2011-12) prices has been estimated to reach the level of Rs. 5,72,239.70 crore with a growth of 7.7 percent in 2019-20 as compared to the growth of 7.5 percent recorded in 2018-19. The real growth of 7.7 percent recorded in GSDP of the State in 2019-20 is higher than the All India GDP growth of 5.0 percent. The composition of State GSVA indicates that the share of Agriculture Sector is declining whereas the share of Services Sector is increasing. Share of industrial sector remained more or less constant. The share of agriculture & allied Sector in the GSVA at constant (2011-12) prices was 16.57 %, industry was 32.79% and services sector was 50.64 % in 2019-20. The growth in Gross State Value Added in the primary sector has been 5.5%, 6.8 % in the secondary sector and 8.8% in the tertiary sector at constant (2011-12) prices in 2019-20. Compared to national average of Rs. 1,35,050 per capita income of Haryana at current prices was Rs. 2,64,207 (96% higher) in 2019-20.

2. Banking Profile

The State had a network of 63 banks with 5,629 branches as on 30.09.2020. Banking network includes 12 Public Sector Banks (2,904 branches), 21 Private Sector Banks (1,303 branches), 7 Small Finance Banks (135 branches), one RRB (654 Branches), Short-term Cooperative Credit Structure (STCCS) with The Haryana State Cooperative Bank Ltd. (HStCB) at the State level and 19 DCCBs (594 Branches), long-term Cooperative Credit Structure (LTCCS) with The Haryana State Cooperative Agriculture and Rural Development Bank Ltd. (HSCARDB) at the State level and 19 District Primary Cooperative Agriculture & Rural Development Bank Ltd. (DPCARDBs). Besides this, 725 Primary Agricultural Credit Societies (PACS) also cater to the crop loan needs of the farmers under STCCS. As many as 2,143 branches are providing banking services in rural areas and 1,277 branches in semi urban areas. India Post Payment Bank has also started its operation in Haryana. As on 30 September, 2020, a total 2671 numbers of BCAs are functioning in the state. Punjab National Bank functions as the Convenor of the State Level Bankers Committee.

Total deposits of all the banks in the State stood at Rs. 4,37,601 crore as on 31 March 2020 registering a growth of 12.76 % over the previous year. Loans and advances outstanding of the Banks in the State stood at Rs. 2,97,698 crore as on 31 March 2020, registering a growth of 8.56% over the previous year. Credit to Deposit ratio in the State stood at 68% as on 31 March 2020, which is above the national benchmark of 60%. Total priority sector lending during the

year 2019-20 stood at Rs. 1,09,074 crore, compared to Rs. 1,14,551 crore in 2018-19, registering a negative growth of 4.78%, mainly as a result of overall lower disbursements by the Commercial Banks, lower disbursement to MSME and Other Priority Sectors, due to overall slowdown in the economy and the emergence of the pandemic.

3. NABARD's Perception on the Development Perspective of the State

NABARD's perception on development perspective of the State on various parameters are as summarized below:

3.1 Capital formation in agriculture is of critical importance for the sustainability of agricultural growth. Hence there should be a focused and targeted approach to ensure Gross Capital Formation (GCF) in both 'in agriculture' and 'for agriculture' in order to attain 4% growth under agriculture in GDP.

3.2 There is a need for doubling of farmer's income through incorporation of integrated farming techniques with increased focus on horticulture crops and technology adoption. The Farmers (Empowerment & Protection) Agreement on Price Assurance & Farm Services Bill 2020 creates a framework for contract farming. It provides a template at the national level of farming agreements, with regard to agribusiness, processing, and the entire range of services including wholesalers, exporters and large retailers for sale of farming produce at a mutually pre-agreed price. Further, the process of digitization of land record need to be expedited.

3.3 A sizeable portion of agricultural household are still left out of formal credit system. To address the issue among others, the GoH has been started the process of digitization of land records, online creation of charge etc which needs to be operationalized properly by giving banks access to the portal for registration of charges from their branch itself. Further, in the absence of a proper legal framework and lack of records relating to their agricultural activity, tenant farmers/ share croppers/ oral lessees/ landless labourers face difficulty in accessing institutional credit.

3.4 In Haryana, the productivity of major crops is higher than the national average. However, it is still possible to increase the agricultural productivity by bridging the yield gaps between genetic potential attainable under frontline demonstrations and that attained at farmers' fields.

3.5 The impact of climate change in more India is more pronounced due to its continued dependency on agriculture and excessive pressure on natural resources for providing livelihoods, as well as inadequate coping mechanisms. NABARD is supporting projects many of which can be classified under climate finance. NABARD's thematic areas of forestry, agriculture, animal husbandry, land development, minor irrigation, etc., have projects/ components with emission reduction potential. Apart from these, areas like farm mechanisation, Self Help Groups, Storage & Market Yards, etc. have some linkages with climate change adaptation. Incidentally, NABARD's three flagship programmes namely - Rural Infrastructure Development Fund (RIDF), Integrated Watershed Management, Umbrella Programme on Natural Resource Management (UPNRM) have supported projects with emission reduction potential in the state. The State Government has been making efforts to address the impact of climate change in Haryana through formulation of suitable policies and introduction of schemes tackling the related issues through measures involving both adaptation and mitigation aspects. There is increased need to promote Climate Smart Agriculture, Integrated Farming System and Agro forestry to reduce the adverse impact of Climate Change.

3.6 Collectivization of producers, especially small and marginal farmers, into producer organisations has emerged as one of the most effective pathways to address the many challenges of agriculture but most importantly, improved access to investments, technology and inputs and markets. Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India has identified farmer producer organisation registered under the special

provisions of the Companies Act, 1956 as the most appropriate institutional form around which to mobilize farmers and build their capacity to collectively leverage their production and marketing strength. Approx. 460 FPOs (including FPCs) have been formed in Haryana by SFACH, NABARD and other organizations during the last decades. In addition to ongoing FPOs' projects, 150 more FPOs are to be promoted in Haryana in next four years (from 2020-21 to 2023-24) under CSS scheme of GoI.

3.7 In Haryana, NABARD has been promoting FPOs which are taking up many activities. Out of these, some FPOs are engaged in seed production of garlic, onion, peas, okra and Wheat. viz., Ambala Seed Producer company Limited and Nilokheri Farmer Producer Company Ltd. (NIFCO) have taken up activities especially, Seed Production, packaging and marketing.

3.8 Micro, Small & Medium Enterprises (MSME) are known as engine of economic growth and are necessary for promoting equitable development. Haryana is among the economically developed and industrialized States of India. The industrial sector is the 2nd largest contributor to the State GSVA with 32.8% in 2019-20 (at 2011-12 constant prices). State Government had also taken 'Ease of Doing Business' further by stressing on 'Ease of Living' for the common men, especially those belonging to poor and middle class of the society.

3.9 The SHG-Bank Linkage Programme has proved to be a major supplementary credit delivery mechanism with wide acceptance by banks, NGOs, various government departments and the poor. While it is recognized that the banks have enormously contributed to the growth of the programme, there has been some reluctance by the banks to accord priority to this programme owing to lack of effective monitoring, staff shortages, increasing NPAs under SHG financing, etc. To augment flow of credit to landless farmers cultivating land as tenant farmers, oral lessees or share croppers and small / marginal farmers as well as other poor individuals taking up farm activities, off-farm activities and non-farm activities the JLG credit model is also being used by banks in rural areas for extending micro credit. On the basis of annual progress in this portfolio, the assigned targets for JLG formation during the year 2020-21 is 1,10,000. NABARD Haryana RO has recently entered into an Agreement with SBI for promotion of 1000 JLGs.

3.10 NABARD provides concessional financial assistance to State Govt. and its agencies for undertaking infrastructural development in Agriculture and Rural Development. Major interventions include Rural Infrastructure Development Fund (RIDF), Micro-Irrigation Fund, NABARD Infrastructure Development Assistance (NIDA), Dairy Processing and Infrastructure Development Fund (DIDF), Fisheries and Aquaculture Infrastructure Development Fund (FIDF), Agri-Market Infrastructure Fund (AMIF), Warehouse Infrastructure Fund (WIF), Long-Term Irrigation Fund (LTIF), Animal Husbandry Infrastructure Development Fund (AHIDF), Food Processing Fund (FPF), etc. The State Govt and its concerned departments should take advantage of these funds for undertaking infrastructural development in rural areas.

3.11 Financial inclusion broadens the resource base of the financial system by developing a culture of savings among large segment of rural population and plays its own role in the process of economic development. Further, by bringing low income groups within the perimeter of formal banking sector; financial inclusion protects their financial wealth and other resources in exigent circumstances. Financial inclusion also mitigates the exploitation of vulnerable sections by the usurious money lenders by facilitating easy access to formal credit. Reserve Bank of India under the aegis of Financial Inclusion Advisory Committee (FIAC) initiated the process of formulation of National Strategy for Financial Inclusion (NSFI) for the period 2019-2024 and released the same on January 10, 2020. The strategy aims to provide access to formal financial services in an affordable manner, broadening & deepening financial inclusion and promoting financial literacy & consumer protection. Concerted efforts of all the related stakeholder are necessary to help people secure financial services and products at economical prices.

3.12 SLBC Haryana prepares the Annual Credit Plan (ACP) for the State every year. There has been a steady increase in the total GLC over the years. In terms of volume, the total credit flow under Priority Sector advances in the State has increased from around Rs. 83845 crore in 2015-16 to Rs. 109074 crore in 2019-20. There has been positive correlation between Priority Sector credit flows to the GDP of the state as well as agriculture production over the years.

3.13 NABARD has been implementing watershed development projects since the inception of Indo-German Watershed Development Programme (IGWDP) in India during 1990s. NABARD has sanctioned three Watershed Projects in the State of Haryana. Further, in order to take up additional economic activities in watershed and wadi project areas, NABARD has decided to extend concessional refinance support to all eligible banks/FIs to enable them to deepen institutional credit to beneficiaries in these project areas. NABARD has earmarked a refinance amount of Rs.5000 crore under this special dispensation during 2020-21 to 2022-23.

3.14 With a view to rejuvenating the PACS, many initiatives have been undertaken by NABARD and one such initiative has been supporting PACS as MSC program from the year 2011 onwards through direct credit as well as through refinance to CCBs/StCBs to make them a self-sustainable entity. Further, with the proposed Agriculture Infrastructure Fund (AIF) scheme under Aatmanirbhar Bharat initiative of GoI, for establishing decentralized farm-gate Post Harvest Management infrastructure wherein PACS have been included as one of the eligible institutions for interest subvention, it is envisaged that PACS can now play a major role in physical and financial supply chain of commodities by working as spokes to the Gramin Agriculture Markets (GrAMs). With investments in post-harvest infrastructure, it is hoped that farmers would be able to reduce post-harvest losses and increase their value realization for the produce.

The objective of the scheme is transformation of 35,000 PACS into MSC in a phased manner spanning over three years with an objective of PACS acting as enabling institutions for meeting the national goal of doubling of farmers' income. The target proposed for current year is transformation of 5,000 PACS and for subsequent years it shall be 15,000 PACS during FY22 and 15,000 PACS during FY23. Rs.5000 crore have been earmarked under this special dispensation for the year 2020-21. All PACS which have powers to borrow for creation of infrastructure in the byelaws and have sufficient borrowing power are eligible.

3.15 To promote livelihood opportunities to rural youth, NABARD is supporting Entrepreneurship Development Programmes (EDPs) and Skill Development Programmes (SDPs) for facilitating generation of self-employment and wage employment opportunities in rural areas conducted through Rural Development Self Employment Training Institutes (RUDSETIs) and Rural Self Employment Training Institutes (RSETIs). Further, Micro Enterprise Development Programme (MEDP) and Livelihood and Enterprise Development Programme (LEDP) for SHG members are being organised to enhance the capacities of the members of matured SHGs to take up micro enterprise through appropriate skill upgradation in the existing or new livelihood activities both in farm and non-farm sectors.

3.16 NABARD was actively working during the lock-down period and some of the interventions undertaken during COVID-19 pandemic outbreak include disbursements made under (i) Special Liquidity Facility to StCB and RRB (ii) Special Liquidity Facility (SLF) for NBFC-mFIs, in-principal approval for concessional financing of 95 PACS for infrastructure creation, etc.

3.17 In view of the emerging challenges of land degradation related issues due to indiscriminate use of water in states like Punjab, Haryana and Western Uttar Pradesh, NABARD is implementing a pilot project for reclamation alkaline soil in Haryana and Punjab. This will broaden the scope of watershed projects beyond soil and water conservation in rainfed/ dryland areas and will extend it to restoration of productivity of degraded soils.

NABARD will implement the pilot project on a limited scale of 1000 ha area each for alkaline soil in Karnal/ Kaithal district of Haryana. The envisaged total grant support is Rs.7.00 crore.

4. Potential Credit Outlay

The aggregate credit potential for the Priority Sector for the year 2021-22 in Haryana has been estimated at Rs. 154295.49 crore after considering the existing and emerging opportunities, showing an increase of Rs. 7562.23 crore (5.15%) over the previous year. Of the SFP projections of Rs. 154295.49 crore, the projections for agriculture sector have been estimated at Rs. 87193.05 crore (56.5 % of Total PS), MSME sector at Rs. 47474.93 crore (30.77 %), and Rs. 19,627.50 crore (12.72%) to Other Priority Sectors like Export Credit, Education, Housing, Renewable Energy, Social infrastructure and Others. The district-wise/sub-sector-wise break-up of these projections are given in Annexure I. Salient features of the credit potential are as under:

4.1 Agriculture & Allied Sectors

4.1.1 Crop Loan

The credit potential for short term crop production sector has been made at Rs. 58182.60 crore for the year 2021-22 as against the projection of Rs. 56517.26 crore during the previous year, registering an increase of about 2.95%. The issues involved in crop production and productivity in the State which needs interventions are dominance of paddy wheat cropping system, soil salinity and alkalinity, declining ground water table, stubble burning, poor seed replacement ratio and stagnating productivity of major crops.

In order to maintain the growth of crop loan, concerted efforts are needed to produce more from less land by enhancing farm productivity, Crop diversification, Coverage of all eligible farmers through KCC, proper implementation of the revised KCC scheme, Coverage of farmers under the PMFBY, organic farming, etc. Farmers Producers Organizations (FPOs) need to be encouraged for collectivization efforts and aggregation of produce. Integrated farming systems (IFS), with emphasis on greater diversification should be popularized.

4.1.2 Water Resources

As per the report on Dynamic Ground Water Resources, out of total 128 assessed blocks taken for assessment in Haryana, 78 have been categorized as 'Over-exploited', 3 as 'Critical', 21 as 'Semi Critical' and 26 as 'Safe'. The situation of depleting water level is alarming and warrants promotion of Water Management, On Farm Development and Water Conservation measures. No further groundwater exploitation in overexploited areas and restrictive exploitation in critical and semi critical areas are recommended. The alarming situation in the State warrants steps for devising methodologies to conserve water as well as judicious use of the available water. In the past, emphasis was on exploiting the ground water resources to the maximum extent, while the current focus is on conservation and efficient use of water. A fund namely Micro Irrigation Fund (MIF) with a corpus of Rs. 5000 crore has been set up in NABARD for promoting State Government's effort to propagate Micro irrigation. Credit projection of Rs. 1324.49 crore has been made for the sector for the year 2021-22.

4.1.3 Farm Mechanization

Of late, non-availability & high cost of labour has increased the importance of farm mechanization which is not only efficient but also cost effective. In the current year also, the state has faced the shortage of migrant agricultural labour, due to COVID 19. Presently the type of farm equipment used in the state are suited to sustain the rice-wheat cropping system. The replacement demand of tractors has to be met by Bankers by educating farmers to purchase energy efficient tractors instead of higher power tractors. With the emerging scenario of crop diversification, there will be a need for specialized equipment. New opportunities for specialized equipment in the diversified sectors such as horticulture, crop residue management, land development and for precision farming, private investment, IOTs etc. have to be explored by all the stakeholders. Custom hiring is emerging as a business avenue for entrepreneurs and this trend needs to be encouraged. In the dairy sector, mechanization is in the initial stage but has huge scope at various stages of production. Credit potential accessed for the sector is Rs. 2856.68 crore for the year 2021-22.

4.1.4 Plantation and Horticulture

Government of Haryana has prepared “Horticulture Vision” to double the area under horticulture from the present 8.17 per cent to 15 per cent and triple the horticulture production in the State by 2030. In the State, Horticultural crops cover 5.23 lakh hectare area with total production of 80.30 lakh MT during the year 2018-19.

Certain issues affecting this sector are infrastructure constraints, shortage of quality seeds and genuine planting materials, lack of post-harvest management and inadequate processing facilities. Developing value chain and post-harvest management & agro-processing is critical for developing this sector. Adoption of cluster approach, tapping the export potential, adoption of protected cultivation for high value crops, promotion of food and agro processing facilities etc., would lead to enhanced off-take of credit and development of the sector. Farmers Producers Organizations can play an important role for the growth of this sector. Credit projection of Rs. 1351.48 crore has been made for this sector for the year 2021-22.

4.1.5 Forestry and Wasteland Development

Haryana is primarily an agriculture State and deficient in area under forest. Total forest and tree cover of the Haryana state is 3.17 lakh hectare (7.16 % of its geographical area). Promotion of Agro Forestry or social forestry in waterlogged and salinity/alkalinity affected lands, assume special significance as these activities can turn the unproductive land and wasteland into cultivable land. Credit projection of Rs. 326.87 crore has been made for the sector for the year 2021-22.

4.1.6 Animal Husbandry

Livestock sector in Haryana contributes about 40 percent to its agricultural GDP. It is also a major source of employment throughout the year and livelihood to small farmers, including women. Per capita per day milk availability of the State is quite high @ 1142 gms (total milk production 2019-20 – 117.35 lakh tonne) against the national average of 375 gms. Haryana is also the home tract of world famous ‘Murrah’ buffaloes popularly known as ‘black gold’ and dual purpose ‘Haryana’ cow. In spite of rich livestock resources with impressive contribution to GDP, significant roles in rural prosperity and socio-economic development of the society, the huge potential of livestock sector remains underexploited. NABARD has two dedicated fund namely Dairy Infrastructure Development Fund (DIDF) and Animal Husbandry Infrastructure Development Fund (AHIDF) for developing the infrastructure in Dairy Sector. Credit projection of Rs. 5294.71 crore has been made for the year 2021-22. In addition to this, a credit potential of Rs. 2207.36 crore and Rs. 402.23 crore have been made for Poultry development and Sheep/Goat/Piggery development respectively, for the year 2021-22.

4.1.7 Fisheries Development

Fishery as a subsidiary occupation is becoming popular among the farmers of Haryana. The State has vast and varied potential for inland fisheries. Various measures such as encouraging small landholders for integrated fish farming, Utilization of saline affected lands by introducing Pacific White Shrimp, collectivization through FPOs, formulation of insurance policy etc. would help in increasing the credit flow to this sector. NABARD has launched the Fisheries & Aquaculture Infrastructure Development Fund (FIDF) for the development of aquaculture sector. For improving the credit scenario, banks in close coordination with fisheries department can work together for providing working capital support to fish farmers. Credit potential of Rs. 226.47 crore has been made for the sector for the year 2021-22.

4.1.8 Agriculture Infrastructure

Post-harvest management of agricultural and horticultural produce is one of the biggest challenges facing the agriculture sector. Proper storage and marketing arrangements, besides reducing post-harvest losses, helps the farmers to avoid distress sales. The procurement agencies of the State have a covered storage capacity of 87.21 lakh M.T. as on 31.12.2019. The Horticulture Department of State has total 187 cold storages varies from 100 to 80000 MT capacity. As on 30 June 2020, total capacity of cold storages in Haryana is 7.75 LMT. The current food grain storage capacity in Haryana amounts to 115.28 Lakh MT with around 90 Lakh MT of covered storage capacity. As per the potential assessed by NABARD there is scope

for at least another 20-25 Lakh MT storage capacity creation. There is a need to encourage setting up of micro-warehouses and silos in the state. A credit potential of Rs. 4048.57 crore has been made for the sector for the year 2021-22.

The problem of soil salinity-alkalinity and water logging is reaching an alarming proportion in Haryana. Reclamation of waterlogged and salinity affected areas in the State through adoption of various land development Soil Conservation, Watershed Development activities would help in restoring the deteriorating soil health and in improving the levels of crop productivity. Agriculture infrastructure investments like tissue culture labs, seed production units, bio fertilizer / bio-pesticide units, vermi-compost units, organic farming etc. need to be popularized through financing. Credit potential of Rs. 1866.31 crore for Land development, Soil conservation, Watershed development activities and Rs. 866.55 crore for Agriculture Infrastructure -other activities (Tissue culture, Agri bio-technology, Seed production, Bio pesticides/ fertilizers, Vermin composting etc.) have been projected for the year 2021-22. A dedicated Agri Infrastructure Fund (AIF) has been created by GoI for development and upgradation of agri infrastructure in the country.

4.1.9 Ancillary Activities

Food processing industry plays a significant role in development of economy because of integration and synergy it provides between agriculture and industry, the two pillars of economic prosperity. The growth of food processing sector is also essential to meet the twin national objective of 'inclusive growth' and 'food security'. Haryana with its production capabilities, infrastructure and large consumer base provides a unique opportunity to industries in food processing sector. Favorable climate for the production of quality fruits and vegetables, fertile soil and proximity to major market-NCR, makes agro processing a potential money spinner for the farmers of Haryana. NABARD has supported two mega food parks in the state. Food Processing units being set up in MFP can be financially supported by the bankers. Linkage between growers and the processing industry, development of entrepreneurial capabilities, development of power, water, transport and storage infrastructure need to be further strengthened. Loans for setting up of Agri clinic and Agri Business Centres, lending to mFIs for on-lending to Priority sector, financing of FPOs are included under Ancillary Activities - Others Activities section. As on 31 December 2020, NABARD has sanctioned and promoted 91 FPOs in the State. The total credit potential estimated under ancillary activities including other activities is Rs. 3800.46 crores for FY 2021-22.

4.2 MSME

Haryana has emerged as one of the most industrialized States in the country. State has made impressive strides over the years to carve out a niche for itself in the fields of engineering, automobiles, textiles, leather, Information Technology, electronic hardware and hi-technology industries. The State has been a leader in manufacture of a number of products like cars, two-wheelers, tractors, scientific instruments, footwear etc.

During the ongoing COVID-19 pandemic, MSME sector has been affected badly and several interventions from central & state governments as well as from banking sector has already been initiated to revive the sector. Govt. of India has widened the definition of MSME on the basis of investment and annual turnover and eliminated the difference on the basis of manufacturing & service criteria. After broadening of the definition, banking sector would be able to extend more credit to the MSME sector. A credit projection of Rs. 47,474.93 crore has been made for the year 2021-22.

4.3 Export Credit

Exports play a vital role in the economic growth of Haryana as the state's performance on the export front has been excellent. The major export items from the state are software, handloom products, scientific instruments, garments, automobiles and automotive components, electrical appliances, rice, pickles, etc. More than 60% of export of Basmati rice from India takes place from Haryana alone. Haryana has been one of the top contributors for Auto exports. The textile industry is also flourishing the export from the state, mainly from the cities such as Faridabad, Hisar, Panipat, Sonapat and Gurugram. The agro-based industry of

Haryana still holds a strong potential for exports. Further, providing more facilities/incentives to the exporting units would increase exports from the state. The growth prospects of the state are very bright keeping in view the dynamic and vibrant growth provoking sectors of the state economy supported with a strong policy environment. A credit projection of Rs. 2,929.79 crore crore has been made for the year 2021-22.

4.4 Education

Modern economic growth, as seen in recent years, is driven by knowledge and education provides inputs for economic growth. Literacy rate in the State is 75.6% as against all-India literacy rate of 74%. As per Revised Priority Sector Guidelines, 2020, loans to individuals for educational purposes, including vocational courses, not exceeding Rs. 20 lakh will be considered as eligible for priority sector classification. The potential for Education sector for the year 2021-22 has been worked out at Rs. 2,228.16 crore.

4.5 Housing

Housing sector in India is one of the fastest growing sector and a key input in economic, social, and civic development. The requirement of housing is growing in the context of the changing knowledge, changes in lifestyle and choice, environment, availability of infrastructural facilities and rapid urbanization. Central Government has launched a comprehensive mission “Housing for All by 2022” through Pradhan Mantri Awas Yojna (PMAY). Total potential for the sector for the year 2021-22 has been worked out at Rs. 9,622.64 crore.

4.6 Renewable Energy

The issue of climate change has emerged as a global threat and considering the environmental impacts of non-renewable energy resources, the shift towards renewable energy has become imperative rather than a choice. Given the dwindling resources in the form of thermal power, tapping the other renewable energy sources such as solar, biomass, wind and small hydro power plants have good scope in the State. Various policies implemented by GoH include Haryana Solar Power Policy 2016, Haryana Bio-energy Policy 2018, PM KUSUM Scheme etc. The aggregate credit potential assessed for the year 2021-22 for different activities under the sector is Rs. 735.29 crore.

4.7 Social Infrastructure involving Bank Credit

Social and physical infrastructures are the key engines for growth, which require continued investments to accelerate the growth rate. Social Infrastructure covering schools, health care facilities, drinking water and sanitation facilities in Tier II to Tier VI centers have now been brought under the ambit of PSL norms. Assessment of the potential for investments which can come up through private participation with bank credit has been attempted based on the demand felt in the district. The aggregate credit potential assessed for the year 2021-22 for various activities under the sector is Rs. 1,385.92 crore.

4.8 Others - Miscellaneous

Loans to SHG/JLGs, loans to distressed persons, loans to State Sponsored Organisations involved with Scheduled Castes/ Scheduled Tribes for the specific purpose and loans to Start-ups up to the limit specified by the revised priority sector guidelines 2020 are eligible to be classified under the sector. The total credit potential under this sector for the year FY 2021-22 has been estimated at Rs. 2,725.67 crore.

5. Infrastructure support

Infrastructure development plays a catalytic role in the growth of any economy. It also enhances the flow of modern technology, and private investment improves productivity and increases trade and commerce across the boundaries. Inadequate and inefficient infrastructure impedes the economy from realising its full growth potential regardless of the progress on other fronts.

NABARD, as the apex level development bank, has been supporting projects for building infrastructure and other promotional activities for development of agriculture, allied and rural non-farm sector activities as well as rural areas of the country. Special funds like Rural

Infrastructure Development Fund (RIDF), Long Term Irrigation Fund (LTIF), Micro Irrigation Fund (MIF), Agriculture Infrastructure Fund (AIF), Animal Husbandry Infrastructure Development Fund (AHIDF), Dairy Processing & Infrastructure Development Fund (DIDF), Fisheries and Aquaculture Infrastructure Development Fund (FIDF), Agri Marketing Infrastructure Fund (AMIF), Warehouse Infrastructure Fund (WIF), Food Processing Fund (FPF), Micro Food Processing Fund, NABARD Infrastructure Development Fund (NIDA) etc. have been created to supplement the efforts being made by State Governments and Govt. agencies for creation of infrastructure in related areas. Private investments are required in for godowns, cold storages & seed processing industries and other post-harvest infrastructure. These will create a big impact with increased production and productivity, better price realisation to farmers.

6. Collectivization of Agricultural Produce:

Govt has long recognized the necessity of structural reforms and transformational initiatives towards the revitalisation of Indian agriculture both by way of stepping up investments for productivity enhancement as also reforms in agricultural marketing and post harvest agri logistics for boosting agricultural growth. In this context, a sustainable solution lies in collectivisation of agricultural produce and value addition/ marketing for achieving the economy of scale and creating commodity-specific agri value chains with participation of agri entrepreneurs and primary producers on the equitable terms. Therefore, in order to give farmers' collectivisation a competitive edge, GoI started categorizing Farmers Producers Organizations (FPOs) as an entity accommodated under the Company's Act and Co-operative Societies Act.

Approx. 460 FPOs have been formed in Haryana under various initiatives of the SFACH, NABARD and other organizations during the last decade. The activities being handled by them range from grain procurement (i.e. Wheat, rice, mustard) bee keeping, dairy based activities, vegetable cultivation, custom hiring centre, primary processing, basmati rice etc. Recognizing the potential of collectivization, GoI has come up with a plan to promote 10,000 FPOs in a span of 05 years in the budget for 2019-20. In addition to ongoing FPOs' projects, NABARD will promote 100 FPOs in next four years (from 2020-21 to 2023-24) under CSS scheme of GoI in Haryana.

Handholding support and capacity building of FPO members, making farmers digitally and financially literate, development of transport and logistics infrastructure, creation of storage and food processing infrastructure, Custom Hiring Centres, marketing of inputs and outputs, etc. are some areas which need the consorted efforts of all the stakeholders to make the FPOs efficient and viable.



State Profile

State - Haryana

1. PHYSICAL & ADMINISTRATIVE FEATURES

Total Geographical Area (Sq.km)	44212
No. of Sub Divisions	73
No. of Blocks	142
No. of Villages	7356
No. of Panchayats	6214

3. LAND UTILISATION ('000 ha)

Total Area Reported	4421
Forest Land	317
Area Not Available for Cultivation	562
Permanent Pasture and Grazing Land	24
Land under Miscellaneous Tree Crops	6
Cultivable Wasteland	49
Current Fallow	111
Other Fallow	75
Net Sown Area	3508
Total or Gross Cropped Area	6550
Area Cultivated More Than Once	3042
Cropping Intensity [GCA/NSA]	186.7

6. WORKERS PROFILE [IN '000]

Cultivators	2481
Small/Marginal Farmers	1117
Agricultural Labourers	1528
Workers engaged in Household Industries	262
Workers engaged in Allied Agro-activities	NA
Other workers	4645

8. HOUSEHOLDS [in '000]

Total Households	4858
Rural Households	3044
BPL Households	858

10. VILLAGE-LEVEL INFRASTRUCTURE [Nos.]

Villages Electrified	7356
Villages having Agriculture Power Supply	NA
Villages having Post Offices	NA
Villages having Banking Facilities	2704
Villages having Primary Schools	NA
Villages having Health Centres	2953
Villages having Potable Water Supply	7356
Villages connected with Paved Approach Roads	7356

13. IRRIGATION COVERAGE ['000 Ha]

Total Area Available for Irrigation (NIA + Fallow)	3378
Irrigation Potential Created	NA
Net Irrigated Area (Total area irrigated at least once)	3177
Area Irrigated by Canals/Channels	1181
Area Irrigated by Tubewells	1996
Area Irrigated by Tanks	NIL
Area Irrigated by Other Sources	NIL
Irrigation Potential Utilized (Gross Irrigated Area)	5737

15. AGRO-PROCESSING UNITS

Type of Processing Activity	No of units	Cap.[MT]
Food (Rice/Flour/Dal/Oil/Tea/Coffea)	89	
Sugarcane (Gur/Khandsari/Sugar)	17	
Fruit (Pulp/Juice/Fruit drink)	10	
Spices (Masala Powders/Pastes)	—	
Dry-fruit (Cashew/Almond/Raisins)	—	
Cotton (Ginning/Spinning/Weaving)	99	
Milk (Chilling/Cooling/Processing)	28	
Meat (Chicken/Mutton/pork/Dry Fish)	—	
Animal feed (Cattle/Poultry/Fishmeal)	8	

17. ANIMAL POPULATION AS PER CENSUS 2019 [in '000]

Category of animal	Total	Male	Female
Cattle - Cross bred	871	79	792
cattle - Indigenous	1201	251	950
Buffaloes	4368	399	3968
Sheep - Cross bred & Indigenous	288	32	256
Goat	335	49	286
Pig - Cross bred & Indigenous	65	23	42
Horse/Donkey/Camel	NA	NA	NA
Poultry - Cross bred & Indigenous	46300	NA	NA

2. SOIL & CLIMATE

Agro-climatic Zone	3
Climate	Arid to semi-arid
Soil Type	Loamy Sand, Sandy Loam, Sandy Soil & Loamy Soil

4. RAINFALL & GROUND WATER

Rainfall [in mm]	Normal	Actual	2017	2018	2019
	563	417	417	524	315
Variation from Normal			-25	-7	-44
Availability of Ground Water [BCM]	Annual Replenishable Ground Water Resource		Net Annual Ground Water Availability		Annual Ground Water Draft
	10.15		9.13		12.50

5. DISTRIBUTION OF LAND HOLDING [Nos in '000 & Area in '000 ha]

Classification of Holding	Holding Nos.	% to Total	Area ha.	% to Total
<= 1 ha	803	49.32	392	10.86
>1 to <= 2 ha	314	19.29	460	12.75
>2 to <= 4 ha	278	17.08	802	22.22
>4 to <= 10 ha	192	11.79	1168	32.36
> 10 ha	41	2.52	788	21.83
Total	1628	100.00	3609	100.00

7. DEMOGRAPHIC PROFILE [IN '000]

Category	Total	Male	Female	Rural	Urban
Population	25351	13495	11856	16509	8842
Scheduled Caste	5114	2710	2440	3720	1394
Scheduled Tribe	Nil	Nil	Nil	Nil	Nil
Literate	16599	9794	6805	10158	6441
BPL(Households)	858	NA	NA	638	220

9. HOUSEHOLD AMENITIES [Nos. in '000 Households]

Having brick/stone/concrete houses	3352	Having electricity supply	4270
Having source of drinking water	4718	having independent toilets	3238
Having access to banking services	3214	Having radio/TV sets	3261

11. INFRASTRUCTURE RELATING TO HEALTH & SANITATION [Nos.]

Anganwadis	25962	Dispensaries	125
Primary Health Centres	511	Hospitals	190
Primary Health Sub-Centres	2636	Hospital Beds	11240

12. INFRASTRUCTURE & SUPPORT SERVICES FOR AGRICULTURE

Fertiliser/Seed/Pesticide Outlets [Nos.]	NA	Agriculture Pumpsets [Nos.]	877151
Total N/P/K Consumption [MT] (P)	14,76,679	Pumpsets Energised [Nos.]	614970
Certified Seeds Supplied ['000 qtl]	3273.69	Agro Service Centres [Nos.]	
Pesticides Consumed [MT] (P)	4015	Soil Testing Centres [Nos.]	34
Agriculture Tractors [Nos.] (P)	3,00,792	Plantation Nurseries [Nos]	22
Power Tillers [Nos.]	26216	Farmers' Clubs [Nos.]	2695
Harvesters [Nos.]	238346	Krishi Vigyan Kendras [Nos.]	18

14. INFRASTRUCTURE FOR STORAGE, TRANSPORT & MARKETING

Rural/Urban Mandi/Haat [Nos.]	27703	Wholesale Market [Nos.]	108
Length of Pucca Road [Km.]	26184	Godown Capacity [000 ton]	72
Length of Railway Line [Km.]	4439.16	Warehouse Capacity [MT]	9200000
Public Transport Vehicle [Nos.]	179610	Cold Storage [Nos.]	338
Goods Transport Vehicle [Nos.]	315353	Cold Storage Capacity [MT]	749830

16. AREA, PRODUCTION & YIELD OF MAJOR CROPS

Crop	2017-18		2018-19 (P)		Avg. Yield [kg/ha]
	Area ('000 ha)	Prod. ('000 T)	Area ('000 ha)	Prod. ('000 T)	
Wheat	2,530	12263	2553	12573	4925
Paddy	1422	4880	1447	4516	3121
Sugarcane	115	9633	109	8505	78027
Cotton('000 bales)	669	1626	708	2013	2843
Oilseeds	559	1121	625	1277	2043

Production of Cotton(lint) is in Bales(170 kg per bale in India)

18. INFRASTRUCTURE FOR DEVELOPMENT OF ALLIED ACTIVITIES

Veterinary Hospitals/Dispensaries [Nos]	2879	Animal Markets [Nos]	
Disease Diagnostic Centres [Nos]	23	Milk Collection Centres [Nos]	
Artificial Insemination Centres [Nos]		fishermen Societies [Nos]	
Animal Breeding Farms [Nos]		Fish Seed farms [Nos]	15
Animal Husbandry Tng Centres [Nos]	2	Fish Markets [Nos]	3
Dairy Cooperative Societies [Nos]	6249	Poultry Hatcheries [Nos]	
Improved Fodder Farms [Nos]	NA	Slaughter houses [Nos]	37

19. MILK, FISH, EGG PRODUCTION & THEIR PER CAPITA AVAILABILITY

Fish	Production [000' T]	166.79	Per cap avail. [gm/day]	
Egg	Production [Lakh Nos]	66153	Per cap avail. [nos/p.a.]	224
Milk	Production [000' T]	11734	Per cap avail. [gm/day]	1142
Meat	Production [000' T]	553.87	Per cap avail. [gm/day]	

Chapter 1

State Profile

1.1 The State of Haryana, which came into existence on 01 November 1966, is situated in the North West of India and covers an area of 44,212 sq. kms, constituting 1.4% of the total geographical area of the country. For administrative purposes, Haryana is divided into 6 divisions, 22 districts, 73 sub-divisions, 93 Tehsils, 49 Sub-Tehsils and 142 blocks, 154 towns, 6,214 panchayats and 7356 villages. The population of the State at 253.51 lakh which is 2.09% of the population of the country. The literacy rate in the State is 75.6%.

1.2 Agro Economic Regions:

The state of Haryana falls under the Zone VI of the Agro-climatic Zones of India. However, on the basis of rainfall, terrain, temperature and soil characteristics, Haryana Kisan Ayog (Government of Haryana), has defined three major agro-climatic zones at state level

Zone	Districts	Area covered
Zone I	Panchkula, Ambala, Kurukshetra, Yamunanagar, Karnal, Kaithal, Panipat and Sonapat.	This Zone forms nearly 32 percent of the total area of the State.
Zone-II	Sirsa, Fatehabad, Hisar, Jind, Rohtak, Faridabad and Palwal.	accounts for nearly 39 percent of the total area of the State
Zone-III	Bhiwani, Charkhi Dadri, Mahendergarh, Rewari, Jhajjar, Gurgaon and Mewat	covers nearly 29 percent of the total area of the State.

(Source: Kisan Ayog, GoH)

The area falling under Zone I and II are ideal for diverse crops like wheat, rice, pulses, cotton and sugarcane as well as for raising dairy cows, buffaloes and poultry. These Zones have good irrigation facilities and overall good infrastructure. However, kandi (Shivalik foothills of Haryana) area in these zones have serious problem of soil and water erosion and hence they are suitable for agro-forestry and agro-horticulture systems. Zone - III is having major area under pearl millet, rapeseed and mustard and is also suitable for arid-horticulture. Mewat area is more suitable for agro-forestry, sheep and goat rearing.

1.3 Demographic Features

Particulars	Haryana	India
Total Population (lakh)	253.51	12,105.69
Urban Population (%)	35	31
Rural Population (%)	65	69
Decadal Growth (%)	19.90	17.72
Sex Ratio	879	943
Population Density	573	382
Total Literacy (%)	75.60	74.00
Male Literacy (%)	84.10	80.90
Female Literacy (%)	65.90	64.60
Percentage of SC population to total population	20.17	16.60
Percentage of ST population to total population	0.00	8.59
% BPL Population (2011-12)	11.20	21.90

(Source: Census 2011)

1.4 Economy of Haryana

1.4.1 Gross State Domestic Product (GSDP)

As per the Advance Estimates for the year 2019-20, the GSDP of the State at current prices has been estimated as Rs. 8,31,610.21 crore, recording growth of 13.3 percent in 2019-20 as against the growth rate of 13.0 percent achieved in 2018-19. The GSDP at constant (2011-12) prices is expected to reach the level of Rs. 5,72,239.70 crore with a growth of 7.7 percent in 2019-20 as compared to the growth of 7.5 percent recorded in 2018-19. The real growth of 7.7 percent recorded in GSDP of the State in 2019-20 is higher than the All India GDP growth of 5.0 percent.

The GDP of the State at current and constant (2011-12) prices during 2016-17 to 2019-20 is given in table below:

(Rs. Crore)				
GSDP	2016-17	2017-18	2018-19(Q)	2019-20 (A)
At Current Prices	561610.05	649591.77	734162.82	831610.21
At Constant (2011-12) Prices	456659.35	494068.03	531085.19	572239.70

(Source: Economic Survey, GoH: 2019-20, Q- Quick Estimates; A- Adv. Estimates)

1.4.2 Gross State Value Added (GSVA)

The growth of Gross State Value Added (GSVA) decreased from 9.8 percent in 2016-17 to 7.8 percent in 2017-18 and further declined to 7.3 percent in 2018-19. However, during the year 2019-20, the growth in GSVA slightly improved to 7.4 percent.

Table: Gross State Value Added (GSVA) at Constant (2011-12) Prices

(Rs. Crore)				
Indicators	2016-17	2017-18	2018-19 (Q)	2019-20 (A)
Agriculture & Allied Sector	71263.06	75636.89	79621.19	83174.62
Share (%)	17.66	17.38	17.05	16.57
Growth (%)	7.9	6.1	5.3	4.5
Industrial Sector	133422.12	143971.02	153990.23	164526.83
Share (%)	33.06	33.08	32.97	32.79
Growth (%)	12.9	7.9	7.0	6.8
Service Sector	198876.63	215615.36	233476.65	254135.78
Share (%)	49.28	49.54	49.98	50.64
Growth (%)	8.6	8.4	8.3	8.8
Total GSVA	403561.81	435223.27	467088.07	501837.23
Growth (%)	9.8	7.8	7.3	7.4

The composition of State GSVA indicates that the share of Agriculture Sector is declining. The growth in Gross State Value Added in the primary sector has been estimated at 4.5%, 6.8 % in the secondary sector and 8.8% in the tertiary sector at constant prices in 2019-20. The share of Agriculture Sector in GSVA declined from 21.3% in 2006-07 to 16.57% in 2019-20. The share of agriculture & allied Sectors, industry and services at constant (2011-12) prices was 16.57%, 32.79% and 50.64% respectively in the year 2019-20.

1.4.2.1 GSVA – Agriculture & Allied Sectors at Constant (2011-12) Prices

(Rs. Crore)				
Sector	2016-17	2017-18	2018-19 (Q)	2019-20 (A)
Crops & Livestock	67212.87 (10.1)	71238.09 (6.0)	75280.85 (5.7)	78677.16 (4.5)

Forestry & Logging	2871.81 (-27.9)	2830.99 (-1.4)	2803.16 (-1.0)	2834.46 (1.1)
Fishing	1178.37 (17.5)	1567.81 (33.0)	1537.18 (-2.0)	1663.00 (8.2)
Agriculture & Allied	71263.06 (7.9)	75636.89 (6.1)	79621.19 (5.3)	83174.62 (4.5)

(Q: Quick Estimates, A: Advance Estimates.

Figures in brackets show the percentage growth over previous year)

1.4.2.2 – GSVA – Industrial Sector at Constant (2011-12) Prices

(Rs. Crore)

Sector	2016-17	2017-18	2018-19 (Q)	2019-20 (A)
Mining & Quarrying	1191.15 (71.3)	1012.63 (-15.0)	762.34 (-24.7)	905.85 (18.8)
Manufacturing	97151.63 (14.4)	104306.35 (7.4)	111503.49 (6.9)	119420.24 (7.1)
Electricity, Gas, water Supply & other utility services	3559.34 (20.2)	4386.61 (23.2)	4854.80 (10.7)	5413.92 (11.5)
Construction	31519.99 (6.6)	34265.43 (8.7)	36869.60 (7.6)	38786.82 (5.2)
Industry	133422.12 (12.9)	143971.02 (7.9)	153990.23 (7.0)	164526.83 (6.8)

(Q: Quick Estimates, A: Advance Estimates.

Figures in brackets show the percentage growth over previous year)

1.4.2.3 – GSVA – Service Sector at Constant (2011-12) Prices

(Rs. Crore)

Sector	2016-17	2017-18	2018-19 (Q)	2019-20 (A)
Trade, Repair, Hotels & Restaurants	55984.01 (11.2)	62512.56 (11.7)	67780.29 (8.4)	75572.52 (11.5)
Transport, Storage, Communication & services related to broadcasting	24363.66 (-0.1)	25405.83 (4.3)	26952.91 (6.1)	28280.93 (4.9)
Financial, Real Estate & Professional Services	89807.03 (9.6)	95085.52 (5.9)	103957.31 (9.3)	112990.76 (8.7)
Public Administration, Defence & other Services	28721.93 (8.0)	32611.45 (13.5)	34786.14 (6.7)	37291.57 (7.2)
Overall Services	198876.63 (8.6)	215615.36 (8.4)	233476.65 (8.3)	254135.78 (8.8)

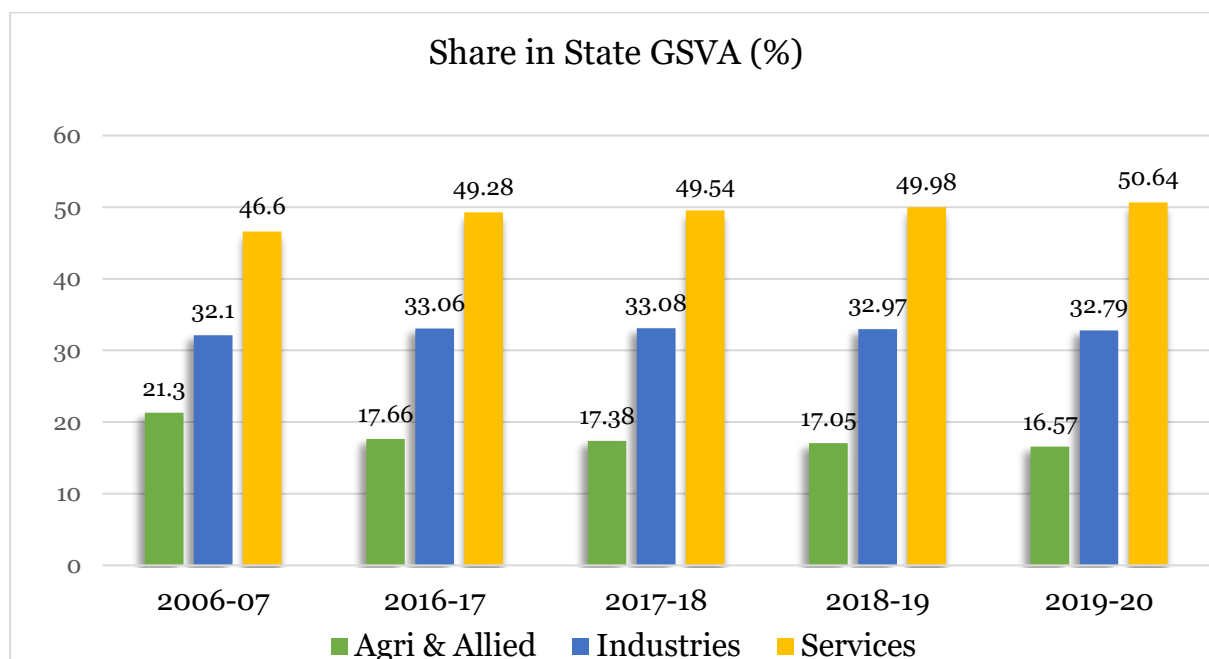
(Q: Quick Estimates, A: Advance Estimates.

Figures in brackets show the percentage growth over previous year)

1.4.3 Changing Sectoral Composition of State GSVA

The composition of State GSVA indicates that the share of Agriculture Sector is declining whereas the share of Services Sector is increasing. Share of industrial sector remained more or less constant. The share of Agriculture Sector in GSVA declined from 21.3% in 2006-07 to 16.57 % in 2019-20. The share of agriculture & allied Sector in the GSVA at constant 2011-12 prices was 16.57 %, industry was 32.79% and services sector was 50.64 % in 2019-20. The growth Gross State Value Added in the primary sector has been 5.5%, 6.8 % in the secondary

sector and 8.8% in the tertiary sector at constant 2011-12 prices in 2019-20. The growth of the Agriculture Sector has tended to fluctuate in the past decade. The agriculture and allied sectors continue to be a critical factor in the overall performance of the State economy. The sectoral composition of State GSVA is given in the table below:



(Source: Economic survey of Haryana 2019-20)

1.4.4 Gross Fixed Capital Formation

The productive capacity of the economy depends to a large extent upon the Capital Formation i.e. more the capital accumulation, the higher would be the productive capacity of the economy. At current prices the GFCF of the State has been estimated at Rs. 86,061 crore during the year 2017-18 as against Rs. 78,423 crore during the year 2016-17, recording an increase of 9.7 percent. Similarly, at constant (2004-05) prices, the GFCF has been estimated as Rs. 44,442 crore during the year 2017-18 as against Rs. 41,463 crore during the year 2016-17, recording an increase of 7.2 percent during the year 2017-18. The Estimates for Gross Fixed Capital Formation and growth percentage are given below;

(Rs. Crore)

Gross Fixed Capital Formation				
Year	At Current Prices	Growth (%)	At Constant (2004-05) prices	Growth (%)
2015-16	71116	8.81	38851	7.45
2016-17	78423	10.27	41463	6.72
2017-18 (P)	86061	9.74	44442	7.18

(Source- Economic Survey 2019-20, GoH)

1.4.5 Per Capita Income

At the time of formation of Haryana State in 1966, the per capita income of State at current prices was only Rs. 608. Since then, the per capita income has increased multifold.

The per capita income of the State at constant (2011-12) prices was Rs. 1,80,026 during 2019-20 indicating an increase of 6.3 percent as compared to the growth rate of 6.0 percent recorded in 2018-19. At current prices, the State's per capita income was Rs. 2,64,207 during 2019-20 showing an increase of 11.9 percent as compared to the growth rate of 11.6 percent in 2018-19.

Per capita income of the State during 2019-20 at both current and constant prices, was higher by 195% and 186%, compared to the National per capita income of Rs. 1,35,050 and Rs. 96,563 respectively.

Year	At Current Prices (Rs.)		At Constant Prices (Rs.)	
	Haryana	India	Haryana	India
2017-18	2,11,526	1,15,293	1,59,892	87,828
2018-19 (Q)	2,36,147	1,26,521	1,69,409	92,085
2019-20 (A)	2,64,207	1,35,050	1,80,026	96,563

(Source: Economic Survey 2019-20, GoH)

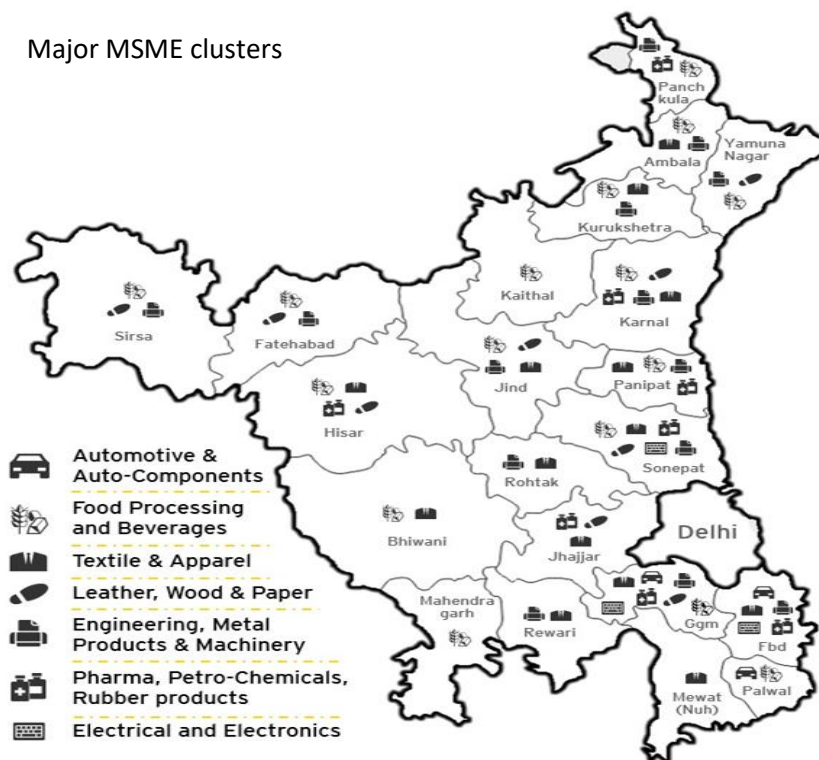
1.5 Agriculture & Allied Sectors

Nearly 80 percent of the total Geographical area of the State is under cultivation and about 76 percent is irrigated with cropping intensity of 184 percent. More than 60% export of Basmati Rice is taking place from Haryana. Haryana is one of the leading states for wheat and mustard production. Haryana is the second highest contributor of food grains to the central pool and contributes about 15.6% of central pool despite having only 1.4% of total geographical area of the country. The state is the largest producer of button mushrooms in India and second largest producer of green peas. Kinnow is the most prominent citrus fruit having maximum production followed by mango and guava. Agriculture sector continues to play a major role in the State economy contributing about 16.6 percent to its Gross State Value added (GSVA) during the year 2019-20. Agriculture including crop husbandry and dairy farming is the main component contributing about 93 percent in GSVA of Agriculture and Allied Sector.

1.6 Industrial Sector

Haryana has emerged as one of the most industrialized States in the country. State has made impressive strides over the years to carve out a niche for itself in the fields of engineering, automobiles, textiles, leather, Information Technology, electronic hardware and hi-technology industries. The State has been a leader in manufacture of a number of products like cars, two-wheelers, tractors, scientific instruments, footwear etc. Gurugram has emerged as the

Major MSME clusters



Business Process Management (BPM) Capital of the country, besides being home to offices of a number of International & National Corporates. With close to 18% share of manufacturing in the total GSDP of Haryana and growing consistently at a CAGR of 6.6% in the last 5 years, Haryana is the leading state in India in terms of manufacturing GSDP contribution (higher than the national average) with the all-India average manufacturing GSDP contribution (around

17-18%) and competing with industrially advanced states like Gujarat (26-28%) and Maharashtra (18-21%). The tertiary sector, with a 52% GSVA contribution of services sector to the total state's GSVA, is the largest sector in terms of economic salience for the state with finance, real estate & professional services (11.4%) and public administration, defense and

other services (12.7%) as the leading services sub-sectors. However, the industry and service sector are concentrated in the National Capital Region, and particularly in the Gurugram and Faridabad districts.

On the policy & regulatory front, the Haryana Enterprise Promotion Policy (EPP) 2015 has laid out a transformational roadmap for making Haryana's manufacturing and services enterprises competitive. Haryana has simplified its regulatory environment considerably in a bid to improve ease of doing business in the State. Today, Haryana is one of the leading states in terms of industrial production, especially passenger cars, mobile cranes, two-wheelers & tractors and the 3rd largest exporter of software.

Haryana was ranked third in FY 2017-18 edition of ranking by the Department for Promotion of Industry and Internal Trade. During the FY 2018-19, Haryana slid from 3rd to 16th spot in the Ease of doing Business rankings of states and UTs, as the ranking was impacted by "new standards" being introduced in the survey. Subsequently, GoH has implemented 209 points out of the 301 points under the Business Reforms Action Plan (BRAP)-2020 in Nov 2020. State Government had also taken 'Ease of Doing Business' further by stressing on 'Ease of Living' for the common men, especially those belonging to poor and middle class of the society.

1.7 Other Infrastructure

The state has approved 07 SEZs in the state, situated in NCR region, to accommodate various sectors such as IT/ITES, textiles, handicrafts, and non-conventional energy.

- a) Transport:** Inter-state rail network is well-developed with 2 dedicated freight corridors (Eastern and Western) passing through the state. Haryana has 5 Airstrips in the State at Pinjore, Karnal, Hisar, Bhiwani and Narnaul. There are 29 national highways with total length of 3083 k.m., state highways with total length of 1491 kms, major district roads of 1337 km, and other district roads of 20974 km under PWD(B&R). The state has a metaled road connection of 26392 km. 99.87% of villages in the state are connected with metaled roads. The remote areas of the state are linked with metaled roads. Haryana has a road length of 184.08 km per 100 square km of area against the all India average of 179.40 km. Road length per lakh population, stands at 321.03 km, against the all India average of 487.18 KM.

The state enjoys a competitive advantage backed by strategic location with 57% of NCR area falling in Haryana, with 21 national highways (2482 kms. of length) and major rail routes covering the State.

- b) Power:** Haryana is the first State in the country to achieve 100 per cent electrification of all its villages (2011 Census). The State is surplus in electricity. Haryana State has limited availability of natural sources of energy. There is very less Hydro Generation potential in the State. Even the coal mines are located far away from the State. There is very limited forest area. Wind velocity prevailing in the State is also not sufficient to exploit for power generation. The solar intensity is relatively higher and there is ample scope of harnessing this resource.

The total installed capacity available to the State at present is 11,971.42 MW. It includes 2582.4 MW from State's own power generation stations, 846.14 MW from jointly owned projects (BBMB) and the balance as share in central projects and Independent Private Power Projects. The power availability from these sources during the year 2018-19 was 5,15,733 lakh KWH. The per capita generation and per capita consumption of electricity in the State is 2271 KWH and 1793 KWH respectively against the National average of 1010 KWH and 746 KWH respectively.

- c) Social infrastructure:** The state has a large number of academic and research institutions. (55 universities, 1303 colleges, 8308 senior secondary schools, 5673 middle schools and 9972 primary schools)

Haryana has 190 Hospitals/Community Health Centres, 511 Primary Health Centers, 2636 health sub centres (Haryana Statistical Abstract 2018-19). Haryana ranked 1st at National

level by Ministry of Health & Family Welfare (MoHFW) for outstanding services in Health Sector (Health Index June, 2019-NITI Aayog) under National Health Mission (NHM). Maternal health indicators have improved in the State significantly. As per the MMR bulletin released in May, 2018 MMR of Haryana has reduced by 3 points to 98 (SRS 2015-17). Haryana has brought down its under 5 Mortality to 35 per thousand live births with a remarkable 10 points dip. Infant Mortality Rate has been reduced by 11 points from 41 to 30 per thousand live births as well as Neonatal Mortality with 5 points from 26 to 21 per thousand live births (SRS 2017 released in 2018).

In Haryana State, all the villages were provided with at least one safe source of drinking water by 31st March, 1992. Thereafter, the focus has been given to augment the drinking water supply infrastructure in the habitations. Currently, the State is engaged in improving the drinking water supply under Jal Jeevan Mission under which each rural household will be provided with a functioning household tap connection.

The poverty level in Haryana is lower than All India level. Regarding social indicators, Haryana has made significant progress on education and health. However, the state's child sex ratio is the lowest in India which needs to be addressed. Major social indicators of the state are given below:

Table: Major Social Indicators

Particulars	Haryana	India
Percentage of population living Below Poverty Line	11.16	21.92
Percentage of population living Below Poverty Line-Rural	11.60	25.70
Percentage of population living Below Poverty Line-Urban	10.30	13.70
Infant Mortality Rate (per thousand births)	30	33
Maternal Mortality Ratio (per lakh births)	98	113
Sex Ratio	879	943
Child Sex Ratio (0-6 years)	834	918
Total Fertility Rate	2.3	2.3
Birth Rate (per thousand)	20.5	20.2
Life Expectancy	67.6 (Male) 72.3 (Female)	67.8 70.4
Percentage unemployment rate	8.6	6.1
Percentage of annual ground water withdrawal against net annual availability	137	62
Percentage of population having safe and adequate drinking water in rural areas	94.12	71.80
Percentage of households electrified	100.00	94.57
Percentage of household having clean cooking fuel	52.20	43.80
Percentage of households with individual household toilets	100.00	82.72
Percentage of districts reported to be Open Defecation Free (ODF)	100.00	31.95
Number of homeless households per 10,000 households	14.52	10.39

(Source: NITI Aayog)

Banking Profile

State -Haryana

1. NETWORK & OUTREACH (As on 30/09/2020)						2. DEPOSITS OUTSTANDING				
Agency	No. of Banks/Soc.	No. of Branches				Amount of Deposits (Rs.Crore)				
		Total	Rural	Semi-urban	Urban	31 Mar 18	31 Mar 19	31 Mar 20	Growth(%)	Share(%)
Commercial Banks	41	4362	1218	1075	2069	326571	364617	411674	12.91	94.08
Regional Rural Bank	1	654	463	128	63	13556	14548	16189	11.28	3.70
District Central Coop. Bank	1+19	594	443	74	77	8465	8899	9738	9.43	2.23
State Coop. Agr. & Rural Dev. Bank	1	19	19	Nil	Nil					
Primary Agr. Coop. Society	725									
All Agencies	63	5629	2143	1277	2209	348592	388064	437601	12.77	100.00
3. LOANS & ADVANCES OUTSTANDING						4. CD Ratio (%)		5. Financial Inclusion(PMJDY)		
Agency	Amount of Loan (Rs. Crore)							No. of A/cs		
	31 Mar 18	31 Mar 19	31 Mar 20	Growth(%)	Share(%)	Agency	31 Mar 20	Agency	As on 31 March 2020	
Commercial Banks	228390	250683	273522	9.11	91.88	CBs	66	CBs		6236415
Regional Rural Bank	8797	9524	10152	6.59	3.41	RRBs	63	RRBs		1029809
Cooperative Banks	13083	14028	14024	-0.03	4.71	DCCBs	144	Coop. Banks		
All Agencies	250270	274235	297698	8.56	100.00	All Agencies	68	All Agencies		7266224
6. PERFORMANCE TO FULFILL NATIONAL GOALS (As on 31/03/2020) (Amount in Rs.Crore)										
Agency	Priority Sector Loans		Loans to Agr. Sector		Loans to Weaker Sections		Loan under DRI		Loans to Women	
	Amount	% of Total Loans	Amount	% of Total Loans	Amount	% of Total Loans	Amount	% of Total Loans	Amount	% of Total Loans
Commercial Banks	132770	48.54	45910	16.78	24944	9.12	10.02	0.004	24642	9.01
Regional Rural Bank	8984	88.49	8306	81.82	5848	57.60	0.18	0.002	699	6.89
Cooperative Banks	13380	95.41	11767	83.91	9555	68.13			180	1.28
All Agencies	155134	52.11	65983	22.16	40347	13.55	10.20	0.003	25521	8.57
7. AGENCY-WISE PERFORMANCE UNDER ANNUAL CREDIT PLANS (Amount in Rs.Crore)										
Agency	2017-18			2018-19			2019-20			Average Ach[%] in last 3 years
	Target	Ach'ment	Ach'ment [%]	Target	Ach'ment	Ach'ment [%]	Target	Ach'ment	Ach'ment [%]	
Commercial Banks	86522	74781	86.43	93336	92976	99.61	100396	86194	85.85	90.63
Regional Rural Bank	9243	8576	92.78	9541	8825	92.50	10639	9433	88.66	91.31
Cooperative Banks	15099	12267	81.24	16245	12648	77.86	17167	13267	77.28	78.79
Others	478	263	55.02	2195	102	4.65	695	180	25.90	28.52
All Agencies	111342	95887	86.12	121317	114551	94.42	128897	109074	84.62	88.39
8. SECTOR-WISE PERFORMANCE UNDER ANNUAL CREDIT PLANS (Amount in ` crore)										
Broad Sector	2017-18			2018-19			2019-20			Average Ach[%] in last 3 years
	Target	Ach'ment	Ach'ment [%]	Target	Ach'ment	Ach'ment [%]	Target	Ach'ment	Ach'ment [%]	
Crop Loan	48735	45748	94	51634	45228	88	53397	46796	88	90
Term Loan (Agr)	22270	14601	66	24139	16772	69	26873	15115	56	64
Total Agri. Credit	71004	60349	85	75773	62000	82	80271	61911	77	81
MSME	24516	24802	101	28995	39595	137	31976	35434	111	116
Other Priority Sector	15822	10736	68	16549	12956	78	16651	11731	70	72
Total Priority Sector	111342	95887	86	121317	114551	94	128897	109074	85	88
9. RECOVERY POSITION UNDER PRIORITY SECTOR ADVANCES (Amount in ` crore)										
Agency	2017-18			2018-19			2019-20			Recovery [%]
	Demand	Recovery	Recovery [%]	Demand	Recovery	Recovery [%]	Demand	Recovery	Recovery [%]	
Commercial Banks	30909	22309	72	43933	32125	73	36425	28188	77	
Regional Rural Bank	7289	6354	87	10162	6859	67	7993	5114	64	
Cooperative Banks	16089	10530	65	33217	16819	51	13894	7166	52	
All Agencies	54286	39193	72	87313	55803	64	58312	40468	69	

Sources : Lead bank & SLBC

Chapter 2

Banking / Financial Sector Profile

2.1 Outreach of Banking Sector

The State had a network of 63 banks with 5,629 branches as on 30.09.2020. Banking network includes 12 Public Sector Banks (2,904 branches), 21 Private Sector Banks (1,303 branches), 7 Small Finance Banks (135 branches), one RRB (654 Branches), Short-term Cooperative Credit Structure (STCCS) with The Haryana State Cooperative Bank Ltd. (HStCB) at the State level and 19 DCCBs (594 Branches), long-term Cooperative Credit Structure (LTCCS) with The Haryana State Cooperative Agriculture and Rural Development Bank Ltd. (HSCARDB) at the State level and 19 District Primary Cooperative Agriculture & Rural Development Bank Ltd. (DPCARDBs). Besides this, 725 Primary Agricultural Credit Societies (PACS) also cater to the crop loan needs of the farmers under STCCS. As many as 2,143 branches are providing banking services in rural areas and 1,277 branches in semi urban areas.

Table - Branch Network in Haryana

S N	Agency	No. of Banks	No. of Branches							
			Total		Rural		Semi-urban		Urban	
1	Public Sector Banks	12	2904	51.6%	823	38.4%	768	60.1%	1313	59.4%
2	Private Sector Banks	21	1303	23.1%	378	17.6%	285	22.3%	640	29.0%
3	Small Finance Banks	7	135	2.4%	17	0.8%	21	1.6%	97	4.4%
4	Regional Rural Banks	1	654	11.6%	463	21.6%	128	10.0%	63	2.9%
	Schedule Commercial Banks	41	4996	88.8%	1681	78.4%	1202	94.1%	2113	95.7%
5	HStCB	1+19	594	10.6%	443	20.7%	74	5.8%	77	3.5%
6	HSCARDB	1	19	0.3%	19	0.9%	0	0.0%	0	0.0%
	Co-Operative Banks		613	10.9%	462	21.6%	74	5.8%	77	3.5%
7	Post Payment Bank	1	20	0.4%	0	0%	1	0.1%	19	0.9%
	Grand Total	63	5629	100%	2143	100%	1277	100%	2209	100%

(Source: SLBC Haryana)

2.2 Lead District Allocations

The Convener Bank of State Level Bankers' Committee (SLBC) in Haryana is Punjab National Bank. The lead bank responsibility in 22 districts has been allocated among the 2 Public Sector Banks (PSBs) namely Punjab National Bank (PNB) and Canara Bank. While Canara Bank is the lead bank of Gurugram, Nuh and Faridabad districts, PNB is the lead bank of remaining 19 districts in the state.

2.3 Deposits and Advances

The total deposits of all the banks in the State stood at Rs. 4,37,601 crore as on 31 March 2020 registering a growth of 12.76 % over the previous year (total Deposits as on March 2019 was Rs. 3,88,064 crore). Deposit growth by the STCCS structure and by the RRB was 9.43 % and 11.28%, respectively as compared to 12.84 % growth registered by the scheduled commercial banks (including RRB and SFBs). The share of STCCS and the RRB in total deposits in the State was only 2.23 % and 3.7%, respectively.

Loans and advances outstanding of the Banks in the State stood at Rs. 2,97,698 crore as on 31 March 2020, registering a growth of 8.56% over the previous year. The growth rate for Public Sector Banks was 3.61 %, Private Sector Banks was 13.73 %, the RRB was 6.6 % and Cooperative Banks was 1.15 % over the previous year. The share of Public Sector Banks, Private Sector Banks, Regional Rural Banks, Small Finance Banks and Cooperative Banks were 47.84%, 43.26%, 3.41%, 0.78% and 4.71 % respectively.

2.4 CD Ratio

The CD Ratio in the State stood at 68% as on 31 March 2020, which is above the national benchmark of 60%.

SN.	CD Ratio (%)	March 2018	March 2019	March 2020
1	Public Sector Banks	65	62	61
2	Private Sector Banks	79	79	73
3	Regional Rural Banks	65	65	63
4	Cooperative Banks	138	142	144
5	Small Finance Banks			60
	Total	72	71	68
	Including RIDF	73	72	69

Although the CD ratio of RRB was more than the national benchmark, yet was low at 63% as compared to the State average.

Further, the CD ratio in some of the districts was lower than the stipulated benchmark - Ambala (49%), Gurugram (58%), Jhajjar (49%), Sonapat (56%), Rewari (44%), Rohtak (51%) and Mahendergarh (49%). CD ratio of Charkhi Dadri district was 60%.

CD ratio of 4 districts (Kaithal - 103%, Karnal – 121%, Panipat – 105% and Sirsa – 100%) were more than 100%. CD ratio of remaining districts were between 60 – 100%.

2.5 Ground Level Credit (GLC) Flow during 2019-20 – Sector Wise

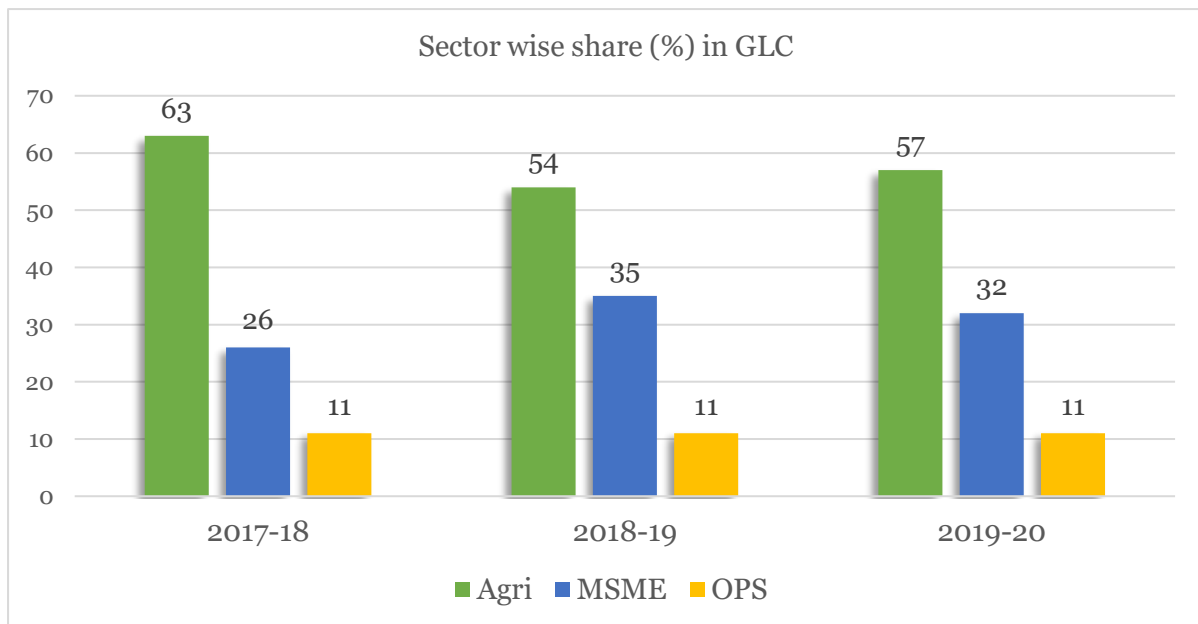
The total priority sector lending during the year 2019-20 stood at Rs. 1,09,074 crore as compared to Rs. 1,14,551 crore in 2018-19, registering a negative growth of 4.78%, mainly as a result of overall lower disbursements by the Commercial Banks, lower disbursement to MSME and Other Priority Sectors, due to overall slowdown in the economy and the emergence of COVID 19 in the last few days of the last financial year.

Broad sectorwise share in GLC during the last three financial years are given in the following table.

(Rs. Crore)

SN.	Sectors	2017-18	2018-19	2019-20
1	Crop Loan	45,748	45,228	46,796
2	Agriculture Term Loan	14,601	16,772	15,115
	Total Agriculture	60,350	62,000	61,911
3	MSME	24,802	39,595	35,434
4	Other Priority Sector	10,736	12,956	11,731
	Total Priority Sector	95,887	1,14,551	1,09,074

(Source: SLBC, Haryana)



The GLC flow to Agriculture & Allied Sectors during the year 2019-20 has decreased marginally by 0.14% only over the year 2018-19. The Agriculture Term Loan has also decreased by about 9.88% over the previous year. Besides, the share of Agriculture Term Lending in total agriculture lending was 24.41% during 2019-20, which is a matter of concern. There is need to focus on term lending under agriculture to boost agricultural production and also for asset creation and capital formation. Capital formation through investment in agriculture helps in improving the productivity of natural resources.

2.6 Agency-wise Share in GLC

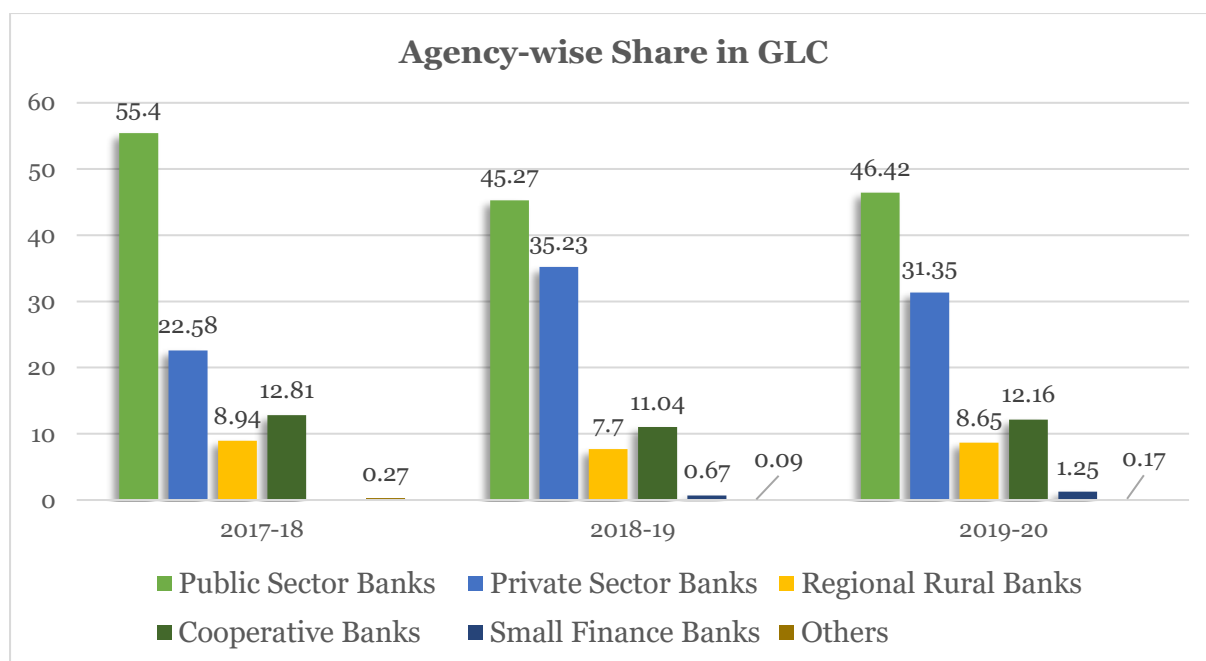
The agency-wise disbursements and their share in total priority sector lending during the last three years is given below:

(Rs. Crore)

Agency	2017-18		2018-19		2019-20	
	Amount	% share	Amount	% share	Amount	% share
Public Sector Banks	53,129	55.40	51,857	45.27	50,634	46.42
Private Sector Banks	21,652	22.58	40,351	35.23	34,192	31.35
Small Finance Banks			768	0.67	1,368	1.25
Regional Rural Bank	8,576	8.94	8,825	7.70	9,433	8.65
Cooperative Banks	12,269	12.81	12,648	11.04	13,267	12.16
Others	261	0.27	102	0.09	180	0.17
Total	95,887		1,14,551		1,09,074	

(Source: SLBC, Haryana)

The Commercial Banks had the highest share in priority sector lending in the state. Small Finance Banks have improved their share under total priority sector lending during the FY 2019-20. The RRB and Coop. Banks need to improve their priority sector lending.



2.6.1 Agency wise share of GLC under Agriculture and Allied Sector

(Rs. Crore)

Agency	2017-18		2018-19		2019-20	
	Amount	% share	Amount	% share	Amount	% share
Public Sector Banks	31,091	51.52	29,836	48.12	28,114	45.41
Private Sector Banks	10,645	17.64	12,324	19.88	12,253	19.79
Small Finance Banks			252	0.41	420	0.68
Regional Rural Bank	7,580	12.56	8,215	13.25	9,034	14.59
Cooperative Banks	11,034	18.28	11,373	18.34	12,091	19.53
Others	0	0	0	0	0	0
Total	60,350		62,000		61,911	

2.6.2 Agency wise share of GLC under MSME

(Rs. Crore)

Agency	2017-18		2018-19		2019-20	
	Amount	%	Amount	% share	Amount	% share
Public Sector Banks	13,729	55.35	12,685	32.04	14,442	40.76
Private Sector Banks	9,672	39.0	25,766	65.07	19,502	55.04
Small Finance Banks			333	0.84	654	1.84
Regional Rural Bank	774	3.12	458	1.16	249	0.71
Cooperative Banks	365	1.47	252	0.63	406	1.14
Others	261	1.06	102	0.26	180	0.51
Total	24,802		39,595		35,434	

2.6.3 Agency wise share of GLC under Other Priority Sector (OPS)

(Rs. Crore)

Agency	2017-18		2018-19		2019-20	
	Amount	% share	Amount	% share	Amount	% share
Public Sector Banks	8,309	77.39	9,336	72.06	8,076	68.84
Private Sector Banks	1,335	12.44	2,261	17.45	2,440	20.8
Small Finance Banks			184	1.42	294	2.51
Regional Rural Bank	222	2.07	151	1.17	150	1.28
Cooperative Banks	870	8.10	1,024	7.90	771	6.57
Others	0	0	0	0	0	0
Total	10,736		12,956		11,731	

2.7 Achievements under National Goals: The position of the state under the National Goals of Priority Sector Lending are given in the Table.

Priority Sector Goals	Target	Achievement – March 2018	Achievement – March 2019	Achievement – March 2020
CD Ratio (Rural)	60%	72%	70%	64%
CD Ratio (S Urban)	60%	71%	71%	67%
CD Ratio (Total)		70%	69%	68%
Percentage of Priority Sector Advance to Total Advance	40%	66%	60%	54%
Percentage of Agriculture Advance to Total Advance	18%	25%	23%	21%
Percentage of Advance to Small/Marginal farmers	8%	9%	9%	8%
Percentage of Advance to Micro Enterprises	7.5%	12%	10%	9%
Percentage under Export Credit	2%	0.11%	0.10%	0.05%
Weaker Section Advance to Total Advance	10%	13%	12%	10%

2.8 State Annual Credit Plan (ACP) – 2020-21

Annual Credit Plan for the FY 2020-21, for the state of Haryana had been prepared by SLBC Haryana. The sector wise targets fixed by the SLBC for the FY 2020-21 are as follows.

(Rs. Crore)

Sectors	PLP Projection for FY 2020-21	ACP Target for FY 2020-21
Crop Loan	56517.26	55841.97
Agriculture Term Loan	29268.38	29035.14
Total Agriculture	85785.65	84877.11
MSME	42302.09	42492.84
Other Priority Sector	18645.52	18407.85
Total Priority Sector	146733.26	145777.8

2.9 Kisan Credit Card Scheme:

The objective of KCC scheme is to provide hassle free production credit to farmers for meeting the cost of cultivation of both short duration field crops and to upkeep / maintain long duration horticultural and plantation crops. Recently, RBI has advised Banks to extend KCC

facility to Animal Husbandry farmers and Fisheries for their working capital requirements. The KCC loan for Animal Husbandry are also eligible for interest subvention. RBI has issued guidelines to raise the limit for collateral free agricultural loans from the existing level of Rs.1 lakh to Rs.1.6 lakh. Progress under KCC scheme in the State are as mentioned below:

Table: Status of KCC implementation

Particulars (As on 30.09.2020)	
Total farm holding as per Agriculture Census 2015-16	16.28 lakh
Number of Small/ Marginal Farmers	11.17 lakh
Cumulative number of KCC sanctioned since the inception	47.24 lakh
Outstanding KCCs (numbers) as on September 2020	23.45 lakh
Outstanding KCCs (Amount) as on September 2020	37734.71 crore
KCC Holders eligible for Kisan Rupay ATM cum Debit card	15.54 lakh
No. of Kisan RuPay ATM cum Debit card issued up to Sept. 2020	12.21 lakh
No. of KCC holders without Kisan Rupay ATM cum Debit card	3.3 lakh
% of Kisan Rupay ATM cum Debit card issued	79%

(Source: SLBC, Haryana)

Although there are 16.28 lakh land holders in the State, the number of operative KCCs, as on 30.09.2020, were much higher (23.45 lakh) which may be attributed due to multiple financing. Further, as per NABARD Financial Inclusion Survey Report (NAFIS) 2016-17, in Haryana, 55.8% of the HH reported to have borrowed from Institutional sources, 41.9% from Non-institutional and 2.3% from both sources. This indicates a sizeable portion of agricultural household are still left out of formal credit system.

Also, the progress under KCC for Animal Husbandry and fish farmers (working capital) was quiet slow as during the FY 2019-20, only 600 cards were issued with a total disbursement of Rs. 6.16 crore only.

2.10 Financial Inclusion

Financial Inclusion is an important agenda of the Govt, RBI and NABARD. The objective is to extend financial services at an affordable cost to the large hitherto unreached and un-served population in the country to unlock their growth potential. Progress under various GoI schemes in Haryana, are as under:

2.10.1 Pradhan Mantri Jan Dhan Yojana: The number of Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts increased from 70.01 lakh as on 31 March 2019 to 72.66 lakh as on 31 March 2020. Out of total 72.66 lakh PMJDY accounts, 63.51 lakh accounts (87.40%) are ADHAR seeded. The activation of the RuPay cards under PMJDY remains a point of concern as only 50.27 lakh RuPay cards were activated as on 31 March 2020 out of 61.47 lakh issued cards. Under PMJDY, 9.30% of the bank accounts, that is, 6.76 lakh bank accounts are Zero Balance accounts. 2458 Business Correspondent Agents (BCAs) have been appointed for universal access to banking facilities and to provide various types of banking services to the customers.

2.10.2 Social Security Schemes

The progress under 03 Social Security Schemes namely Pradhan Mantri Suraksha Bima Yojna (PMSBY), Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY) and Atal Pension Yojna (APY) is significant. As on 30.09.2020, 36.58 lakh persons had enrolled under PMSBY. Under PMJJBY, 11.46 lakh persons have enrolled under the scheme. Under APY, 4.83 lakh persons had been enrolled.

2.10.3 Stand up India Scheme

As on 31 March 2020, banks have disbursed an amount of Rs. 117.40 crore to 563 entrepreneurs.

2.10.4 Pradhan Mantri Mudra Yojana (PMMY)

4.19 lakh entrepreneurs have been supported under PMMY with bank credit of Rs.3651.01 crore during the FY 2019-20. Out of 4.19 lakh beneficiaries, 1.33 lakh (31.83%) are women beneficiaries with a total credit of Rs. 776.30 crore. Category wise progress under the PMMY during the FY 2019-20 is given below;

(Rs. Crore)

MUDRA Loan	Beneficiaries		Women Beneficiaries		SC/ST beneficiaries	
	No. of A/Cs	Amount Disbursed	No. of A/Cs	Amount Disbursed	No. of A/Cs	Amount Disbursed
Shishu	322195	924.39	118448	469.78	186757	533.81
Kishore	77958	1335.01	14068	198.98	16550	164.03
Tarun	19548	1391.60	1289	107.52	753	59.76
Total	419701	3651.01	133805	776.30	204060	757.60

Total NPA amount as on 31.03.2020 under PMMY is Rs. 327.70 crore against the total outstanding amount of Rs. 5425.42 crore, which is 6.04% of total O/S.

Centre For Financial Literacy Project (supported under FIF)

During 2017, a pilot project on financial literacy supported under NABARD's Financial Inclusion Fund was launched in collaboration with CRISIL Foundation and Punjab National Bank in 10 blocks of Haryana spread across four districts—called as 'Moneywise Centres for Financial Literacy' (CFL) – three among which are in Indri, Nissing and Assandh, Karnal. The major objectives of the project included imparting financial literacy, enhancing linkages for social security schemes, encouraging digital transactions etc.

Till November 2020, the project has facilitated 1985 bank a/c openings, linkage of 3661 and 1790 applicants under PMSBY and PMJJY respectively, 279 under Atal Pension Yojana, 1232 Aadhar seedings and 337 Mudra loans across 195 villages in Karnal. One such village is Kheri Sherf Ali in Assandh – a village comprising of almost 90% SC category and marginalised communities. Due to the continuous efforts - this village was developed as the first model village under the project – with all eligible community members linked to an active bank account and key social security schemes of PMSBY and PMJJBY.

Under the project, Gram Shakti Certification course was rolled put to create a cadre of rural financial health workers. Till date, 114 rural women known as 'Gram Shaktis' have successfully taken the course and are facilitating the cause of financial inclusion in their respective villages. During the lockdown period, a tech-based helpline support to the CFL beneficiaries and community members was provided for counselling and creating general awareness.

2.11 Issues and suggestions relating to Rural Financial Institutions in the State:

- As the share of STCCS in the total number of branches is 10.9%, it accounts for only 2.23% share in the total deposits of the banking system in the State. There is a need for STCCS to improve its market share in both deposits and advances.
- Poor recovery especially under LTCCS has been a hindrance to flow of investment credit by DPCARDBs. Urgent steps are needed to improve the recovery performance and financial health of this structure.
- The operations of STCCS are mainly confined to disbursement of production credit. Achievements of STCCS under ACP for the years 2018-19 and 2019-20 were less as compared to other agencies because of its under-achievement for agriculture term lending. There is an urgent need for diversification of business by cooperative banks, with emphasis on term lending in agriculture, to improve their financial health to increase their share in the total banking business in the State.

- CD Ratio of all CCBs, except Gurgaon, Bhiwani and Rohtak were more than 100% indicating a high level of dependence on borrowing and consequent high cost of funds.
- 09 CCBs viz., Faridabad, Fatehabad, Gurgaon, Hisar, Jhajjar, Kurukshetra, Panchkula, Panipat and Rohtak had gross NPAs of more than 5% of loans outstanding as on 31 March 2019.
- 14 of the 19 CCBs have more than 80% of loans outstanding to PACS. Even though the Maximum Credit limit to these PACS have not been revised since 2012, 16 banks show an increase of more than 5% in outstanding to PACS with an increase of as high as 27% in case of Panchkula. This is on account of reported debiting of interest against loan outstanding against PACS in the books of DCCB. This practice of crediting interest as income of DCCBs and increasing outstanding against PACS without examining the extent of NPAs at PACS level doesn't give a true picture of the profits being made by the Banks.
- The accumulated losses and imbalances at the PACS level are Rs. 4545.67 crore and Rs. 3939.43 crore, respectively as on 31.03.2020 which is bound to adversely affect the balance sheet of the CCBs. The concerns as regards the viability of PACS need to be addressed.
- There are no CEOs in all the 19 DCCBs as per fit and proper criteria. Only 9 DCCBs viz. Fatehabad, Gurgaon, Panipat, Rewari, Rohtak, Bhiwani, Jhajjar, Sirsa and Sonapat have elected/co-opted professional directors on their BODs.
- Farmers are being extended maximum loan of Rs.1.50 lakh by the STCCS, irrespective of his/her land holding. There is a need to review this decision and the farmers need to be provided loan to the extent of his/her requirement depending upon land holding, cropping pattern and scales of finance.
- RRB is having 11.6 % of the total number of branches in the State with only 3.7% share in the deposit base of the banking system in the State. The SHGB may plan to enhance its presence and share in the market both under deposits and advances.
- Although HStCB and DCCBs are on CBS platform, and the PACS are not on CBS platform which hinders their capacity to provide service to clients. Meanwhile, there is a felt need to computerise the PACS, urgently.
- Nuh district identified as Credit deprived district. There is a need for bankers to prepare a monitorable action plan to substantially improve the GLC flow in Nuh district.

Chapter - 3

NABARD's Perception on the Development Perspective of the State

Introduction

NABARD as an apex developmental financial institution has vision to promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing prosperity. NABARD's initiatives are aimed at building an empowered and financially inclusive rural India through specific goal oriented actions which can be categorized broadly into three heads: Financial, Developmental and Supervisory. Through these initiatives NABARD has touched almost every aspect of rural economy. From providing refinance support to banks to financing rural infrastructure; from preparing district level credit plans to guiding and motivating the banking industry in achieving these targets; from supervising Cooperative Banks and Regional Rural Banks (RRBs) to helping them develop sound banking practices and onboarding them to technology platforms; from designing new banking products and development schemes to the implementation of GoI's development schemes; from skill training to handicraft artisans and rural women to providing livelihood opportunities to rural women.

NABARD's perception on development perspective of the State on various parameters are as summarized below:

3.1 Capital Formation in Agriculture and increase in production and productivity

Capital formation in agriculture is of critical importance for the sustainability of agricultural growth. Some of the nagging problems of the Indian agriculture sector viz., low productivity, low employment opportunities, high intensity of poverty and inadequate infrastructure could be attributed to waning capital formation especially public investment in areas such as irrigation, rural electrification, roads, markets, etc., in addition to under development of off-farm sector. Capital formation is more important in agriculture as increasing production and productivity of agriculture is of paramount concern not only to ensure food security but also to exploit export potential and to improve incomes of the majority of small and marginal farmers engaged in agriculture. Capital formation through investment in agriculture helps in improving the stock of equipment, tools and productivity of resources employed, which, in turn, enables the farmers to use their resources, particularly land and labour, more productively. Public investment in irrigation, rural roads, power, telecommunications, marketing infrastructure, agricultural research and extension services results in high growth of the agricultural sector and reduction in poverty. There exists a direct correlation between capital investments in agriculture and its growth rate. Further, capital investments related to agricultural growth are of two categories:

- Capital investments 'in' agriculture – Land development, irrigation, markets, etc.
- Capital investments 'for' agriculture – Road, power, transport, etc.

Hence there should be a focused and targeted approach to ensure Gross Capital Formation (GCF) in both 'in agriculture' and 'for agriculture' in order to attain 4% growth under agriculture in GDP.

3.1.1 Gross Fixed Capital Formation

(Rs. Crore)

Gross Fixed Capital Formation at Current Prices					
Year	Haryana	% growth	India	% growth	% Share of Haryana
2015-16	71,116	20.26	4422659		1.61
2016-17	78,423	10.27	4918077	11.20	1.59
2017-18 (P)	86,061	9.74	5849224	18.93	1.47

As indicated in the above table, the share of Haryana in GCF is has decreased from 1.61% in 2015-16 to 1.47% in 2017-18. Thus, there is an urgent need for policy and administrative interventions by the State Govt. Some of them are as under:

- There is need to shift from 'mono agriculture' to agriculture allied activities viz. horticulture, floriculture, agro-forestry, dairy, animal husbandry, fisheries, integrated farming and agro-processing.
- State may also adopt a policy on enhancing usage of solar pumps by farmers through incentivizing installation of solar panels for solarizing their pumps, as also, enable them to sell surplus solar power generated to DISCOMs to get extra income. Solar panels could also be installed on the fields, with generation of solar energy as an additional source of income or 'third crop'.
- Strengthening of post-harvest mechanism, marketing channels and promotion of Producers' Organizations (POs) for niche farming, vegetable growers, horticulture farmers and linking these to the Food processing Industries are also the need of the day.
- There is a need to promote high-tech farming by promoting private investments for taking up horticulture crops through adoption of protected cultivation technologies among other activities.

3.2 Financing SF/MF, Oral Lessees, Tenant Farmers, Share Croppers etc.

3.2.1 Financing SF/MF

Marginal and Small Farmers constitute 85.01% (117.59 million nos.) of total nos. of agricultural land holding in the country, accounting for 44.57% (71.14 million Ha.) of agricultural land, contributing 51.2% of total agricultural output at an all India level. As far as the State of Haryana is concerned, SF/MF constitute around 69% of the land holdings with a little less than 24% of operational farming land. In the absence of adequate asset base to provide for securitizing loans from institutional sources, vulnerability of the group towards borrowing from non-institutional sources increases. This leads to instances of exploitation by middlemen which is a big factor in agrarian distress and farmer suicides.

For strengthening the SF/MF segment, the following strategies/action plans are being suggested:

- a) Need for doubling of farmer's income through incorporation of integrated farming techniques with increased focus on horticulture crops and technology adoption. Integrated Farming Models can be utilised to have more than one crop simultaneously on a single piece of land, which can be a great means of income increment for farmers with small landholdings.
- b) Linking of the SFs/MF with the value chain system for enabling them to move up the ladder. For this, FPO/PCs approach needs to be promoted by all the stakeholders.
- c) Extensive Financial Literacy campaigns for awareness creation among farming community to ensure that credit is used for the purpose for which it has been availed while ensuring incremental income with savings and regular as well as timely repayment.

3.2.2 Financing of Oral Lessees/ Share Croppers and Tenant Farmers, etc.:

Of late with the increase of input cost in agriculture, the big farmers (owning >10 Ha.) are leasing out the land to the SF/MF. Small farmers take land on lease, but find it increasingly difficult to continue with the agrarian profession on account of declining profitability. It is in this perspective that we find a sudden increase in land leasing percentage from 2012-13 onwards.

To bring the distressed small and marginal farmers in the fold of institutional credit, the GoI, NABARD and RBI have stressed on the promotion of Joint Liability Groups (JLGs). The mutual guarantee /Joint liability deed signed by each of the borrowing member's forms the

basis for financing of Oral Lessee/ tenants who may not have proper land title deeds for availing mortgaged based lending support from the financial institutions.

RBI has also simplified the Procedures and Processes for obtaining Agricultural Loans by MF/SF/OL/TL and SC by advising banks to dispense with the requirement of 'No Due Certificate'.

The Farmers (Empowerment & Protection) Agreement on Price Assurance & Farm Services Bill 2020 creates a framework for contract farming. It provides a template at the national level of farming agreements, with regard to agribusiness, processing, and the entire range of services including wholesalers, exporters and large retailers for sale of farming produce at a mutually pre-agreed price.

The process of digitization of land record with access to Banks to create charge online needs to be expedited.

3.3 KCC/RuPay KCC, Crop Insurance, Land Records – Digitization and Creation of Charge

3.3.1 KCC/ RuPay KCC scheme and its coverage

The KCC Scheme aims to provide adequate and timely credit support from the banking system under a single window to the farmers for their short term credit requirements for cultivation of crops, post-harvest expenses, produce marketing loan, consumption requirements, working capital for maintenance of farm assets and activities allied to agriculture.

The banks are also advised to extend KCC facility to Animal Husbandry and Fish farmers for their working capital requirements. RBI has also raised the limit of collateral free Agri loans from Rs.1 lakh to Rs.1.6 lakh. The main objective of the KCC scheme is to meet the recurring cost towards feeding, veterinary aid, labour, water and electricity supply for animal husbandry activities and recurring cost towards seed/feed/harvesting and marketing charges etc. for inland fisheries sector.

Progress under KCC Scheme

SN	Agency	No of KCC sanctioned during 2019-20	% share of KCC sanctioned during 2019-20	Cumulative No of KCC (As on 31.03.2020)	Operative KCC as on 30.09.2020	Cumulative No of RuPay KCC issued up to 30.09.2020
1	Public Sector Banks	91,108	41.22	5,99,245	7,02,701	4,61,696
2	Private Sector Banks	92,537	41.86	2,04,284	1,90,876	39,558
3	RRB	36,922	16.70	2,69,012	2,69,638	1,72,877
4	SFBs	479	0.22	446	559	-
5	CCBs	3	-	11,87,18	11,81,562	5,46,507
	Total	2,21,049		22,60,16	23,45,336	12,20,638

(Source: SLBC, Haryana)

Although there are 16.28 lakh land owners in the State, the number of operative KCCs are much higher (23.45 lakh) which may be attributed to multiple financing. Further, as per the NABARD Financial Inclusion Survey Report (NAFIS) 2016-17, loan taken by agricultural households through the institutional sources stands at 72 per cent and the rest 28% credit requirement was met through non-institutional sources. This indicates a sizeable portion of agricultural household are still left out of formal credit system. To address the issue among others, the GoH has been started the process of digitization of land records, online creation of charge etc. which needs to be operationalized properly by giving banks access to the portal for registration of charges from their branch itself. Further, in the absence of a proper legal

framework and lack of records relating to their agricultural activity, tenant farmers/ share croppers/ oral lessees/ landless labourers face difficulty in accessing institutional credit.

3.3.2 Crop Insurance

The Central Government has formulated the Pradhan Mantri Fasal Bima Yojana (PMFBY) vide notification dated 23.2.2016. The scheme is providing financial support, stabilizing the income, to adopt innovative and modern agricultural practices to the farmers. Under this scheme, the farmer's share of premium is 1.5 percent for Rabi crops, 2 percent for Kharif crops and 5 percent for horticultural & commercial crops. The remaining share is borne by the Central and State Government in equal ratio proportion. There is single premium payable for all crops in a season. In the interest of the farmers, the State Government has decided to take only 2 percent premium from the farmers in case of cotton crop, which is a commercial crop and falls under the 5 percent premium category. The remaining 3 percent is being paid by the State Government.

Status of Crop Insurance

Season	Total Farmers Covered	No. of Farmers Benefitted	Total Premium Collected	Farmers Share of Premium	Claims Settled	Claim Ratio
Kharif 2016	738795	150881	25684.41	12735.62	23423.05	91.20
Rabi 2016-17	597298	62606	10780.29	6994.67	5702.64	52.90
Sub-Total	1336093	213487	36464.70	19730.29	29125.69	79.87
Kharif 2017	641562	240144	30365.01	12674.31	79704.32	262.49
Rabi 2017-18	697977	77215	14993.10	8224.34	8530.02	56.89
Sub-Total	1339539	317359	45358.11	20898.65	88234.34	194.53
Kharif 2018	722953	322574	58092.86	13908.27	79729.23	137.24
Rabi 2018-19	774947	80271	27289.08	10236.94	12705.24	46.56
Sub-Total	1497900	402845	85381.94	24145.21	92434.47	108.26

(Source: Economic Survey – 2019-20, Haryana)

It may be observed that the claim ratio in respect of Kharif is high in comparison to Rabi in all the years. Further, although the number of operative KCCs are 23.45 lakh, number of farmers covered are very less. The State Government should promote the scheme vigorously in order to extend benefits to more farmers in the State.

3.3.2 Digitization of Land Record and creation of charge:

Department of Land Resources, Ministry of Rural Development, merged CLR and SRA&ULR and launched National Land Records Modernization Programme, 'NLRMP' in 2008, with an ultimate aim to achieve a system of titles which ensures conclusive proof of the ownership of land. NLRMP was revamped in 2014 as the Digital India – Land Records Modernization programme (DILRMP), with its inclusion in the Digital India initiative of the Government of India.

In Haryana, the Scheme of Computerization of Land Records was started in the State in the year 1990-91 when Rewari district was taken up as a pilot district for computerizing land records. This scheme is being implemented under the technical guidance of National Informatics Centre (NIC) Haryana Unit.

The ultimate objective of the scheme of CLR is to make available the computerized copies of revenue records to the people at tehsil and lower level in place of manual nakal by the patwaris. To meet this objective, the Tehsil Computer Centres are being setup in the State.

The system to be strengthen further by allowing banks to register online charges through their branches/ ROs without approaching to the revenue department.

3.4 Agriculture & Allied Activities – Prospects and Performance

Agriculture is the main occupation of the people of Haryana. About 70% of the population is dependent on agriculture for their livelihood. Haryana is self-sufficient in food production and the second largest contributor to India's central pool of food grains (share around 15.6%). The State is facing problems of decreasing size of farm holdings, decreasing cultivable area, erratic rainfall, decreasing Long Period Average (LPA) rainfall, over exploitation of ground water, decreasing fertility and degradation of soil due to salinity, alkalinity and water logging, imbalanced use of fertilizers and micro-nutrient deficiency, low forest cover (3.59%), lack of required processing and value addition facilities, shortage of labour for farming operations. Challenges remain to be addressed as regards land reforms, capital investment for infrastructure development, natural resource management, marketing, processing and value addition, improved environmental services, risk management, agricultural credit, insurance and agro-advisory services to the farmers. Livestock sector is also a major source of employment and livelihood throughout the year to small farmers, including women. Cultivation of fruits and vegetables is the next potential activity after dairy and it needs to be developed through bank credit and to be integrated with micro irrigation, technological improvements etc. The main thrust, apart from fruits and vegetables, is being given for protected cultivation of Horticultural crops. Having close proximity to NCR, the requirement of fresh vegetables has increased manifold. For detailed prospects, performance and potentials of Agriculture & Allied Sectors, refer to the Chapter 4 on Potential Credit Outlay.

Farm Acts 2020

To bring about reforms in Agri Sector, the Government of India has passed the following three bills on 27th September 2020:

1. The Farmers (Empowerment & Protection) Agreement on Price Assurance & Farm Services Act 2020.
 - Provides a legal framework for farmers to enter into pre-arranged contracts with buyers including mention of pricing.
 - Defines easier dispute resolution mechanism.
2. The Farming Produce Trade & Commerce (Promotion & Facilitation) Act, 2020.
 - Expands the scope of trade areas of farmers' produce from select areas to "any place of production, collection, aggregation".
 - Allows electronic trading and e-commerce of scheduled farmers' produce.
 - Prohibits state governments from levying any market fee, cess or levy on farmers, traders, and electronic trading platforms for trade of farmers' produce conducted in an 'outside trade area'.
3. The Essential Commodities (Amendment) Act, 2020.
 - Removes foodstuff such as cereals, pulses, potato, onions, edible oilseeds and oils, from the list of essential commodities, removing stockholding limits on such items except under "extraordinary circumstances"
 - Requires that imposition of any stock limit on agricultural produce be based on price rise.

3.5 Climate Change – Adaptation & Mitigation

The impact of climate change is being felt globally. However, vulnerability of India is more pronounced due to its continued dependency on agriculture and excessive pressure on natural resources for providing livelihoods, as well as inadequate coping mechanisms.

In 2008, Government of India released its policy on climate change enshrined in its National Action Plan on Climate Change (NAPCC) having 8 missions. All these Missions are live, and have launched different programmes and schemes to achieve their objectives.

India has adopted a low carbon pathway for development. India's commitment in the Paris Agreement, is coherently built upon its low historic and per capital emissions. Further, an additional carbon sink of 2.5-3.0 billion tonnes of carbon dioxide is to be created through additional tree cover.

Haryana emits nearly 2% of national greenhouse gases (GHG). Agriculture sector contributes about 82% & 91% of CH₄ & N₂O emissions of the state. Majority of CH₄ emissions occur from enteric fermentation of livestock (62%) followed by rice cultivation (14%) & biomass burning (6%). While majority of the N₂O emissions occur from application of synthetic nitrogenous fertilizer (62%) followed by indirect N₂O emissions (20%) & nitrogen from crop residue left (5%).

The State Government has been making efforts to address the impact of climate change in Haryana through formulation of suitable policies and introduction of schemes tackling the related issues through measures involving both adaptation and mitigation aspects. There is an increasing need to promote Climate Smart Agriculture.

3.5.1 Haryana State Action Plan on Climate Change (SAPCC)

Impact of Climate Change on various sectors- The State Government of Haryana has projected the different sectors to be impacted by climate change as under:

- a) **Water resources:** For the Yamuna and Indus basins lying within Haryana, an increase in annual precipitation of about 9% (72 mm) by mid-century and of about 23% (186 mm) by end century is projected. Evapotranspiration to increase by 25% (46 mm). Negligible changes in ground water recharge is projected.
- b) **Forests:** During the short-term period of 2030s, out of the 14 forested grids in Haryana, 4 (28.57%) will be impacted by climate change. It is also assessed that any afforestation programme undertaken in future, in the districts of Karnal, Panipat, Jind, Bhiwani, Sonapat, Gurgaon, etc., could be vulnerable to future climate impacts.
- c) **Agriculture:** It is established that with short periods of exposure of wheat crops to temperatures of 28 °C to 32°C, results in a significant decrease in yield by 20% or more. Unpredictable moisture deficits during crop growth are a major constraint for productivity, for example, Sclerotinia stem rot may become a serious threat to the successful cultivation of Indian mustard.
- d) **Livestock:** The environmental conditions that induce heat stress on dairy animals may exacerbate and may lead to decline in milk productivity and may impair reproductive functions and efficiency of livestock species.
- e) **Health:** Extreme air temperature leading to heat waves are a direct contributor to deaths from cardiovascular and air pollution to respiratory disease, particularly among elderly people, major infectious diseases transmitted by water may increase in future.

3.5.2 Sectors identified and major interventions suggested

- a) **Agriculture:** The sector could benefit from research in molecular breeding for heat stress tolerance during grain filling period in wheat, development of water efficient aerobic rice, improving abiotic (drought and salinity) stress tolerance in Indian mustard, molecular Breeding of chickpea for drought prone environments and enhancing soil health. Extension work and advisory for fruits and vegetables in horticulture, strengthening of pest monitoring system need to be undertaken. Under livestock,

strengthening extension to provide advisory on Adaptation practices by capacity building of farmers, dairy, feed and fodder development, preventive health measures, strengthening disease investigation system and risk management could be undertaken. Under fisheries, improving fisheries management, reducing post-harvest losses, increasing waste recycling, maximizing yield and quality and reducing spoilage are suggested.

- b) **Forestry:** Forests in Haryana are vulnerable to climate change risks and any afforestation/reforestation programme to be implemented under the Greening India Mission (GIM) could also be vulnerable to climate change impacts. Both adaptation and mitigation projects could be taken up for addressing climate change impacts on forest ecosystems as well as to mitigate the climate change through enhancing the carbon sinks. Potential projects could be adoption of short rotation species, sustainable harvesting of timber and non-timber products, promoting agro-forestry and Social Forestry (increasing biomass and creating carbon sink) with multiple species and incorporation of anticipatory planting of species.
- c) **Water Resources:** A Comprehensive water database modelling and analysis of the data for climate change impact on water resources and development of real time water quality monitoring system have been identified as important interventions apart from rehabilitation of irrigation infrastructure and flood control measures for efficient management of water resources. Capacity building, groundwater management, rainwater harvesting, water logging and salinity control, construction of dams in upper catchments, crop diversification, use of water saving technologies, R&D etc. also need to be stepped up.

3.5.3 NABARD's intervention for addressing climate change

NABARD is supporting projects many of which can be classified under climate finance. NABARD's thematic areas of forestry, agriculture, animal husbandry, land development, minor irrigation, etc., have projects / components with emission reduction potential. Apart from these, areas like farm mechanisation, Self Help Groups, Storage & Market Yards, etc. have some linkages with climate change adaptation.

Incidentally, NABARD's three flagship programmes namely - Rural Infrastructure Development Fund (RIDF), Integrated Watershed Management, Umbrella Programme on Natural Resource Management (UPNRM) have supported projects with emission reduction potential in the state.

Climate Change specific initiatives by NABARD Haryana Regional Office

- a) Conduct of workshops to bring together all the major stakeholders of the State and create awareness on climate finance
- b) Collaborating with other agencies for generating awareness on emergent climate change related issues in the State and strategize on the road ahead through conduct of workshops
- c) NABARD is implementing the component for "Awareness and Capacity Building of Farmers" for the project - "Climate Resilience Building among Farmers through Crop Residue Management".

NABARD is the National Implementing Entity (NIE) for the following three funds:

- Adaptation Fund
- Green Climate Fund (GCF)
- National Adaptation Fund for Climate Change (NAFCC)

The campaign for 2020-21 was launched on 25 September 2020 with intensive focus on 350 villages selected on the basis of Haryana Space Applications Centre (HARSAC) data on incidents of paddy straw burning. The campaign includes innovative use of informative posters and wall paintings in prominent locations of villages, use of mobile vans for information dissemination, distribution of customized facemasks and t-shirts

with appropriate messages, playing of 3-D film on regional TV channels & jingles through AIR keeping in view the COVID 19 protocols and social distancing norms.

- d) The RO has earlier collaborated with National Dairy Research Institute (NDRI) for conducting a workshop on “Climate Resilient Livestock Management Systems” with grant support. The focus of the workshop was livestock sector with an objective to promote breeding of indigenous livestock like Hariana, Tharparkar, Murrah, Sahiwal etc.

Progress under NAFCC

The State Government has constituted State Level Steering Committee for recommending and endorsing projects under NAFCC.

- a) One project titled “**Scaling Climate Smart Agriculture (CSA) through Mainstreaming Climate Smart Villages (CSVs) in Haryana**” has been accorded approval for grant support of Rs.22.09 crore to the executing agency viz Agriculture Deptt, Govt of Haryana. The project is spread over 250 villages in ten districts (Yamunanagar, Ambala, Kurukshetra, Karnal, Jind, Kaithal, Panipat, Sonapat, Sirsa and Fatehabad).
- b) Another project titled “**Climate Resilience Building of farmers through Crop Residue Management**” in Punjab, Haryana, Rajasthan and Uttar Pradesh has been accorded approval for grant support of Rs.120.66 crore. The project grant support in Haryana is Rs.22.535 crore and Rs.3.045 crore to the executing agencies namely Dept. of Agriculture, GoH and NABARD respectively. The project is spread in ten major paddy growing districts of Haryana (Ambala, Fatehabad, Kurukshetra, Karnal, Jind, Kaithal, Panipat, Sonapat, Sirsa and Yamunanagar), accounting 80% of the paddy cultivated area. As a part of the project Haryana RO is organizing the “Awareness and Capacity Building of Farmers” component of the project.

3.6 Farmers’ Producer Organization (FPO)

Efforts are being made to form different types of farmer collectives and rural collectives such as self-help groups (SHGs), SHG Federations, joint liability groups (JLGs), etc. and more recently, FPOs that can be promoted under various legal provisions, including under the Companies Act, 1956. The FPOs are expected to evolve by combining the traditional cooperative spirit with the managerial efficiency of modern companies. They are seen as a ray of hope for improving farmers’ welfare, alleviating poverty and minimizing risks by virtue of being closer to the rural poor.

The Government of India’s plan to form 10,000 farmer producer organisations (FPOs) in the next five years is a path-breaking step to ensure economies of scale for farmers and is expected to help small and marginal cultivators team up to get lower rates for inputs and sell produce at higher rates. FPOs have helped farmers lower the cost of cultivation and achieve higher realization through collective marketing. Partnership between FPOs and private companies has also helped reduce risk and improve value chain for various crops.

3.6.1 Status of FPOs’ formation in Haryana: Approx. 460 FPOs (including FPCs) have been formed in Haryana by SFACH and various initiatives of the Govt. of India, NABARD and other organizations during the last decades. The activities being handled by FPOs range from grain procurement (i.e. wheat, rice, mustered) bee keeping, dairy based activities, vegetable cultivation, custom hiring centre, primary processing, basmati rice etc. In addition to ongoing FPOs’ projects, 150 more FPOs are to be promoted in Haryana in next four years (from 2020-21 to 2023-24) under CSS scheme of GoI.

3.6.2 NABARD’s Support for FPOs

NABARD is extending support to FPOs through the various funds as follows:

- a) **Producers Organizations Development Upliftment Corpus (PRODUCE) Fund**
NABARD utilized this Fund of Rs.200 crores for promotion and nurturing of 2,000 FPOs

during three years. NABARD has supported formation of 50 FPOs in the State of Haryana under PRODUCE. All these FPOs have been registered.

b) **Producers' Organization Development Fund (PODF)**

NABARD, from its own surplus had set up Producers Organization Development Fund in 2011 with an initial corpus of Rs.50 crore. The broad objective of the fund is to support POs across three levers, viz. credit support, capacity building and market linkage to meet their end to end requirements and thereby ensuring sustainability and economic viability.

c) **PODF – Credit Linked Grant Assistance**

NABKISAN Finance Ltd.- a subsidiary of NABARD as also other subsidiaries are assigned special responsibility to support credit needs of FPOs on affordable terms. However, NABARD provides grant support towards accompanying measures such as DPR preparation, training, administrative cost, etc. to POs/ PACS/ PCARDBs so as to ensure better utilization of loan extended to them by the lending agencies and achievement long term sustainability.

d) **PODF- Interest Differential (PODF- ID)**

NABARD is extending further support to new and existing FPOs, broadly covering the cost towards awareness creation, member mobilization and promotion of FPOs, capacity building, training of directors and CEO, business planning, registration, market linkages, administrative expenses of promoting agency, deliberations/ interaction meets, documentation, research, publicity and linkage to value chain, monitoring of progress and such other items of expenditure required for promotion of FPOs. NABARD has supported the formation of 39 FPOs and extended BDA to 13 FPOs in the State of Haryana under PODF-ID.

3.7 Convergence of FPOs with GoI. / State Govt. schemes (especially seed production)

Indian Seed Industry is one of the biggest seed markets in the world and it involves various institutions and organizations like Government institutions, Public sector organizations, Research and academic laboratories and Institutions and Private Sector. Nowadays, the farmers collaborate in the process of seed production by forming Farmer Producer Organizations.

In Haryana, NABARD has been promoting FPOs which are taking up many activities. Out of these, some FPOs are engaged in seed production of garlic, onion, peas, okra and Wheat. viz., Ambala Seed Producer company Limited and Nilokheri Farmer Producer Company Ltd. (NIFCO) have taken up activities especially, Seed Production, packaging and marketing.

The amendments in The Seed Act 1966 may be considered to enable FPOs to take part in the seed production operations in a bigger way by giving priority to them in seed production operations of State. Presently, this Act puts the seed producing FPOs at a disadvantage vis-à-vis the Govt. organisations producing seeds. Agriculture being a timely operation and seed is produced for use in the ensuing crop seasons, the involvement of reputed companies of private sector may also be considered for seed testing and certification where a seed producer/FPO after paying required fee may get timely results of its seed samples/certification. The inclusion of private sector on a well defined criteria in seed certification sector may give much required boom to the sector.

3.8 Micro, Small & Medium Enterprises (MSME)

Micro, Small & Medium Enterprises (MSME) are known as engine of economic growth and are necessary for promoting equitable development. Rural entrepreneurship empowers rural people in general and promotes the rural economy. It also provides access to credit, technology and (local as well as global) market for MSMEs. It also develops clusters to provide common minimum facility to MSMEs. Through Self-employment schemes it encourages youth to establish their enterprise at their home town/village.

Haryana is among the economically developed and industrialized States of India. The industrial sector is the 2nd largest contributor to the State GSVA with 32.8% in 2019-20 (at 2011-12 constant prices). State Government had also taken 'Ease of Doing Business' further by stressing on 'Ease of Living' for the common men, especially those belonging to poor and middle class of the society.

3.8.1 NABARD's initiatives for MSME

a) **Marketing Support to Rural artisans - Exhibitions and Melas**

In order to provide a platform to SHG members and rural artisans to showcase their products for marketing, NABARD provides financial assistance for exhibitions /melas being held in different parts of the state and country. Artisans are also sponsored for participation in such events.

b) **Rural Mart and Rural Haat**

NABARD is extending support to facilitate marketing linkages for artisans to sell their handicrafts and agro based products through Retail Outlets and through Rural Haat to cover the risk involved in the initial stages of marketing linkage. SHGs who are in the entrepreneurial mode, Producer Groups and Farmers Clubs are being identified under the scheme to support all the group members for marketing of products.

The Chief Minister Government of Haryana announced that 2,000 retail outlets would be opened in villages and cities through the cooperation department, in which the youth of the village and town will work according to their abilities and skills. These outlets will function as mini-super markets. Apart from this, potable mineral water under brand name 'Haryana Fresh' is also being launched through the Public Health Engineering Department.

c) **Off Farm Producers Organisation (OFPO)**

NABARD evolved its own cluster development policy in the year 2005-06. Taking a step ahead and also incorporating the learnings from the pilot, NABARD took initiatives for promotion and development of OFPOs in new clusters. The main aim of OFPO is to ensure higher income for the producers/ members through improved technology, skill upgradation, procurement and also supply of raw materials, aggregation and marketing of their products. One OFPO supported by NABARD is operational in district Palwal.

d) **Agri Business Incubation Centre**

NABARD has supported an Agri Business Incubation Centre at Chaudhary Charan Singh Haryana Agriculture University with an intention to promote agribusiness and entrepreneurship development with the concept of growth through innovation, upgradation of technology and skill development.

3.9 Micro Credit

3.9.1 SHG-Bank Linkage Programme

The SHG-Bank Linkage Programme has proved to be a major supplementary credit delivery mechanism with wide acceptance by banks, NGOs, various government departments and the poor. While it is recognized that the banks have enormously contributed to the growth of the programme, there has been some reluctance by the banks to accord priority to this programme owing to an effective monitoring, staff shortages, increasing NPAs under SHG financing, etc. NABARD and SRLM have been making concerted efforts for sensitizing the bankers and NGOs through capacity building on a continuous basis. As result of the convergence of efforts of stake holders, the programme has been steadily gaining pace.

3.9.1.1 Progress of SHG Bank Linkage Programme

Particulars	Cumulative (as on 31 March 2020)
No. of SHGs Saving Linked	66188
No of SHGs Credit Linked	42758

No. of participating banks	57
i. Commercial Banks	37
ii. Regional Rural Banks	1
iii. Co-operative Banks	19
No. of district covered	22
Bank Loan outstanding (Rs. in crore)	187.34

(Source: SLBC Data 2019-20)

3.9.1.2 NABARD's support for Capacity Building of Stakeholders

NABARD has been extending assistance for capacity and awareness building measures for all partners/ stake holders of SHG-Bank Linkage Programme through its tailor-made functional programmes for all levels of partners as well as SHG leaders.

3.9.1.3 E- Shakti - Digitization of SHGs

E-Shakti or Digitization of SHGs is an initiative of Micro Credit and Innovations Department of NABARD in line with our Hon'ble PM statement, 'we move with the dream of electronic digital India...'. Digital India is a Rs 1.13-lakh crore initiative of Government of India to integrate the government departments and the people of India and to ensure effective governance. It is to "transform India into digital empowered society and knowledge economy". NABARD has launched a project for digitization of all SHGs in the country. E-Shakti project is being implemented in 11 districts in Haryana State.

3.9.1.4 Roadmap for the future

There is a need to identify those branches which are not participating in SHG-BLP and involve them actively in programme implementation.

- There is an urgent need to identify the dormant SHGs and to plan for their revival.
- The capacity building and training programmes for the stake holders, particularly for newly recruited bank officers, may be organized in the districts by NABARD/SRLM.
- Convergence with Government programmes like NRLM may be ensured to maximize the benefits to SHG members.
- SHG-BLP to gradually shift from providing access to banking services to livelihood for SHG members.

3.9.2 Joint Liability Groups (JLGs)

JLG has emerged as a good way of extending micro-credit in rural areas of Haryana. This model is being used extensively by numerous MFIs and providing door step services to the borrowers. The JLG credit model is also used by banks in rural areas for extending micro credit. To give fillip to this effort, NABARD has signed a MoU with SBI for 1000 JLGs and is in the process of signing MoUs with other banks also.

Till 30.09.2020, 114381 JLGs have been formed since inception with outstanding loan of Rs.2026.60 Crores. (Source: 154th SLBC). On the basis of remarkable progress in this portfolio by banks, the assigned targets for JLG is 1,10,000 for the year 2020-21.

3.10 Rural Infrastructure and linkage support

NABARD provides concessional financial assistance to State Govt. and its agencies for undertaking infrastructural development in Agriculture and Rural Development under various funds placed with it. The details are as under:

3.10.1 Rural Infrastructure Development Fund (RIDF)

Cumulative Financial Assistance under RIDF since Inception i.e. Tranche I-XXVI (as on 20.11.2020):

Total No of Projects	- 6650
RIDF Loan Sanctioned	- Rs. 10674.49 cr
RIDF Loan Disbursements	- Rs. 6542.22 cr

The major share of the sanctions pertains to Irrigation and Agriculture allied sectors (48.79%) followed by Rural Connectivity (25.82%) and Social Sector (25.39%)

Potential Benefit of RIDF projects implemented in Haryana (Tranche – I to XXVI):

- a) Irrigation: 1.42 lakh hectare
- b) Roads: 4992 kms
- c) Bridges: 5450 meters
- d) Rural Drinking Water: 8.6 million population benefited

3.10.2 Micro-Irrigation Fund

Government of India has operationalized a Micro-Irrigation Fund (MIF) with a corpus of Rs. 5000 crore for special & innovative projects. A tripartite Memorandum of Agreement was signed between Govt. of Haryana, NABARD and Govt. of India in December 2019.

Haryana has sanctioned 04 projects under MIF with loan component of Rs. 790.94 crore in Haryana against total project outlay of Rs. 1192.81 crore. The projects will extend the coverage of micro irrigation over an area of 96,300 hectares across the state.

As on 14.12.2020, an amount of Rs. 21.57 crore has been released to Govt. of Haryana under Micro Irrigation Fund for project sanctioned to Agriculture & Farmers Welfare Dept. The Government of Haryana has constituted Micro Irrigation Mission Authority under the Chairmanship of Hon'ble Chief Minister of Haryana for the promotion and implementation of Micro Irrigation in the state.

3.10.3 NABARD Infrastructure Development Assistance (NIDA)

NIDA is a new line of credit support for funding rural infrastructure projects. NIDA is available for state governments and other state-owned organizations, such as corporations. For state governments, NIDA provides assistance for rural infrastructure development, outside of RIDF borrowing. For other state-owned organizations, NIDA offers direct financing based upon risk appraisal of every specific project. NIDA offers customized terms based on the requirements of the borrower, nature of the project, and risk profile of the borrower. The assistance provided under NIDA is available on flexible interest terms. NIDA also aims to leverage existing development schemes and technical expertise of NABARD by offering credit+ support to rural infrastructure projects. The aim is to offer credit+ support for a fee to ensure sustainability of the venture for NABARD.

Some of the projects sanctioned in Haryana are as under:

- a) Sanctioned Rs. 696.84 cr. to Haryana Vidyut Prasaran Nigam Limited (HVPNL) for strengthening the power supply since 2014-15 onwards. The cumulative disbursement since 2014-15 is Rs. 164.01 cr.
- b) Sanctioned Rs.187.91 crore under Lot-XI to Haryana Vidyut Prasaran Nigam Limited (HVPNL) for strengthening the power supply arrangements in all districts of Haryana.
- c) Supported HAFED with loan assistance of Rs 70.68 crore for construction of 12 godowns having capacity of 172965 MT in 8 districts of Haryana.

3.10.4 Dairy Processing and Infrastructure Development Fund (DIDF)

Under this fund we are supporting Cooperative Dairy Milk Union for modernization & up gradation of milk processing Plants. There are 06 Milk Unions in the state and all have been covered under DIDF. Rs 43.35 cr. has been sanctioned and Rs.06.90 cr. has been disbursed to NDDB during the last year.

3.10.5 Fisheries and Aquaculture Infrastructure Development Fund (FIDF)

NABARD will fund for creation of Fisheries Infrastructure in the state of Haryana. NABARD, Haryana, Regional Office and Govt. of Haryana have signed an MOA which has been sent for signing by GOI. Projects amounting to Rs.69.98 cr. has been approved in the State Level Approval and Monitoring Committee (SLAMC) under FIDF.

3.10.6 Agri-Market Infrastructure Fund (AMIF)

NABARD is supporting upgradation of Marketing Infrastructure of Rural Haats & APMCs. In Haryana, tripartite Memorandum of Agreement (MoA) has to be signed amongst the State Government, NABARD and Govt. of India to operationalize the fund. There are 81 APMCs in the state, of which 54 have been identified by GoI for upgradation of marketing infrastructure.

3.10.7 Warehouse Infrastructure Fund (WIF)

Under WIF, NABARD has sanctioned an amount of Rs. 69.89 crore to Food, Civil Supplies and Consumer Affairs Department, Govt. of Haryana for construction of 4 godowns. As against the said sanction cumulative disbursement is Rs. 44.04 cr. With this total capacity of 130334 MT has been created in the state by the said department.

An amount of Rs.108.05 crore to Haryana State Warehousing Corporation (HSWC) has been sanctioned for construction of 26 godowns with a total capacity of 271312 MT. As against the said sanction cumulative disbursement is Rs. 77.45 cr.

During the FY a sum of Rs. 113.04 crore sanctioned to HAFED for construction of 16 godowns with a total capacity of 272726 MT Capacity in various location of Haryana State. Post sanction formalities is going on which will be completed shortly. With this, we have sanctioned total 46 godowns under the WIF in the state which will create capacity of 674372 MT.

3.10.8 Long-Term Irrigation Fund (LTIF)

The Long-Term Irrigation Fund (LTIF) set up in NABARD with an initial corpus of Rs.20,000 crore for funding 99 irrigation projects during 2016-17 following the announcement in the Union Budget, was further supplemented with an additional allocation of Rs.20,000 crore in 2017-18 and Rs.15,000 crore in 2018-19.

In addition to the 99 projects, two more projects namely Polavaram National Project from Andhra Pradesh and North Koel Reservoir Project from Bihar and Jharkhand were included for funding under LTIF. This fund is not applicable to Haryana.

3.10.9 Animal Husbandry Infrastructure Development Fund (AHIDF)

The recently announced Prime Minister's Aatma Nirbhar Bharat Abhiyan stimulus package mentioned about setting up of Rs. 15000 crore Animal Husbandry Infrastructure Development Fund (AHIDF).

The Fund has been introduced to incentivize individual entrepreneurs, private companies, Farmers Producers Organizations (FPOs) and section 8 companies to establish.

- a) The dairy processing and product diversification infrastructure
- b) Meat processing and product diversification infrastructure and
- c) Animal feed plant.

3.10.10 Food Processing Fund (FPF)

a) Mega Food Park - Sonipat district – HSIIDC

NABARD sanctioned a term loan of Rs.71.00 crore to Haryana State Industrial and Infrastructure Development Corporation Ltd. (HSIIDC) under FPF for establishing a Mega Food Park at Barhi in Sonapat District in an area of 75.58 acres and 02 Primary Processing Centres at Karnal and Panipat spread over an area of approx. 2.00 acres each. Against the said sanction, we have disbursed Rs. 54.04 crore till date. The work related to provision of core infrastructure facilities is going on.

b) Mega Food Park - Rohtak district – HAFED

A term loan of Rs.55 crore has been sanctioned to HAFED for construction of MFP at IMT Rohtak & PPC at Sonipat, Yamunanagar and Sirsa district. Now the legal formalities for disbursement of loans are being undertaken.

3.11 Financial Inclusion

Financial inclusion broadens the resource base of the financial system by developing a culture of savings among large segment of rural population and plays its own role in the process of economic development. Further, by bringing low income groups within the perimeter of formal banking sector; financial inclusion protects their financial wealth and other resources in exigent circumstances. Financial inclusion also mitigates the exploitation of vulnerable sections by the usurious money lenders by facilitating easy access to formal credit.

3.11.1 National Strategy for Financial Inclusion 2019-2024

Globally, the adoption of National Financial Inclusion Strategies (NFIS) have accelerated significantly in the past decade. Keeping in view the global trend, Reserve Bank of India under the aegis of Financial Inclusion Advisory Committee (FIAC) initiated the process of formulation of National Strategy for Financial Inclusion (NSFI) for the period 2019-2024 and released the same on January 10, 2020.

The strategy aims to provide access to formal financial services in an affordable manner, broadening & deepening financial inclusion and promoting financial literacy & consumer protection.

Vision - To make financial services available, accessible, and affordable to all the citizens in a safe and transparent manner to support inclusive and resilient multi-stakeholder led growth. A set of guiding objectives have been formulated with special relevance in the Indian context which are as under:

- Universal Access to Financial Services
- Providing Basic Bouquet of Financial Services
- Access to Livelihood and Skill Development
- Financial Literacy and Education
- Customer Protection and Grievance Redressal
- Effective Co-ordination

3.11.2 NABARD's initiatives

Financial Inclusion Fund (FIF) is being managed by NABARD for providing grant assistance to Commercial Banks, Cooperative Banks and RRBs for promotion of financial inclusion, facilitating digitization and spread of financial literacy among rural masses. NABARD provides grant support to banks for promoting financial inclusion and digital literacy. Grant assistance of Rs. 3.42 crore has been sanctioned by NABARD to various agencies under FIF during the year 2019-20.

3.12 Past Trends in Credit flow in the State

The table gives a snapshot of the flow of GLC since 2015-16 in the state. SLBC Haryana prepares the Annual Credit Plan (ACP) for the State every year. Year wise status of flow of Ground Level Credit (GLC) are as follows:

(Rs. in Crore)

Particulars	Crop Loan	Term Loan	Total Agri	MSME	OPS	Total
PLP Projection 2015-16	45,210	15,198	60,408	14,733	13,908	89,049
ACP target 2015-16	44,214	14,650	58,864	15,646	14,276	88,786
ACP Ach. 2015-16	39,347	11,148	50,495	22,688	10,662	83,845
ACP Ach %	88.99	76.10	85.78	145.01	74.68	94.43
PLP Projection 2016-17	47,858	22,806	70,664	19,209	16,306	1,06,179
ACP target 2016-17	47,471	21,692	69,163	19,181	15,609	1,03,953
ACP Ach. 2016-17	39,644	12,233	51,877	22,341	9,911	84,129

ACP Ach %	83.51	56.39	75.01	116.47	63.50	80.93
PLP Projection 2017-18	52,274	24,366	76,640	25,289	16,947	1,18,876
ACP target 2017-18	48,735	22,269	71,004	24,516	15,822	1,11,342
ACP Ach. 2017-18	45,748	14,601	60,349	24,802	10,736	95,887
ACP Ach %	93.87	65.57	84.99	101.17	67.85	86.12
PLP Projection 2018-19	52,282	24,386	76,668	27,365	16,953	1,20,986
ACP target 2018-19	51,634	24,139	75,773	28,995	16,549	1,21,317
ACP Ach. 2018-19	45,228	16,772	62,000	39,595	12,956	1,14,551
ACP Ach %	87.59	69.48	81.82	136.56	78.29	94.42
PLP Projection 2019-20	54,073	26,950	81,023	31,748	17,071	1,29,842
ACP target 2019-20	53,398	26,873	80,271	31,977	16,650	1,28,898
ACP Ach. 2019-20	46,796	15,115	61,911	35,434	11,731	1,09,074
ACP Ach%	87.64	56.25	77.13	110.81	70.47	84.62
PLP Projection 2020-21	56,517	29,268	85,785	42,302	18,646	1,46,733
ACP target 2020-21	55,842	29,035	84,877	42,492	18,408	1,45,777
ACP Ach. 2020-21(As on 30 Sep 2020)	24,293	8,479	32,772	21,498	5,071	59,341
ACP Ach % (As on Sept 2020)	43.50	29.20	38.61	50.59	27.55	40.71
PLP Projection 2021-22	58,183	29,010	87,193	47,474	19,628	1,54,295

It may be observed from the above table that there has been a steady increase in the total GLC over the years. In terms of volume, the total credit flow under Priority Sector advances in the State has increased from around Rs. 83845 crore in 2015-16 to Rs. 109074 crore in 2019-20. There has been positive correlation between Priority Sector credit flows to the GDP of the state as well as agriculture production over the years.

3.13 Doubling of Farmers' Income by 2022

Announcing the target of doubling farmers' income by 2022, the Hon'ble Finance Minister in his Union Budget Speech 2016-17, had highlighted the need to think beyond 'food security' of the country to focus on 'income security' of the farmer. He had also laid emphasis on the optimal utilization of the country's water resources; creation of new infrastructure for irrigation; conservation of soil fertility with balanced use of fertilizer; and provision of value addition and connectivity from farm to markets.

3.13.1 Broad Strategies for Doubling Incomes

Some of the key strategies are given below:

- Enhancing Production through Yield Increase
- Leveraging Water Resources for Enhancing Farm Incomes
- Special Focus on Dryland Areas

Krishak Samriddhi - an income enhancement initiative project

NABARD has implemented the project in the Hisar district of Haryana. The project covers 1244 farmers in seven villages of Hisar district. Identified interventions include Animal Husbandry, Bee-keeping, Seed production, Orchard, Aromatic and Medicinal Plantation, Vermi-compost production and various off-farm activities. The main focus of interventions are adoption of cost-reduction measure, productivity enhancement, risk management and market linkages. The EE also provides awareness to the beneficiaries for adoption of good agriculture practices. As at the close of the project, the average income of the beneficiaries has been increased up to 60%.

- d) Reducing Cost through Smart Nutrient Management
- e) Reducing Costs through Low Input Agriculture
- f) Reducing Costs through the Farming Systems Approach
- g) Income Enhancement through Diversification
- h) Income Enhancement through Professionalization
- i) Stabilizing Income and Risk Management
- j) Focus on Small Holders' Problems
- k) Climate Change and Sustainable Agriculture
- l) Changing Economic Conditions and Global Food Market Trends
- m) Leveraging the Flagship Programmes of the Government

3.14 Integrated Farming System

At present, the farmers of Haryana concentrate mainly on Paddy and Wheat cropping pattern which resulted into degradation of soil fertility and declining ground water table coupled with stagnating productivity. Also SF/MF constitute around 69% of the land holdings with a little less than 24% of operational farming land. In this context, it is imperative to evolve suitable strategy to address these burning issues.

ICAR has recommended the integrated farming systems (IFS) for SF/MF to enable them to develop an alternative strategy to improve the economics of small sized farming operations.

Integrated Farming System (IFS) deploys a combination of two or more components like crops, live stocks, birds and trees using the principles of minimum competition and maximum complementarity aiming for sustainable and environment friendly system for improvement of farm income, family nutrition and ecosystem services.

IFS is a labour intensive system, thereby engaging the farmer family productively on their own farms, throughout the year. IFS leads to collective efforts among the farmers like collective purchase of inputs and collective marketing of produce, thus reducing their costs of production.

3.15 Agro Forestry

Haryana is primarily an agricultural state with almost 81% of land under agriculture and is deficient in area under forest (Forest Cover 3.62% & Tree Cover 3.53%). Agro Forestry is the sustainable way in which the state can increase its area under green cover along with improvement of grower's income.

Agroforestry is defined as a sustainable land-use system that maintains or increases total yields by combining food crops (annuals) with tree crops (perennials) and/or livestock on the same unit of land, either alternately or at the same time, using management practices that suit the social and cultural characteristics of the local people and the economic and ecological conditions of the area.

Agroforestry has proven to be replicable model for reclamation of soil salinity/alkalinity/water-logged soils. Trees form integral part in IFS approach for maximizing income from small units of land in a sustainable manner.

A dedicated National Agroforestry Policy was approved by Government in 2014. In continuation of above recommendations, a Sub-Mission on Agroforestry (SMAF) under National Mission for Sustainable Agriculture (NMSA) was setup in 2016 with an aim to expand the tree coverage on farmland in complementarity with agricultural crops.

3.16 Watershed initiatives – Banking Plan and Increase in Credit Flow

Watershed Development programs aim to restore degraded watersheds in rainfed regions to increase their capacity to capture and store rainwater, reduce soil erosion, and improve soil nutrient and carbon content so they can produce greater agricultural yields and other benefits.

NABARD has been implementing watershed development projects since the inception of Indo-German Watershed Development Programme (IGWDP) in India during 1990s. The participatory watershed development concept and methodology has proved to be a successful initiative in enhancing the productivity, production and improving livelihood security of rural community.

NABARD has sanctioned three Watershed Projects in the State of Haryana. The first project-Shivalik Dangri Taal River Watershed Project-has been sanctioned in Raipur Rani Block of Panchkula district covering 2016 ha area of 15 villages in the project area. The second project under WDF, the Mallah watershed, was sanctioned in Pinjore block of Panchkula district covering 1431 ha area of 12 villages and the third project has been sanctioned in Nizampur block of Mahendergarh district.

In order to take up additional economic activities in watershed and wadi project areas, NABARD has decided to extend concessional refinance support to all eligible banks/FIs to enable them to deepen institutional credit to beneficiaries in these project areas. NABARD has earmarked a refinance amount of Rs.5000 crore under this special dispensation during 2020-21 to 2022-23.

Refinance assistance is provided to the banks/FIs under Automatic Refinance Facility (ARF). Interest rate on refinance will be at 3% and the ultimate lending rate to be charged by banks/FIs should not be more than 2.5% over & above the interest rate charged by NABARD. Repayment period of refinance ranges between 18 months (minimum) to 5 years.

3.17 PACS as Multi Service Centres

With a view to rejuvenating the PACS, many initiatives have been undertaken by NABARD and one such initiative has been supporting PACS as MSC program from the year 2011 onwards through direct credit as well as through refinance to CCBs/StCBs to make them a self-sustainable entity. Positive impact and the benefits derived by the members of PACS as well as limitations in implementing the program were assessed and accordingly the operational methodology, coverage of investments and terms of refinance have since been revised.

The objective of the scheme is transformation of 35,000 PACS into MSC in a phased manner spanning over three years with an objective of PACS acting as enabling institutions for meeting the national goal of doubling of farmers' income. The target proposed for current year is transformation of 5,000 PACS and for subsequent years it shall be 15,000 PACS during FY 2021-22 and 15,000 PACS during FY2022-23. Rs.5000 crore have been earmarked under this special dispensation for the year 2020-21.

All State Cooperative Banks and DCCBs complying to refinance policy of NABARD are eligible for special refinance scheme.

Thrust areas for refinance include custom hiring centres, collective purchase of inputs, procurement of farm produce, scientific warehouses, pack houses, assaying units, sorting & grading units, cold chains, logistics facilities, primary processing centres, supply chain services including e-marketing platforms, marketing facilities etc. will be eligible for refinance.

3.18 Skill India Scheme related to agriculture and non-agriculture

Skill building has been viewed as an instrument to improve the effectiveness and contribution of trained work force for the modern industry. Developing skilled workers enhances the efficiency and flexibility of the labour market. Self-employment through small business also plays a vital role in the economy. To overcome this challenge, Skill Development and Skill Upgradation needs to be undertaken. For wage/ self-employment to the youth Haryana Skill Development Mission has been constituted to provide industries compliant skill training to the youth of Haryana. Further, four new State Industrial Development Institutes have been started during 2019-20 and 24 new Model Industrial Development Institutes are to be established.

3.18.1 Government of India Initiatives

Govt. of India has announced the Skill India campaign on 15 July 2015 with an aim to train over 40 crores (400 million) people in India in different skills by 2022 for which Govt. of India has launched a bunch of skill development initiatives aimed at skilling unemployed youth to make India the skill Capital of the world. An amount of Rs. 3,000 crores has been provided for skill development in the Union Budget 2020-21. Government has identified employment opportunities in construction, operation and maintenance of infrastructure. The National Skill Development Agency (NSDA) putting special thrust to infrastructure-focused skill development opportunities.

Some of the Schemes for the skill development launched by Government of India are:

- a) Deen Dayal Upadhyaya Grameen Kaushalya Yojana
- b) Pradhan Mantri Kaushal Vikas Yojana
- c) Financial Assistance for Skill Training of Persons with Disabilities
- d) National Apprenticeship Promotion Scheme
- e) Craftsmen Training Scheme
- f) Apprenticeship training
- g) Pradhan Mantri Kaushal Kendra

3.18.2 NABARD's initiatives

a) Entrepreneurship Development and Skill Development Programmes

NABARD is supporting Entrepreneurship Development Programmes (EDPs) and Skill Development Programmes (SDPs) for facilitating generation of self-employment and wage employment opportunities in rural areas conducted through Rural Development Self Employment Training Institutes (RUDSETIs) and Rural Self Employment Training Institutes (RSETIs).

b) Training Programmes for SHG Members/Leaders

NABARD has been extending assistance for capacity building measures for all partners/ stake holders of SHG-Bank Linkage Programme. Awareness building measures are also supported by NABARD through its tailor-made functional programmes for all levels of partners as well as SHG leaders. Further, Micro Enterprise Development Programme (MEDP) and Livelihood and Enterprise Development Programme (LEDP) for SHG members are being organised to enhance the capacities of the members of matured SHGs to take up micro enterprise through appropriate skill upgradation in the existing or new livelihood activities both in farm and non-farm sectors.

c) Capacity Building for Adoption of Technology (CAT)

Farmers, preferably small and marginal, are taken on exposure-cum-training visits to innovating agriculture and allied sector projects, Research Institutes, Agriculture Universities, Exhibitions/Fairs/Melas on Agriculture etc. for practical field level demonstration of innovative agriculture techniques. Different line departments, KVKs and Universities are also imparting training to the farmers, entrepreneurs and unemployed youth. The Horticulture Department has CoE for imparting training to the farmers.

3.19 Covid-19 related initiatives

Interventions undertaken during COVID-19 pandemic outbreak are as under:

a) Special Liquidity Facility (SLF) to StCB and RRB

In the wake of COVID-19 pandemic, RBI has made available a Special Liquidity Facility (SLF) to NABARD for providing front ended liquidity support to RRBs, Cooperative Banks and mFIs with a view to ensure unhindered flow of credit from banks to farmers to carry out their agricultural operations smoothly. Under SLF NABARD, Haryana RO has disbursed Rs.400/- crore and Rs.300/- crore to Haryana State Cooperative Apex Bank Ltd. and Sarva Haryana Gramin Bank respectively at a concessional rate of interest of 4.40% p.a. to tide over the

liquidity crunch during the pandemic outbreak. Relaxation upto a maximum 2% in case of CRAR was also provided by NABARD to Cooperative Banks and RRBs on case to case basis.

b) Special Liquidity Facility (SLF) for NBFC-mFIs

NABARD has decided to provide refinance to smaller NBFCs and Micro-finance Institutions (NBFC-mFIs) to overcome the liquidity crunch. Under the facility, NABARD Haryana RO has disbursed an amount of Rs.450.00 crore to Satin Credit Care Network Ltd. (NBFC-mFI registered with RBI in Haryana) at concessional rate of interest. Two more proposals of NBFC/MFI are under consideration of Haryana RO. Commercial Banks, SFBs and SHGB have been disbursed refinance to the tune of Rs.269.64 crore, Rs.87.51 crore and Rs.199.57 crore respectively during the current financial year (up to 17.12.2020).

c) Initiatives under AIF

A State level meeting on implementation of AIF Scheme was conducted under the chairmanship of Additional Chief Secretary (Agriculture & Cooperation) in the month of August 2020 involving all the stakeholders. The RO conducted a Sensitization Programme on AIF for MD of HStCB and Chairman, SHGB. The MoU under the Scheme was executed with the Chairman, SHGB and MD, HStCB during the month of August 2020 and HO has informed having forwarded the same to GoI.

d) Support for Development of Infrastructure

Haryana RO has disbursed Rs. 505.00 crore RIDF loan to Govt. of Haryana during Covid-19 Pandemic i.e. from March 2020 until 14th December 2020. Further, projects with RIDF Loan of Rs. 652.70 crore have been sanctioned towards agriculture, social sector (Drinking Water/Solid Waste Management) & Rural Connectivity (Roads) etc.

e) NABARD has sanctioned Rs.2,000 crore to Haryana State Warehousing Corporation (HSWC) and Rs 5,000 crore to Haryana State Cooperative Supply and Marketing Federation Limited (HAFED) to ensure that payment to farmers is made at the earliest during the COVID 19 lockdown period and ensured release of funds for their procurement operations during RMS 2020-21 and KMS 2020-21 respectively and disbursed Rs 3198 crore till date.

f) Sanctioned ST limit of Rs. 55 crore to CCBs for financing to farmers towards working capital requirements, repair and maintenance of farm equipment and other productive assets, storage/grading/packaging of produce Marketing activities, crop loan (if individual requirement exceeds Rs 3.0 lakh) and disbursed cumulative Rs. 70 crore under DRA during the COVID 19 lockdown period.

g) NABARD has taken steps to spread the health advisory SMS on COVID standard operating procedure to 73,860 SHG members across 11 districts of the State. Awareness camps have been organised by NGOs- our channel partner for SHG members in districts. SHGs members were encouraged to take up the activity of making mask, distribution of sanitizer etc. as income generating activity.

3.20 Any other state specific relevant issue/sector

3.20.1 Programme on Reclamation of Alkaline Soil through Watershed/Land Scape approach

In view of the emerging challenges of land degradation related issues due to indiscriminate use of water in states like Punjab, Haryana and Western Uttar Pradesh, NABARD is implementing a pilot project for reclamation alkaline soil in Haryana and Punjab. This will broaden the scope of watershed projects beyond soil and water conservation in rainfed/dryland areas and will extend it to restoration of productivity of degraded soils.

NABARD will implement the pilot project on a limited scale of 1000 ha area each for alkaline soil in Karnal/ Kaithal district of Haryana. The envisaged total grant support is Rs.7.00 crore.

3.20.2 Summing up

Agriculture continues to remain the main stay of the economy of the State. The important factors that are affecting the growth of Agriculture and Allied Activities in the State are summed up below:

- a) Depleting ground water resources is a matter of concern.
- b) Climate change and variability in rainfall. Climate Smart Agriculture, Climate Resilient Agriculture, Precision Farming etc., are need of the hour.
- c) Stagnating productivity, increase in cost of cultivation and decreasing net returns/income to farmers. This is a deterrent for the newer generation for taking up farming operations.
- d) Fast pace of fragmentation of land thereby making farming unviable.
- e) Soil degradation due to excessive use of chemical fertilizers and pesticides. Concerted efforts are therefore needed to be taken by all the stakeholders concerned so as to sustain and improve on the growth rate that agriculture sector has been witnessing over the past few years.
- f) Special focus is needed for enhancing capital formation in agriculture and allied sectors for sustainability of agricultural operations. Banks need to increase their lending in ATL to the farmers.
- g) Water conservation and optimum use of available resources are the watchword and micro-irrigation with due synergy between government Departments and bankers can play a significant role.
- h) Collectivization/aggregation of primary producers is the way forward for optimal use of limited resources in a sustainable manner and maximization of income through leveraging economies of scale.

Chapter 4

Potential Credit Outlay

4.1 Agriculture & Allied Sectors

4.1.1 Farm Credit

4.1.1.1 Crop Production, Maintenance & Marketing

Agriculture is the backbone of the economy of the State as majority of the population continues to be directly or indirectly dependent upon agriculture and allied activities for their livelihood. The Agriculture and Allied Sectors have always been an important contributor to the GSDP. However, as a consequence of rapid structural transition of the State's economy over the years, the contribution of the Agriculture and Allied Sectors at constant (2011-12) prices went down to 16.57 percent of the GSVA during the year 2019-20.

Haryana is self-sufficient in food production and the second largest contributor to India's central pool of food grains (share around 15.6%). The production of Wheat and Rice (the main cereal crops of the State) has increased significantly over the decades. State has reached an impressive level of food grain production of 181.44 lakh tonne during the year 2018-19, registering an increase of more than seven time as compared to 25.92 lakh tonne in 1966-67. (Economic Survey of Haryana 2019-20). The world famous Basmati rice, produced in Haryana finds an easy market abroad. More than 60% export of Basmati Rice from India is from Haryana alone. The major crops grown in the State are Wheat, Paddy, Mustard, Cotton, Bajra and Fruits & Vegetables. Wheat and Paddy crops have played a major role in pushing up the agricultural production.

I. Present Scenario:

a) Area under Principal Crops:

The details of the area under the major crops grown in the State are as mentioned in the table below:

('000 Hectare)				
Year	2015-16	2016-17	2017-18	2018-19 (P)
Wheat	2576	2542	2530	2553
Paddy	1353	1386	1422	1447
Total Food grains	4451	4537	4533	4558
Sugarcane	93	102	115	109
Cotton	615	571	669	708
Oilseeds	526	522	559	625
Gross Area Sown	6502	6502	6549	6550

(Source: Economic Survey, GoH, 2019-20)

b) Food grain production:

The total food grains production in Haryana has increased marginally over the last few years.

('000' Tonne)				
Year	2015-16	2016-17	2017-18	2018-19 (P)
Wheat	11350	12310	12263	12573
Paddy	4142	4451	4880	4516
Total Foodgrains	16330	17877	18032	18144
Sugarcane	6992	8167	9633	8505
Cotton ('000' Bales)	995	2046	1626	2013
Oilseeds	841	956	1121	1277

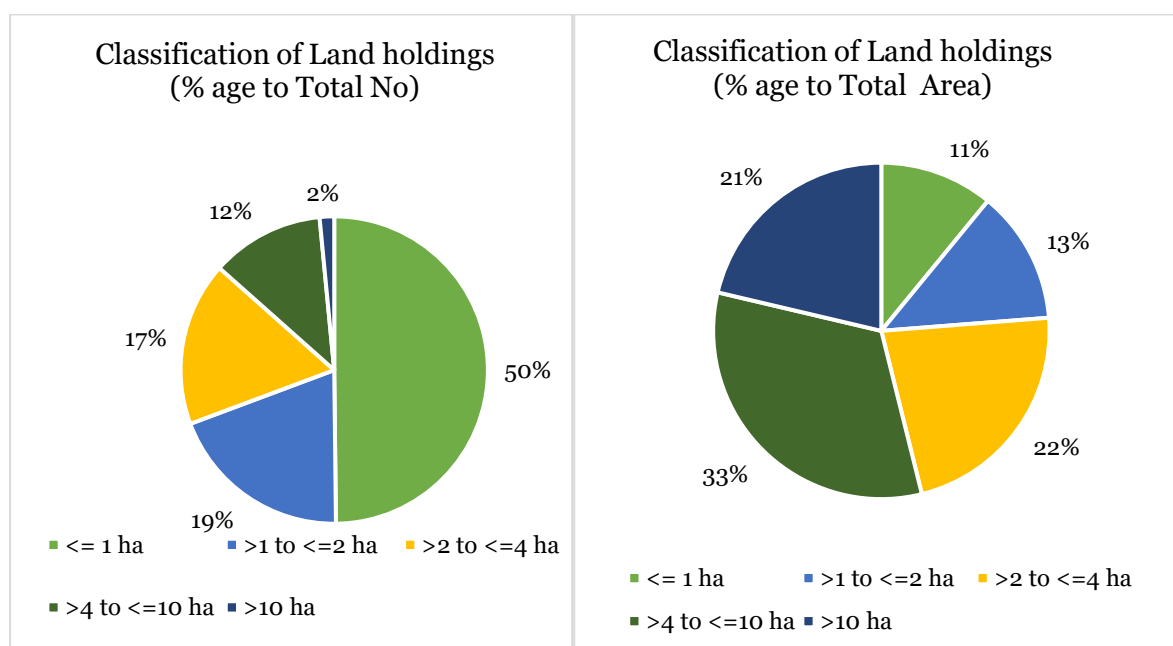
c) Average Yield of Wheat and Rice in Haryana and at all India Level

Average Yield of Wheat and Rice in Haryana and at all India Level (Kg. per Ha.)				
Year	Haryana		India	
	Wheat	Rice	Wheat	Rice
2015-16	4407	3061	3034	2400
2016-17	4842	3214	3200	2494
2017-18	4847	3432	3371	2578
2018-19	4925	3121	-	-

d) Land Holding Patterns

As per Agriculture Census 2015-16, there are estimated to be 16.28 lakh land holders in the State with a combined landholding size of 36.09 lakh ha, of which 69% viz, 11.17 lakh farmers are small/marginal with a total landholding size of 8.52 lakh ha (which is 23.6% of the State's total landholdings). Although average size of land holding in Haryana remains 2.25 ha. (All India average size of holding – 1.16 ha.), average size of marginal holdings and small holdings are 0.49 Ha and 1.46 Ha respectively.

As per Statistical Abstract 2018-19, GoH, the state has a total 89.16 lakh workers, of which 24.80 lakh are cultivators and 15.28 lakh are Agricultural Labourers, which combines to nearly 45% of total workers in the state.



II. Govt. Initiatives

The following are the major initiatives of GoI and GoH in recent budget

- State Govt. in Budget 2020-21 has allocated a total outlay of Rs. 6481.48 crore for agriculture and allied sectors for the year 2020-21 which is 23.92 % higher than previous year's allocation of Rs. 5230.54 crore.
- Interest Subvention:** In order to increase production and productivity of various crops, GOI and State Government have launched various schemes from time to time. The GoI provides interest subvention to the banks at the rate of 2% on their own involvement in production credit. Besides, the GoI also provides incentive at the rate of 3% for timely repayment by the farmers. Earlier, farmers were not required to pay any interest on loans of up to Rs 1.5 lakh taken from cooperative banks if they repay their loan on or before due date. GoH in budget 2020-21 has announced to extend the scheme to cover loans taken

by farmers from all nationalized banks as well. This benefit will be available only if the loans are repaid timely.

- c) **Crop Diversification** to check the depleting ground water resources- Following programmes have been initiated by GoH recently.
- GoH has started “**Mera Paani Meri Virasat**” scheme to diversify the predominant Paddy-Wheat cropping pattern in the state. Under the scheme, 1 lakh hectare area in the state is to be diversified with maize, cotton, bajra, pulses and horticultural crops.
 - Govt. of Haryana has launched the “**Jal hi Jeevan**” crop diversification programme on May 29, 2019 to address depleting ground water and to provide incentives to farmers switching from non-basmati paddy to less water intensive crops such as maize, pulses and oilseeds. The scheme envisages the replacement of water guzzling Paddy by Maize and other crops in 7 dark zone blocks with a target to diversify around 50,000 ha. of non basmati area into primarily Maize and other crops consuming less water. Crop diversification through this scheme is intended to promote technological innovation with sustainable agriculture and enable farmers to choose crop alternatives for increasing productivity and income. Progressive farmers who have adopted crop diversification will be selected as master trainers. These master trainers will be rewarded for successful promotion of crop diversification to other farmers.
- d) **Land Reclamation:** GoH has announced a target of 1 lakh acre for reclamation of Saline and Waterlogged soils in the state by 2020-21. (total affected area – 11 lakh acre) (Source – Haryana Budget 2020-21)
- e) **Organic farming** will be promoted in an area of 100000 acres in next 3 years. (Source – Haryana Budget 2020-21)
- f) New category of electricity connections will be created for ‘special agriculture-based activities’ under which electricity will be supplied at a cost of Rs 4.75 per unit, instead of the existing Rs 7.5 per unit. This category will cover activities such as grading, packing, precooling and ripening, beekeeping, and fish farming, and also cover certain cold storage facilities. (Source – Haryana Budget 2020-21)
- g) **Meri Fasal Meri Byora Portal:** On this Portal, farmers can directly avail benefits of various government schemes by uploading their crop details online.
- h) In addition to the above mentioned budgetary provisions and schemes, state government is also implementing various central and state government schemes for development of agriculture like –
- Pradhan Mantri Fasal Beema Yojana (PMFBY)
 - Soil Health Card Scheme
 - Rashtriya Krishi Vikas Yojana (RKVY)
 - National Food Security Mission (NFSM)
 - PM-Kisan Samman Nidhi
 - Pradhan Mantri Kisan Maandhan Yojana (PM-KMY)

III. Issues of Haryana Agriculture

- a) The **dominance of wheat-paddy cultivation** coupled with stagnating productivity, in the absence of breakthrough in new high yielding varieties, is aggravating dwindling ground water resources problem.
- b) The twin problem of **soil salinity** and **water logging** is reaching an alarming proportion in Haryana. As per Central Soil Salinity Research Institute (CSSRI) nine districts of Haryana have this problem.
- c) Falling soil health due to excess use of NPK has become wide spread and soils are exhibiting minor and micro-nutrient deficiency, thereby impacting crop productivity.

- d) **Poor Seed Replacement Rate** in Paddy (30.48%) & Wheat (33.8%). There is a strong co-relationship between the quality of seed, the seed replacement rate and the yields.
- e) **Lack of bio fertilizer** units and limited awareness about use of organic manure.
- f) There is a problem of paddy (wheat also to a small extent) **stubble burning** leading to huge carbon dioxide release/smoke over northern part of the country in a particular time of the year resulting in environmental pollution and wastage of valuable organic matter. This also kills the micro-organisms in the soil and enhances water requirement for the next cropping season.

IV. Suggested Action Points

- a) To promote diversification of agriculture, farmers can be incentivized to move away from wheat-paddy crop cycle to natural resources conserving crop alternatives (fruits, vegetables, flower, oilseeds, pulses, spices, etc.). Diversification can be a major game changer. This can be of three types viz. product (high value enterprise), process (precision farming) and time diversification (delinking from seasonality)
- b) Seed Replacement Rate (SRR) of various crops especially of Gram, Wheat and paddy is poor. Adequate multiplication of certified seed of various crops is pre-requisite to improve the Seed Replacement Rate.
- c) Development of terminal heat tolerant varieties of wheat, salinity resistant varieties of oilseeds and pulses and hybrids of sunflower, paddy, and pulse is required.
- d) In terms of number of land holdings, the Small and Marginal Farmers account for 68% of the total holding in the State. As per the NABARD Financial Inclusion Survey Report (NAFIS) 2016-17, loan taken by agricultural households through the institutional sources stands at 72 per cent and the rest 28% credit requirement was met through non-institutional sources. This indicates a sizeable portion of agricultural household are still left out of formal credit system. Tenant farmers / Oral lessees, in particular, face a range of problems like credit availability, input subsidies, relief measures etc., dominantly stemming from the lack of official recognition of tenancy and the fact that their status as actual cultivators is nowhere recorded. The Revenue department needs to develop such a database for credit intensification in this segment.
- e) The Agriculture Department may provide soil health cards to all farmers to ensure balanced use of plant nutrients on the basis of soil test analysis. There are scope for mobile soil testing units.
- f) Promoting environment friendly farming with micro irrigation techniques and judicious but optimal use of inputs. Minimum use of chemical fertilizers and promotion of organic farming is the need of the hour.
- g) Agriculture Department may provide facilities for surveillance and monitoring of disease outbreaks in crops.
- h) Promotion of Producers' Organizations (POs) for niche farming, vegetable growers, horticulture farmers and linking these to the Food processing Industries is necessary for enhancing Farmers' income. There is also a need for foray into Secondary as well as Tertiary Processing i.e. development of rice and wheat flour based snacks/bakery/ energy health foods/ grain based distilleries and confectionary products in close collaboration of development of value chains of FPOs with agro entrepreneurs willing to setting up of agro-processing cluster units ion the designated food parks.
- i) Govt. may like to build synergy in various programmes and policies, viz. Pradhan Manti Krishi Sinchai Yojana (PMKSY), e-NAM, Pradhan Mantri Fasal Bima Yojana (PMFBY), to provide an one stop hassle free digital solutions to the farmers.
- j) Agricultural extension has to be strengthened for making knowledge accessible to small and marginal farmers.

- k) Incentivizing setting up of more bio-charcoal units for gasification of stubble for manufacturing of briquettes from paddy straw rubble as well as need for promotion of “Lignocellulosic Hydrolysis” Process for manufacture of ethanol from paddy straw rubble which can be blended with petrol and diesel. The same can also be used in bioenergy plants for power generation and for making fuel bricks, silage making etc. which uses crop stubble for making compost or as a base material for mushroom cultivation by giving subsidy for the same for a limited period.
- l) As substantial number of farmers are still dependent on informal credit sources for their credit requirements, there is a need to regulate their transactions. There is need to check multiple financing to the farmers.

V. Potential Credit Outlay:

During 2019-20, total crop loan disbursed constituted 77% of the target set under the ACP. A number of factors, like the increased availability of important agriculture inputs like quality/certified seeds, timely availability of fertilizers and insecticides/pesticides, revision in scale of finance and adoption of KCC Scheme, facilitated the disbursement in crop loan. The adequate availability of electricity for irrigation in rural areas and canal water supply during the crucial phases of various crops also helped in the offtake of crop loan.

The total credit requirement for seasonal agriculture operations of farmers in Haryana for 2021-22 has been estimated at Rs.58182.60 crore compared to Rs. 56,517.26 crore in the previous year. The assessment of district-wise bankable potential for 2021-22 is furnished in Annexure I.

4.1.2 Term Loan for Agriculture and Allied Activities

Government of India, has envisaged that share of term loans in total agricultural loans is required to be raised to a significant level say 30% - 35%. Based on the PLP projections across all the districts of Haryana and aggregating it to the State level, the potential for this sector for the year 2021-22 has been worked out at Rs.29010.45 crore as compared to Rs. 29268.38 crore for the year 2020-21.

4.1.2.1 Water Resources

Water resources are the most important natural assets that impact Agriculture and economy of the State. Haryana, without any perennial source of surface water and dependent upon its share in various interstate agreements, has been managing the surface water resources so well that the State has become one of the main contributors to national basket of food grains. However, injudicious use of irrigation water resources in the state, leads to rapid depletion of Ground water level, which is a major concern.

I. Present Scenario:

- a) The State has an extensive network of canals, watercourses, a vast network of drains and 8.48 lakh tube wells with gross irrigated area of 57.37 lakh ha. The net area irrigated in the State during the year 2016-17 was 31.77 lakh ha, which is 90.8 % of the net sown area. 19.96 lakh hectare of area is irrigated by tube wells and 11.81 lakh hectare by Government Canals.
- b) Haryana has developed an extensive canal network consisting of 1,461 channels having a length of 14,085 kms. The Bhakra System has total 522 canals with a total length of 5,961 kms, the Yamuna System has total 446 canals covering 4,422 kms. and the Lift System has total 493 canals covering 3,702 kms. Beside this, the State has vast drainage network of about 800 drains covering 5,150 kms. length. However, the canal network in the State is old and capacity of the carrier channels has been reduced due to the continuous running of system.
- c) As per the Report on Dynamic Ground Water Resources, finalized as per the GEC-97 methodology by the State Government in consultation with CGWB (Central Ground Water Board) giving the status of ground water development stage as on 31-03-2017 (published in

July 2019). The annual replenishable ground water resource of the State has been estimated as 10.15 bcm and net annual ground water availability is 9.13 bcm. The annual ground water draft is 12.50 bcm and stage of ground water development is 137%. As per the same report, out of total 128 assessed blocks taken for study, 78 have been categorized as 'Over-exploited', 3 as 'Critical', 21 as 'Semi Critical' and 26 as 'Safe'. Total Annual Groundwater Recharge has decreased from 11.36 to 10.15 bcm, annual extractable resources have decreased from 10.30 to 9.13 bcm and the annual ground water extraction from 13.92 to 12.50 bcm.

- d) About 55 percent area of the State is affected by poor quality brackish underground water.

II. Govt. Initiatives

At present, the following government supported/ subsidy linked programmes are in operation in the state and expected to continue/ extended in the coming years.

- a) **National Mission on Sustainable Agriculture (NMSA)'s On-Farm Water Management System (OFWM)** is being implemented

through Department of Soil and Water Conservation, GoH, wherein the agriculture department, GoH is providing assistance to farmers for laying of Under Ground Pipe Line (UGPL) System, Sprinkler Irrigation System and Drip Irrigation System, in cotton and sugarcane crops. These water saving devices have been found most suitable for different agro-climatic conditions e.g. Sprinkler Irrigation System has been found well suited for sandy soils having undulating topography. Whereas, UGPL has been found most viable in central flat region of the State.

- b) Mission for Integrated Development of Horticulture (MIDH) which subsumes interventions under National Horticulture Mission (NHM), Horticulture Mission for North East & Himalayan States (HMNEH), & Central Institute of Horticulture (CIH) is being implemented wherein subsidy for creation of water resources for community or individual is available as well as for drip irrigation component in case of establishment of integrated new gardens.

- c) **'Pradhan Mantri Krishi Sinchayee Yojana'** with the motto of 'Har Khet Ko Paani' has been launched. The vision of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) will be to ensure access to some means of protective irrigation to all agricultural farms in the country, to produce 'per drop more crop', thus bringing much desired rural prosperity. To provide end-to-end solution in irrigation supply chain, such as creation of water sources, rain water harvesting, distribution network, efficient on-farm application and extension services on new technologies/information in the state, as first step during 2016-17,

Potential Bankable Activities

The following items of investments may be considered under the WR sector in Safe and Semi-Critical Blocks of the State :-

- Tube wells
- Drip Irrigation System
- Sprinkler Irrigation System
- Rain Water Harvesting
- Pumpsets
- Under Ground Pipe Line
- Solar Pump Sets

In Overexploited and Critical blocks, only the following items of investments should be considered under the WR sector :-

- Drip Irrigation System
- Sprinkler Irrigation System
- Rain Water Harvesting
- Under Ground Pipe Line
- Solar Pump Sets

In over-exploited / critical blocks some investments like replacement of old pumpsets by new pumpsets of same HP/ same type of pumpsets can be financed only after micro level survey. Other activities like drip, sprinkler irrigation, UGPL, water harvesting and recharge schemes could be financed rather promoted being water saving techniques in such blocks as suggested above.

District Irrigation Plans (DIPs) for all districts have been finalized under Pradhan Mantri Krishi Sinchayee Yojana. Agriculture Department is the nodal department for all the activities of PMKSY.

- d) In order to accelerate the pace of micro irrigation development in the country, NITI Aayog-Water resource division has assisted in the development of Hybrid Annuity model with Public-Private-Partnership (PPP) to provide water to every field. The pilot project based on that concept is being implemented in Haryana.
- e) **Long Term Irrigation Fund (LTIF)** has been instituted in NABARD as a part of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) to complete the pending ongoing irrigation projects.
- f) Struggling to cope with the declining water table due to overexploitation of groundwater, Haryana is set to implement the **Atal Bhujal Yojana** in 36 blocks of 13 districts in Haryana.
- g) GoH has announced to install 50,000 **off-grid solar water pumps** (3 HP and 10 HP), of which 35000 pumps to be installed during the current FY. For promoting solar photovoltaic water pumping system, State Government provides subsidy through HAREDA & Soil and Water Conservation Department.
- h) To check the depleting ground water, GoH has started “**Mera Paani Meri Virasat**” scheme to diversify the predominant Paddy-Wheat cropping pattern in the state. Under the scheme, 1 lakh hectare area in the state to be diversified with maize, cotton, bajra, pulses and horticultural crops.
- i) **Micro Irrigation Fund (MIF)** with a corpus of Rs.5000 crore has been operationalized in NABARD from 2019-20. Ministry of Agriculture and Farmers Welfare (MoA&FW), Government of India is the Nodal Ministry. The objective of the fund is to facilitate State Govts. efforts in mobilizing additional resources for expanding coverage under micro irrigation and incentivizing its adoption beyond provisions of PMKSY-PDMC.

III. Issues & Suggested Action Points

- a) The situation of depleting water level is alarming and warrants promotion of water management, On Farm Development and water conservation measures. No further groundwater exploitation in overexploited areas and restrictive exploitation in critical and semi critical areas are recommended. The alarming situation in the State warrants steps for devising methodologies to conserve water as well as judicious (consumptive) use of the available water. In the past, the stress was for exploiting the ground water resources to the maximum extent, while the current focus is on conservation and efficient use of water.
- b) Need to discourage flood irrigation and more incentives for adoption of micro irrigation practices to enhance water use efficiency (WUE).
- c) There is need to introduce Under Ground Pipe Lines (UGPLs) on the farms through which about 20% of the water can be saved and the same can be used to bring more area under irrigation.
- d) Encourage use of water saving devices like sprinkler and drip irrigation systems for reducing water/ power consumption and labour cost.
- e) Need to adopt practices like direct seeding of rice, SRI (System of Rice Intensification) and SSI (Sustainable Sugarcane Intervention), alternate furrow irrigation in cotton, plastic mulching and laser land levelling etc. for water conservation.
- f) The drainage efficiency of canals needs to be enhanced so that irrigation potential of canals can be increases from its present level.
- g) Renovation of tanks and village ponds for ground water recharge.

- h) Promoting less water consuming crops along with Participatory Irrigation Management (PIM) through Water Users Association (WUA). Pricing of irrigation of water and collection mechanism through WUA may be considered by the GoH.
- i) Harnessing solar energy for both new pumpsets and substitution of old and inefficient diesel pumpsets is the need of the hour.
- j) Adoption of integrated water resources management approach for efficient utilization of water resources, promotion of rain water harvesting and ground water recharge structures. These steps would mitigate effects of climate change to a great extent.

IV. Potential Credit Outlay

The total credit potential under Water Resources for the State during FY 2021-22 has been estimated at Rs. 1324.49 crore as compared to Rs.1314.43 crore in 2020-21. The potential has been projected to promote adoption of water saving technologies, like drip/sprinkler irrigation, underground pipeline (UGPL) etc., for judicious use of water. Irrigation being the most critical and scarce input to Agriculture efficient water use, combined with adoption of more judicious and market linked crop planning and customization of other inputs based on soil health cards is imperative for ensuring doubling of farmer's income.

4.1.2.2 Farm Mechanization

Haryana has emerged as a state with one of the highest agricultural production and productivity in the country in which farm mechanization has played an important role. Efficient and judicious use of farm mechanization can lead to enhancement of production and productivity in agriculture. Mechanized farming leads to reduction of costs and drudgery, better utilisation of irrigation potential, adoption of new and improved technology, timeliness of operations and augments efficiency and profitability of agriculture.

I. Present Scenario:

Presently the type of farm equipment used in the state is suited to sustain the rice-wheat cropping system. With the emerging scenario of crop diversification, there will be a need for specialized equipment. Though, the level of farm mechanization in India stands at about 40-45% with states such as UP, Haryana and Punjab having very high mechanization levels.

II. Govt. Initiatives

- a) ***Sub Mission on Agriculture Mechanization (SMAM)***: SMAM includes increasing the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low, offsetting adverse 'economies of scale' and 'higher cost of ownership' of high value farm equipment by promoting "Custom Hiring Centre" concept for agricultural machinery, passing the benefit of hi-tech, high value and hi-productive agricultural machinery to farmers through creating hubs for such farm equipment. It also includes promoting farm mechanization by creating awareness among stakeholders through demonstration and capacity building activities, and ensuring quality control of newly developed agricultural machinery and equipment through performance evaluation and certifying them at designated testing centers located all over the country.
- b) In order to popularize use of modern and improved farm machinery several other schemes of GoI and State government cover farm mechanization as one of the components are also operational. Some of these schemes are Rashtriya Krishi Vikas Yojna (RKVY), National Food Security Mission (NFSM), Promotion of Cotton Cultivation in Haryana State etc. These schemes provide subsidy on farm equipment and have been helpful in popularizing the same among the farmers.
- c) ***Scheme for promotion of agricultural mechanization for in-situ management of crop residue in the states of Punjab, Haryana, Uttar Pradesh and NCT of Delhi***: As per budget 2018-19 announcement, a special scheme to support the efforts of the Governments of Punjab, Haryana and Uttar Pradesh and NCT

of Delhi to address air pollution and to subsidize farm machinery required for in-situ management of crop residue, a new Central Sector Scheme (100% Central share) in this regard in the States of Punjab, Haryana and Uttar Pradesh and NCT of Delhi for the period 2018-19 to 2019-20 has been approved by GoI. The Scheme has been approved for continuation during 2020-21.

- d) Northern Region Farm Machinery Training and Testing Institute (FMTTI) has been operating at Hisar since 1963. It is engaged in developing human resource for agricultural mechanization. The FMTTIs have been conducting different types of training on selection, operation, repair/maintenance and management of farm machinery for the benefit of private organizations, retired defence personnel, technician, rural youth, farmers and engineering graduates. (Website - <http://nrfmtti.gov.in/>)

III. Constraints:

- a) Though mechanization in agriculture has grown steadily, the sector faces problems on account of declining average size of land holding as well as scattered farms, which restrict the scope for large scale farm mechanization.
- b) Costly machinery like tractors, combine harvesters etc. are economically unviable for small and marginal farmers.
- c) Lack of proper knowledge of farmer to purchase, operate and maintain farm machinery, especially innovative precision implements, leads to wrong choice and makes it uneconomical and risky.
- d) Non-judicious use of machinery may lead to soil compaction and cause damage to physio-chemical characteristics of soil, especially during puddling.
- e) Due to seasonal nature of agriculture, farm machineries remain idle for most of the time.
- f) With increased GHG emission leading to global temperature rise and climate change, it becomes important for the sector to attune itself by adopting hi-tech scientific technologies which help in minimizing GHG emission from the Farm machines and engines operating on farm as well as for off farm operations.
- g) Crop Residue burning is the biggest menace in Haryana as of today. There is need for adequate numbers and appropriate use of farm implements for quick removal and disposal of crop residue from the field.

IV. Suggested Action Points:

- a) New opportunities for specialized equipment in the diversified sectors such as horticulture, medicinal plants and for precision farming have to be explored by Government departments. With the growing awareness and demand, various Farm implements are being included in addition to existing implements for financing by banks which include Multi-crop thresher, Seed Drill, Tractor Mounted sprayer, Laser leveller, Paddy Transplanters, reaper binder etc. To increase water use efficiency in paddy cultivation, laser levellers are being popularized with subsidy support. The emerging scenario in the state manifests the need for modern and efficient farm equipment customized to the needs of the farmers and to conserve resources. Concepts like zero tillage need to be promoted as it will not only lead to water and soil conservation but also increase the cropping intensity in the State.
- b) Custom hiring/servicing in farm operations is in vogue. The trend among farmers to use increasingly larger tractors should be leveraged for custom hiring of farm equipment because in future multi-farm use will be the only way to keep operating cost at reasonable level. Custom hiring is emerging as a business avenue for entrepreneurs and this trend needs to be encouraged.
- c) Group financing for Farm Mechanization through JLGs, Farmers club etc. should be encouraged for SF/ MF.

- d) Need for dissemination of information through the Agriculture Technology Information Centres (ATIC), Single Window Centers about in-situ Crop Residue Management as well as alternative usage of lignocellulosic materials for generation of 2G-ethanol using hydrolysis techniques.
- e) On-farm demonstration of the usage and the benefits accruing out of use of various farm implements and machineries need to be promoted for usage of such machineries by small / marginal farmers.
- f) In the dairy sector, FM is in the initial stage but it can contribute at various stages of production such as grass harvesting, milking parlour, slurry disposal, maize based silage preparation etc. Keeping in view the high nutritional value of maize, there is scope for dairy farmers in the state to use specialized tractors of high HP (>65 HP) for silage preparation, tractor operated chaff cutting operation, forage cutting etc.
- g) PACS may be encouraged for setting-up Agro-Service Centres for farm implements, tractors, heavy machinery, etc. for custom hiring by farmers.
- h) Use of solar power operated farm machines/ use of biofuels and its blending with diesel for reducing CO₂/CO emission may be initiated. Similarly farm engines with high fuel efficiency/ use of turbo charger and intercooler with ability to reuse of flue gases may be introduced with rapid lab to industries transformation of technologies.
- i) Farm mechanisation penetration involving high capacity and expensive farm machineries needs to be enhanced through agri-start-ups, FPOs and other innovative modes.
- j) Banks to finance only those tractors and power tillers which meet Minimum Performance Standards (MPS) norms and BIS standards. Financing of second hand tractors should be done carefully after taking into account its remaining useful life.

V. Potential Credit Outlay

The total credit potential under Farm Mechanization for the State during FY 2021-22 has been estimated at Rs. 2856.68 crore as compared to Rs.2,777.34 crore in 2020-21. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.2.3 Plantation and Horticulture

Haryana is emerging as one of the leading States in the field of Horticulture. The Government of Haryana has prepared “Horticulture Vision” to double the area under horticulture from the present 8.17 per cent to 15 per cent and triple the horticulture production in the State by 2030.

Horticulture development has assumed greater importance in recent years since this sector has been identified as remunerative for diversification of land use which provides increased employment opportunities, better return per unit area besides filling the nutritional gaps.

I. Present Scenario:

In the State, Horticultural crops cover 5.23 lakh hectare area with total production of 80.30 lakh MT during the year 2018-19. The sector-wise area and production of horticultural crops in Haryana during 2018-19 are as under.

SN	Name of the crop	Area (000 ha.)	Production (’000 tones)
A.1	Vegetables	438.39	7172.11
2	Fruits	67.28	712.02
3	Spices	11.12	64.88
4	Flower	5.96	72.85
5	Cut flower		2.64
6	Medicinal and Aromatic plant	0.32	1.08

7	Honey	-	4.80
	Total	523.07	8030.38
B.1	Nursery fruit plant production in Nos during 2018-19		34.57 lakh
2	Area under Micro Irrigation		83813 ha.
3	Area under Poly Green House (2016)		924.31 ha.

(Data source: DoH, Govt. Haryana)

Haryana is the largest producer of seasonal Button Mushroom in the country. The main thrust, apart from fruits and vegetables, is being given for protected cultivation of Horticultural crops.

II. Govt. Initiatives

- a) Mission on Integrated Development of Horticulture (MIDH) for area expansion under fruits, flowers, spices, creation of water resources, community tanks and post-harvest management and marketing infrastructure. Under Mission for Integrated Development of Horticulture, the following centres have been established:
 - Centre for Subtropical Fruits at Ladwa, Kurukshetra.
 - Integrated Bee Development Centre at Ram Nagar, Kurukshetra.
 - Flower project at Gharaunda, Karnal.
- b) With the agreement of Govt. of Haryana and Govt. of Israel, two projects viz. Centre of Excellence for fruits and Centre of Excellence for vegetables were started at Sirsa and Karnal, respectively.
- c) Concerted efforts on water saving techniques and increased subsidy assistance in Micro irrigation (drip and sprinkler) scheme.
- d) Assistance of 65% for construction of poly houses, which will facilitate off season vegetable production, quality produce and high net return to the farmers.
- e) A new integrated centre of excellence for Integrated Horticulture Development has been set up at Hodal, Palwal.
- f) At Horticulture Training Institute, Karnal, three new courses were started as one year diploma, six month and three month courses in the field of Horticulture and gardening.
- g) GoH has entered into the field of Biotechnology especially production of micro tubers in potato and introduction of new varieties through tissue culture techniques.
- h) State government of Haryana shall promote integrated Pack-house(s) for horticulture produce i.e. fresh fruits and vegetables. The state government shall increase the upper limit of capital investment subsidy to the tune of up to INR 3.5 Cr. (50% capital investment up to the limit of INR 3.5 cr.) to units setting-up infrastructure in form of Integrated Pack-house(s) (washing, electronic and mechanized sorting & grading line/ packaging line/ waxing line/ staging cold rooms/cold storage, etc.) for fresh fruits and vegetables grown in the state.
- i) Launching of Bhavantar Bharpayee Yojna (BBY) w.e.f 01.01.2018. It is a risk mitigation scheme for Horticulture Producers during low price in the markets of the State. In the initial phase it covered 4 crops that are Potato, Tomato, Onion and Cauliflower. Twelve new vegetables namely, Carrot, Peas, Brinjal, Capsicum, Lady finger, Chilli, Bottle gourd, Turmeric, Cabbage, Radish, Garlic and three fruit crops namely Guava, Mango and Kinnow have been recently included under this scheme.
- j) Small Farmers Agribusiness Consortium Haryana (SFACH) has announced Crop Cluster Development Project (CCDP) in bagwani villages under plan scheme on "On farm and Marketing Support to Horticulture Farmers in the state of Haryana. Under the scheme the department has identified 140 potential horticulture clusters covering 340 baagwani villages across the State.

- k) The Haryana State Agricultural Marketing Board (HSAMB) is setting up India International Horticulture Market (IIHM) in about 537 acres of land at *Ganaur* in *Sonipat* with a cost of Rs 1500 crore. HSAMB is also planning to rope in private sectors to work as service provider at IIHM and 100 Horticulture collection centres is also planned to be set up in the State.
- l) Work has been initiated for new thematic markets by the Haryana State Agricultural Marketing Board (HSAMB), such as an integrated Apple Market at Pinjore, wholesale market for spices at Sersah in Sonapat district and wholesale market for flowers at Gurugram.
- m) A Centre of Excellence for Flowers is being set up with the assistance of Netherlands in Jhajjar district of Haryana to encourage the farmers to take up floriculture.
- n) In December 2019, Haryana approved 40 Horticultural projects with an aim of increasing farmers' income. Proposals like mushroom cultivation, banana ripening chamber, rooftop solar, cold storages, refrigerated vans, planting infrastructure development, integrated post-harvest management etc. have been approved. Also a subsidy of Rs 902.35 lakh has been allotted for it under the Mission for Integrated Development of Horticulture (MIDH). Main aim of these projects is to promote horticulture and doubling farmers' income with a focus on post-harvest management, marketing infrastructure development and mushroom cultivation.

III. Issues & Suggested Action Points

- a) Indian horticulture sector, despite being the second largest in the world, suffers from infrastructure constraints, shortage of high quality seeds and genuine planting materials, lack of post-harvest management and inadequate processing facilities.
- b) Credit support to plantation and horticulture sector especially in the investment intensive post-harvest facilities needs to be augmented.
- c) Having close proximity to NCR the requirement of fresh fruits and vegetables has increased manifold. Promotion of fruits and vegetable cultivation in this area, need to be properly prioritized.
- d) It is estimated that cultivable wasteland, which is lying idle specially in western Haryana, which can be brought under dry land fruit crops like Ber, Aonla, Pomegranate, Karonda etc. without curtailing the area under food crops.
- e) In view of high export potential in off-shore markets, floriculture, mushroom production, biotechnology, tissue culture and bio-fertilizers were identified as thrust areas for setting up of Hi-tech & Commercial Agriculture projects.
- f) Credit support would be required in this sector to enable the technocrat entrepreneurs to bring biotechnology products and processes to the market. Building awareness among bankers is very necessary in ensuring smooth credit flow to this nascent sector.
- g) With a view to boost the production and productivity level of horticultural crops, production and distribution of genuine quality planting materials at reasonable cost and their mass production and use of quality planting material by tissue culture technique need the attention and support of all concerned.
- h) Large scale promotion of Integrated Pest Management (IPM) and Integrated Nutrient Management Systems (INM) to help the farmer in cost management and quality production.
- i) Developing indigenous production and processing technology for commercial horticulture for domestic and export market.
- j) Mushrooms: Both seasonal production and cultivation under controlled conditions has picked up. Districts nearer to New Delhi like Sonapat, Panipat, Gurgaon, Rohtak and Jhajjar have high potential.

- k) Stress on water management in horticultural crops through use of drip and sprinkler irrigation systems.
- l) Development of suitable marketing infrastructure with grading, packaging and storage facility for the perishable horticulture crops. Post-harvest infrastructure like pack houses having washing, grading, waxing, packing line may be set up in those districts where Kinnow, Mango, Sweet Orange plantation is existing. Scope for establishment of Processing Industries in fruits (mango, citrus, aonla, strawberry) and vegetables (pea, tomato, potato, carrots, garlic, onion) to be explored.
- m) High Density and Mixed Orchards being the thrust area should be promoted in all the districts.
- n) There is a need to give emphasis for promoting shorter gestation crops, exotic vegetables and fruit crops, medicinal & aromatic plants, commercial floriculture, etc

The cultivation of horticulture crops is highly specialized, technical and remunerative venture as compared to traditional crops being grown by the farmers in the State of Haryana. Apart from this, majority of horticulture crops, being perishable in nature, require systematic and scientific handling and adequate cold chain infrastructure.

IV. Potential Credit Outlay

The total credit potential under Plantation and Horticulture for the State during FY 2021-22 has been estimated at Rs. 1351.48 crore as compared to Rs. 1,326.98 crore in 2020-21. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.2.4 Forestry and Wasteland Development

Haryana is primarily an agriculture State with almost 81% of its land under agriculture and is deficient in area under forest. As per India State of Forest Report, FSI, 2019, the Forest Cover in the state is 1.602 lakh ha which is 3.62% of the state's geographical area and the Tree Cover in the state is 1.565 lakh ha which is 3.53% of the geographical area. Thus, the Forest and Tree Cover of the Haryana state is 7.16 % of its geographical area. The State Government has framed its own Forest Policy in 2006. The policy has fixed the goal of achieving 20% forest and tree cover in the State in a phased manner.

I. Present Scenario:

In terms of forest canopy density classes, the State has 28 sq km under very dense forest, 450.90 sq km under moderately dense forest, and 1123.54 sq km under open forest. Forest Cover in the State has increased by 14.44 sq km as compared to the previous assessment reported in ISFR 2017. Forestry activities in the state are dispersed over rugged Shiwalik Hills in the North, Aravalli hills in the South, sand dunes in West and wastelands, saline-alkaline lands and waterlogged sites in the central part of the state.

In Haryana state, poplar and eucalyptus have been two popular species for agro-forestry. Twin cities of Yamunanagar and Jagadhari are the most important timber markets in Haryana state in terms of volume traded of a large number of species. Eucalyptus and Poplar, however, constitute the largest chunk of the market. They are the biggest timber markets of Northern India.

II. Govt. Initiatives

- a) **Development of Agro-forestry in Community / Farm lands** - State Plan Scheme namely "Development of Agro-forestry in Community / Farm lands" is being run by the Department which is wholly funded by the State Govt.
- b) **Rehabilitation of Aravalli Hills** - The state plan scheme namely "Rehabilitation of Aravalli Hills" is a state plan scheme wholly funded by the State Govt. The scheme aims to

maintain and protect the green cover created under “Aravalli Afforestation Project” with the help of Village Forest Committees and other stakeholders.

- c) **Herbal Nature Park:** It is an on-going state plan scheme wholly funded by the State Govt. with the objectives of making general public, especially farmers, aware of the importance, scope and potential of herbal plants. So far 48 Herbal Parks have been established in the State and another 10 Herbal Parks are under establishment.

- d) **National Mission for a Green India:** This is a Centrally Sponsored Scheme on 60:40 sharing basis (Centre: State). This Scheme was started from the financial year 2016-17 through State Plan. Green India Mission (GIM) is one of the eight Missions identified under the National Action Plan on Climate Change (NAPCC). The GIM aims to address key concerns related to Climate Change in the forest sector, namely: Adaptation, Mitigation, Vulnerability and Ecosystem Services.

Successful Agro Forestry Models for Haryana		
Classification	Tree Species	Intercrops
Agri-silvicultural System	Bakain (<i>Melia azedarach</i>)	Foxtail Millet, Soybean
Agri-silvicultural System (Irrigated conditions)	Poplar (<i>Populus deltoids</i>)	Kharif - Mentha, Moong, Maize, Sorghum, Colocasia, Pearl millet, Cowpea Rabi - Wheat, Potato, Mustard, Berseem, Oats- Annuals - sugarcane & turmeric
Silvi-Pastoral System	Eucalyptus	Natural Grass

- e) **National Afforestation Programme:** Under National Afforestation Programme (NAP), Forest Development Agencies have been constituted in every district. Under this scheme, afforestation and other allied activities are undertaken mainly in forest areas through Joint Forest Management mechanism. As per the revised operational guidelines of NAP, a State Level Forest Development Agency (SFDA) has already been constituted in Haryana State. The SFDA functions as a federation for the various district level Forest Development Agencies.

- f) **Soil and Water Conservation on Watershed Basis** - It is an on-going state plan scheme with the aims and objectives of construction of Water Harvesting Structures, Crate Wire Structures and gully plugging particularly in ecologically fragile areas along with tree plantation in their catchments

III. Issues & Suggested Action Points:

- a) The state has a large area falling in category of wastelands such as a) Waterlogged/Marshy land (seasonal), b) Land affected by Salinity/alkalinity, c) Land with Open Scrub & degraded land. Promotion of Agro Forestry or social forestry in those areas, will generate additional income for the farmers.
- b) In Haryana, there are good number of plywood and veneer industries. There is need to coordinate with such industrialists so as to motivate farmers to adopt farm-forestry
- c) There is needs for aggressive awareness building on the economic benefits of various forest species.
- d) Various agroforestry systems including - agri- silvi (agriculture + trees); silvi-horti (horticulture + trees); agri-silvi - pastoral (agriculture + animal husbandry + trees); etc, may be adopted to increase farmers' income.

- e) The State Research Organizations/Agriculture Universities to develop and promote revenue models for species like clonal Bamboo, Melia dubia, Casuarina, etc., which start giving yield within 3 years.
- f) Suitable species of bamboo may be promoted as a bio-drainage species, in addition to Eucalyptus. The State Govt. may encourage commercial plantation of clonal bamboo through a holistic plan including farmers' awareness & exposure visits, marketing tie-ups/ contract farming etc.
- g) Nurseries in close vicinity to the plantation sites may be set up for supplying adequate quantity of seedlings.
- h) Insurance companies may consider providing insurance for forestry species by developing new products.
- i) Training of bankers in appraisal of forestry projects for facilitating easy credit flow to the entrepreneurs.
- j) The wood based industries may promote the sector through suitable contract farming arrangements. The CSR obligations of the industries may be used in creation of awareness.

IV. Potential Credit Outlay

The total credit potential under Forestry and Wasteland Development for the State during FY 2021-22 has been estimated at Rs. 326.88 crore as compared to Rs. 311.99 crore in 2020-21. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.2.5 Animal Husbandry

The State of Haryana has carved a prominent place in the Animal Husbandry map of the country and Animal Husbandry activities in the State play a pivotal role in the rural economy through a variety of contributions in the form of income generation, draft power, socio-economic upliftment, employment generation and better nutrition through livestock production of milk, eggs & meat etc.

I. Present Scenario

Livestock sector in Haryana contributes about 40 percent to its agricultural GDP. It is also a major source of employment throughout the year and livelihood to small farmers, including women. For overall agricultural growth; livestock related activities are being given focused attention and support. Animal husbandry is an important sector to supplement the income of rural masses in the State.

Haryana is the home tract of world famous 'Murrah' buffaloes popularly known as 'black gold' mainly concentrated in Bhiwani, Jind, Hisar, Sonapat, Rohtak, Jhajjar and Karnal Districts and the dual purpose 'Haryana' cow. The State has since long been the prime source of Murrah germplasm for other States and abroad for up-gradation of their low yielding, nondescript buffaloes. The demand for superior germplasm of Murrah is increasing in rest of India and other countries. Per capita per day milk availability of the State is quite high @ 1142 gms (total milk production 2019-20 – 117.35 lakh tonne) against the national average of 375 gms next only to Punjab where per capita per day milk availability is 1181 gm. Certainly, the State is proud of its position, achievements, livestock wealth and the significant contributions of this sector to the State economy which is 5.5% of GSDP. There is tremendous scope for improvement in livestock sector in the State. The importance of this sector further increases particularly when there is a saturation level in production in the crop husbandry and the availability of cultivable land is shrinking due to urbanization and other facilities to the burgeoning human population.

Presently, livestock population of the State is being catered to by 2,879 veterinary institutions. On an average, 3 villages are having the facility of one veterinary institution in the state.

In spite of rich livestock resources with impressive contribution to GDP, significant roles in rural prosperity and socio-economic development of the society, the huge potential of livestock sector remains largely underexploited.

II. Govt. Initiatives

- a) **The Haryana Animal (Registration, Certification and Breeding) Act, 2019**, has been passed by the State for the welfare and Genetic improvement of animals by regulating animal breeding activities including use of breeding animals for production, processing, storage, sale and distribution of animal semen and embryos by way of artificial insemination, in-vitro fertilization, embryo transfer technology etc by doing their registration and certification. The Act will prevent the victimization of the owners of the animals by way of unregulated breeding activity in the State and in long term this will lead to improvement in the productivity of the animals.
- b) **Breeding Policy:** In order to improve the genetic merit of livestock, special attention is being paid towards conservation, multiplication and improvement of indigenous germplasm such as Murrah breed of buffaloes and Haryana, Sahiwal and other indigenous breeds of cows. Under this programme, animals of superior germplasm are being identified with an ultimate objective of establishing a 'gene pool' of these unique breeds for future breeding. Further efforts are being made to introduce latest technology in order to maximize per head productivity of milch animals in the shortest possible time.
- c) **Availability of Sexed semen in the Government Veterinary Institutions:** Livestock owners as well as animal scientists have long been dreaming of having a calf of the desired sex since calf of one sex may have more economic advantages than the calf belonging to other sex. The Govt. of Haryana is determined to promote breeding and rearing of native cows and has procured and supplied good quality Sexed semen in the Government Veterinary Institutions for artificial insemination of exotic and indigenous cattle with an aim to produce female calves only. The use of sex –sorted semen will give a big boost to the on-going efforts in controlling the stray cattle and increasing the milk production. The sexed semen technology there will be increase in the proportion of 'in production females' to more than 60% from the current 30-35% and will also boost the milk production in addition to minimizing the menace of stray cattle responsible for many road accidents and loss to crops through illicit grazing.
- d) **Health care:** The veterinary institutions are being provided all essential veterinary medicines and life-saving drugs. For providing specialised veterinary services, the State has established veterinary polyclinics at strategic locations. So far, five Polyclinics have been established at Sirsa, Bhiwani, Sonapat, Rohtak, Rewari, Jind and Panchkula. An ultra-modern Pet Medical Hospital-cum-Training Centre has been set up at Panchkula for diagnostic and treatment of pet animals. Two new veterinary clinics at Panipat and Kurukshetra are in process to be established. In addition to this, 8 new Govt. Veterinary Hospitals and 6 Govt. Veterinary Dispensaries have been opened and 2 Veterinary Dispensaries have been upgraded into Govt. Veterinary Hospitals.
- e) **Mobile Veterinary services for Livestock (1962 Pashu Sanjeevani Sewa):** In order to provide Veterinary and Animal Health Care Services (Preventive and Curative) to Livestock at their doorsteps and to address the concerns effectively; the Department of Animal Husbandry & Dairying, Haryana is in process to launch Information Technology Assisted 24x7 Mobile Veterinary Care services for Livestock (1962 Pashu Sanjeevani Sewa) in Jind, Mewat and Yamunanagar on Pilot Basis. The easy access to livestock will likely induce livestock owners to take better care of animal health of their Livestock more effectively so as to improve the productivity of their livestock.
- f) **Implementation of Central and State Schemes:** The Department of Animal Husbandry & Dairying is implementing the Central Plan and State plan schemes i.e. Livestock Health and Diseases Control, National Livestock Mission, Rashtriya Gokul Mission, Scheme for Establishment of Hi-Tech and Mini Dairy Units, Scheme for

Providing Employment Opportunities to Scheduled Castes, Scheme for the conservation and development of indigenous cattle (Gausamvardhan), Scheme for Integrated Murrah Development, Backyard Poultry Development Scheme, Scheme for establishment of Goat, Sheep & Piggery Units in the State etc.

- g) **Risk Management:** Insurance of the Livestock of the Farmers of the State under “Pandit Deen Dayal Upadhyay Pashudhan Suraksha Beema Yojna” wherein, the General livestock owners can insure his animals (Cattle, Buffalo, Horse, Camel Sheep, Goat, Pig etc.). The livestock insurance for the livestock of the Scheduled Caste livestock owners is 100% free for both large and small animals. There is a target to insure at least 8.0 lakh animals of the State during the Current Financial year i.e. 2020-21.
- h) **Pashu Kisan Credit Cards:** The Pashu Kisan Credit Cards facility will meet the short term credit requirements for rearing of livestock, poultry, fish, shrimp, other aquatic organisms. It covers Poultry and small ruminant as well as Dairy animal owners who are either individual or joint borrower like Self Help Groups. Reserve Bank of India (RBI) has extended the Kisan Credit Card (KCC) facility to Animal Husbandry Farmers on 4th February, 2019 for meeting out the short term working capital requirements. Dairy is the biggest and fastest growing sector and providing short term credit for working capital will boost the productivity tremendously. The benefit of KCC for AH&D with a limit of Rs. 1.60 lakh can be availed by any livestock and poultry farmer, without providing any collateral security and the benefit of KCC for AH&D upto the limit of Rs. 3.0 lakh can be availed by any livestock and poultry farmer with collateral security in the state of Haryana. The benefit of KCC can be availed at the effective interest rate of 4% annually up to Rs. 3.00 lakh. There is a target of issuing 4.32 lakh PKCC during current Financial year
- i) Centrally sponsored scheme on NLM having sub component of Livestock development which aims at Entrepreneurship Development and Employment Generation (EDEG) and incorporates 25% subsidy for different approved activities under Poultry, Sheep, Goat, Rabbit and Pig through subschemes. i.e. Poultry Venture Capital Fund (PVCF-EDEG); Integrated Development of Small Ruminants and Rabbits (IDSRR-EDEG); Pig Development (PigD-EDEG); Salvaging of Male Buffalo Calves (SMBC-EDEG). The scheme is being implemented through NABARD.
- j) In order to boost the Indian dairy sector in the post COVID-19 situation, the Government of India has announced special package worth Rs. 15,000 crore for **Animal Husbandry Infrastructure Development Fund (AHIDF)** to support private investment in Dairy Processing, value addition and cattle feed infrastructure on 5th May, 2020. This will not only give a boost to local manufacturing and consumption of locally produced goods but will also help the national consumer become vocal for local; thus taking India forward on the path of self-reliance.

III. Issues & Suggested Action Points

- a) Investment in the area of ‘value-addition’ in livestock products and processing, which is crucial for the objective of ‘Doubling the farmer’s income’.
- b) Promoting and motivating FPOs to practice ‘Organic Animal Husbandry Practices’ and create strong marketing links for organic dairy products and also taking steps to get the organic products certified.
- c) Scientific breeding policy to promote productivity of livestock especially among small farmers through use of AI Technology, Embryo transfer Technology etc. This is important for promoting sustainable animal husbandry practices as less animals will be required to produce the same output.
- d) Tapping the export potential of Murrah breed of Haryana.
- e) Production of clean milk through scientific management of the production units (small/medium dairies).

- f) Investment in functional livestock products (those products which provide extra health benefits besides nutrition) like 'Nutraceuticals'.
- g) Adopt smart supplements. The productivity of ruminant animals can often be boosted with supplements, some of which encourage microbes in the rumen to grow quickly and to provide better nutrition. In India, a water fern (*Azolla caroliniana*) cultivated in local ponds provides extra protein to cattle and goats fed on protein-deficient elephant grass (*Pennisetum purpureum*). GoH may promote Azolla cultivation in the State. This will also
- h) pave a way to reduce antibiotic and pesticide residues in animal products.
- i) Paddy straw management is emerging as a major issue for the state in view of dense air pollution caused by paddy straw burning. An approach to overcome the problem of stubble burning in the State is to convert the straw into silage and improve its nutritive value by various treatments like Urea and molasses treatment or to constitute it into complete feed blocks by various methods of treatment and fortification. This will solve the twin problem of climate change and fodder scarcity in the region. Paddy straw management by utilizing it as a potential source of fodder for livestock could be a future investment area in state.

Potential Bankable Activities

- Small & commercial Dairy units
- Captive indigenous milk processing units
- Densified fodder unit
- Transport vehicles
- BMCU and AMCU
- Refrigerated Vans
- Contract farming of Broilers
- Goat farming for meat production
- Milk ATMs and Mobile Automatic milk dispensing units
- Total Mixed Ration units
- Fodder harvester
- Self-Propelled Forage Cutter

IV. Potential Credit Outlay

The total credit potential under Dairy Development for the State during FY 2021-22 has been estimated at Rs. 5294.71 crore as compared to Rs. 4939.14 crore in 2020-21. Credit potential for the development of Sheep, Goat and Piggery has been set at Rs. 402.23 crore for the FY 2021-22.

4.1.2.6 Animal Husbandry- Poultry

Poultry farming is being taken up by the farmers as commercial business due to training programmes imparted by the State Agricultural Universities and State Govt Departments. Poultry farming is being mainly taken up in Panchkula, Karnal, Jind, Panipat, Sonapat and Gurugram districts of the state.

I. Present Scenario:

As per 20th Livestock Census 2019, the poultry population in the State was 463 lakhs registering an increase of 8% from 2012 to 2019. The poultry farming is mainly a private trade. The State Government is providing extension/techno-advisory services to carry out poultry development in the state.

During the year 2019-20, the production of eggs has reached to 66153 lakh whereas production of meat has reached to 553 lakh kg. in the State.

The poultry sector had a major setback during the initial few months of COVID 19 related lockdown.

II. Govt. Initiatives:

- a) NABARD is the subsidy channelizing agency under Entrepreneurship Development & Employment Generation (EDEG) component of National Livestock Mission which includes Poultry Venture Capital Fund (PVCF) as a component.

III. Issues and Suggested Action Points:

- a) There is a need to promote large scale poultry units both layer and broiler in the state with latest state of art technology and mechanization of operations to take advantage of the large meet markets.
- b) Increasing poultry feed prices are affecting margins of the poultry farmers. Setting up of Livestock feed units need to be encouraged to ensure adequate control over feed quality for poultry.
- c) Creation of organized processing facilities under Poultry.
- d) Insurance policies for poultry need to be made more attractive and affordable.
- e) Strict adherence to Bio security norms need to be ensured to prevent any diseases outbreak

IV. Potential Credit Outlay

Similarly, credit potential for poultry development for the State during FY 2021-22 has been estimated at Rs. 2207.36 crore as compared to Rs. 2182.32 crore in 2020-21. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.2.7 Animal Husbandry- Sheep, Goat & Piggery

Sheep and goat rearing continue to be in the hands of poorest of the poor using age-old, traditional animal husbandry and breeding knowledge passed on from generation to generation. Although lately small scale organized pig farming has come up in the State but most of it is limited to backyard rearing.

I. Present Scenario

According to 2019 Livestock Census, the total livestock population in the State is 69.38 lakhs consisting of 20.72 lakh cattle, 43.68 lakh buffaloes, 2.88 lakhs sheep, 3.35 lakhs goats, 0.43 lakhs pigs and 0.18 lakh horses, ponies, donkeys and others. Summary of livestock census 2012 and 2019 of the State reveals that cattle population has increased whereas population of sheep, goat and pigs have decreased significantly.

II. Govt. Initiatives

NABARD is the subsidy channelizing agency under Entrepreneurship Development & Employment Generation (EDEG) component of National Livestock Mission which includes Integrated Development of Small Ruminants and Rabbit (IDSRR), Pig Development (PD) as component under the scheme.

III. Issues & Suggested Action Points

- a) AH department may provide the necessary health care and extension services.
- b) Commercial goat rearing and stall fed goat rearing may be encouraged on a large scale around cities and districts bordering other States. Research is needed to develop cross bred of 'Boer' Goat/ other meat breeds in the state for promotion of stall fed goat farming.
- c) Awareness may be created amongst the members of SHGs and JLGs about goat rearing.
- d) Breeding units, meat processing & wool processing units should be financed to encourage the sector.
- e) Strengthening of extension and support services for imparting necessary technical information & skills to the prospective entrepreneurs.

IV. Potential Credit Outlay

Credit potential for Sheep Goat and Piggery development for the State during FY 2021-22 has been estimated at Rs. 402.23 crore. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I

4.1.2.8 Fisheries Development

Fishery as a subsidiary occupation is becoming popular among the farmers of the State. Although a non-traditional state in fisheries, fish culture is mainly done in the farmers' ponds, community ponds, micro water sheds and running water. The contribution of fishery subsector in GSVA of Agriculture and Allied Sectors is merely around 2 percent resulting in very low impact on the overall growth of Agriculture and Allied Sectors. Govt. of Haryana intends to transform the agriculture sector completely by diversifying the focus from crop husbandry to horticulture crops, animal husbandry and fisheries.

I. Present Scenario

The average annual fish production in the state is about 9,600 Kgs per hectare against a national average of 3,000 Kgs. Cumulatively, upto 2019-20, an area of more than 17,000 ha has been brought under aquaculture. The State has also increased the fish seed production over the years. As against the total demand of about 600 million seeds in the state, the total production in the government seed farms and by the private seed farmers is approximately 480 million. Fish production is also on rise as the state recorded a production of about 1.66 lakh tons of production during 2019-20. Fish farmers are not only rearing popular varieties of fish like rohu, mrigal, catla, common carp, silver carp and grass carp but also cat fishes and prawns.

Utilization of saline affected lands by introducing Pacific white shrimp, *Letopenaeus vannamei* was initiated under the

RKVY in the districts Jhajjar, Rohtak and Hisar. The white legged shrimp culture has now expanded and is being successfully done by the farmers in many of the adjoining districts. Haryana State has been declared as disease free State in Fish Culture by Indian Council of Agricultural Research (ICAR).

Major resources available for fisheries			
SN.	Item	Unit	Area
1.	Village Ponds:		
	i) Perennial	Hect.	14000
	ii) Seasonal	Hect.	2500
2.	Reservoirs / Lakes	Hect.	900
3.	Water Harvesting Dams	Hect.	1000
4.	Water Logged Area (critical)	Hect.	38000
5.	Critically affected saline areas	Hect.	20000
6.	Rivers and its tributaries	Km.	5000
7.	Canals	Km.	22000
8.	Drains	km.	2000
9.	Govt. Fish Seed Farms	No.	15
10.	Private Fish Hatcheries	No.	16
11.	Fish Seed Raring Units	No.	68
12.	Fish Farmers Development Agencies	No.	18
13.	Research & Training Institutes	No.	1
14.	Training Sub-centre, Jyotisar	No.	1
15.	Fish Markets	No.	3
16.	Field Offices	No.	114

II. Govt. Initiatives

- Govt of India has launched an ambitious scheme, by name, “**Pradhan Mantri Matsya Sampada Yojana**”. The scheme aims to bring about *Blue Revolution* through sustainable and responsible development of fisheries sector in India” with highest ever investment of Rs. 20,050 crores in fisheries sector comprising of Central share of Rs. 9,407 crore, State share of Rs 4880 crore and Beneficiaries contribution of Rs. 5763 crore. PMMSY will be implemented over a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories. The scheme intends to address critical gaps in fish production and productivity, quality, technology, post-harvest infrastructure and management, modernization and strengthening of value chain, traceability, establishing a robust fisheries management framework and fishers' welfare. It would also address issues like low productivity in inland aquaculture, disease, sustainability of marine

fisheries, sanitary and phyto-sanitary matters that impact the competitiveness of India's exports along with global bench marking.

- b) A new fund named as **Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** has been established by Govt of India during 2018-19 with an estimated fund size of Rs. 7,522 crore. The eligible entities under the fund are State Governments/ Union Territories, State Owned Corporations/ State Govt Undertakings, Fisheries Co-operative Federations, Co-operatives, Fish producer groups, Panchayat Raj Institutions, SC/ ST/ Marginal farmers, Women, SHGs, Private Companies/ Entrepreneurs.
- c) GoH has set a target to increase the area under fisheries to 55000 acre by 2020-21 and fish production target to 2.60 lakh MT by 2020-21. In State Budget 2020-21, Govt announced to establish 2 big feed meal plants and 10 small feed meal plants, Prawn Chilling and Processing Centre to encourage the fisheries sector in the state.
- d) In the Budget 2018-19, the Union Government had announced to extend the facilities of Kisan Credit Card (KCC) to Animal Husbandry farmers and Fisheries (AH & F) to help them meet their working capital requirements.
- e) Hi-tech and Ultra Modern Ornamental Fish Hatchery in Jhajjar is the only project in North India approved by the Govt with the cost of 13.68 Crore.
- f) GoH will support 16 Units of Re-circulatory Aquaculture System (RAS) at high stocking rate in indoor tanks with a water parameters in Haryana with a cost of 50 Lakh each and will provide 40-60% subsidy on each unit. It will produce 40 ton fish per acre.
- g) In Haryana, about 4.15 lakh hectare land is water logged. Haryana Fishery Resource Development Authority (HFRDA) will take the water logged land from the land owners on long lease basis and exploit the untapped water logged resources in Charkhi Dadri, Jind and Jhajjar districts. This initiative will enhance the income of fish farmers by utilizing the 16,000 identified water logged areas.
- h) Four fish markets at Bahadurgarh, Faridabad, Yamunanagar & Panipat has been established by the Haryana State Agriculture Marketing Board. There is a provision of vehicles in these markets which are provided to fish farmers for transportation of their produce from pond site to the markets at the concessional rates.
- i) The Government has also extended the validity of lease period of community ponds/village ponds from 5 years to 8 years for fish culture.
- j) Govt seed farm has been constructed at Ottu (Sirsa) with a capacity to produce 30.00 lakh fish seed per year.
- k) CIFE, Rohtak centre has taken initiatives for conversion of salinity affected agricultural fields into saline aquaculture farm. Of the various aquaculture options possible, CIFE has developed a technology for culture of Pacific white shrimp (*Litopenaeus Vannamei*) using inland saline groundwater. The technology was successfully tested in salinity affected areas in Haryana by the Rohtak Centre of CIFE at Lahli in 2012-2013. Subsequently, it has come to be promoted in the salinity affected villages in Haryana. With support from the Fisheries Department of GoH, which provides 50% subsidy to shrimp farmers for developing infrastructure and inputs, over 200 hectares of salinity-affected areas in Rohtak, Hissar, Bhiwani, Jind, Sonapat and Jhajjar districts has been already brought under white shrimp farming.

III. Issues & Suggested Action Points

- a) State Government may provide facilities for certification of fish seed and its quality.
- b) Farmer-friendly insurance schemes need to be formulated by the insurance companies.
- c) Lack of extension support and services for overall fisheries development in the state poor condition of community ponds requiring renovation and improvement. The ownership of

these ponds are with the gram panchayats and the ponds are put to multiple use. As a result, the productivity of these ponds are very low.

- d) A good Brooder Bank on the lines of that developed in Odisha needs to be developed in the state with NFDB/FIDF assistance.
- e) Supply chain of fish to internal markets needs to be strengthened so as to enable higher price for the fish producers.
- f) Fish Farmers' Producer Organisations may be formed in potential regions especially the eastern areas to address the issues of small producers with regard to input supply, aggregation of produce, market linkages etc.
- g) Extension support and services for overall fisheries development in the state may be further strengthened. Marketing infrastructure like ice plants, mini cold storage, refrigerated vans, etc. need to be strengthened by state government.
- h) Inadequate bank security, while considering bank loan for fisheries is an impediment. Village ponds cannot be mortgaged by the borrower. Accordingly, there is need for considering third party guarantee as collateral.

Potential bankable activities

- Construction of new Ponds and Tanks in low lying areas
- Renovation of existing Ponds and Tanks
- Establishment of freshwater fish seed hatcheries
- Construction of fish seed rearing farms (seasonal ponds)
- Renovation/ up-gradation of existing fish seed hatcheries
- Establishment of fish and prawn feed mills
- Pangasius/Magur/Tilapia culture
- Ornamental fish rearing units
- Integrated fish farming with dairy, poultry and ducks
- Intensive culture of fish through biofloc technology
- Re-circulatory Aquaculture System
- Cage culture in open waters and reservoirs

IV. Potential Credit Outlay

The total credit potential under Fisheries Development for the State during FY 2021-22 has been estimated at Rs.226.47 crore. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.3 Agriculture Infrastructure

4.1.3.1 Construction of Storage Facilities

A grain saved is a grain produced. These golden words remain as a mere proverb when one visualizes the quantum of post-harvest wastage and losses of agricultural produce due to inefficient supply chain management. There is an estimated wastage of about 1/3rd of total produce in India. The reason for such huge post-harvest losses are mainly attributed to lack of scientific storage facilities and improper transportation, poor front end infrastructure, such as inadequate warehousing facilities, redundant food processing technology and farmers' inaccessibility to value-added services. Creation of storage facilities for agricultural produce, particularly in the rural area has been emphasized in the National Agriculture Policy as well as in GoI Budget 2020. Proper storage of agricultural produce is as important as production in the modern day agriculture when we are facing the 'problem of plenty'.

I. Present Scenario:

The State Govt. is cautious to minimize the storage loss and enhance the covered storage capacity. The procurement agencies of the State have a covered storage capacity of 87.21 lakh M.T. as on 31.12.2019. Procurement agency wise storage capacity details is Food, Civil Supplies & Consumer Affairs Department 3.81 lakh, Hafed 13.01 lakh, HSWC 15.26 lakh, HAIC 1.79 lakh, FCI 7.58 lakh, CWC 4.55 lakh, HSAMB 4.19 lakh PEG Scheme 34.02 lakh and silos

capacity 3 lakh M.T. The covered godowns by Food Department are currently under construction at Bhorsainda (Kurukshetra) 26,380 MT, Kharkhoda (Sonapat) 42,200 MT, Sainmajra (Ambala) 15,600 MT, Shahjampur (Ambala) 2,340 MT and Hisar 40,656 MT which in turn the total 1,27,176 MT capacity Godowns.

Govt. of India has set a target of constructing silos for a capacity of 9.50 lakh M.T. Out of this the FCI is constructing for a capacity of 3.00 lakh MT steel silos at Rohtak, Jind, Palwal, Panipat, Bhattu and Sonapat for a capacity of 50,000 MT each. The state government will construct steel silos for the remaining capacity i.e. 6.50 lakh MT at Ambala 1,00,000, Faridabad 50,000, Bhiwani 50,000, Rohtak 50,000, Jagadhari 50,000, Karnal 75,000, Taroari 75,000, Hansi 50,000, Uchana 50,000 and Kurukshetra 1,00,000 MT on PPP mode.

The Horticulture Department of State has total 187 cold storages varies from 100 to 80000 MT capacity. As on 30 June 2020, total capacity of cold storages in Haryana is 7.75 LMT (as per data shared by Horticulture Deptt.) Majority of the storages are located in Ambala, Kurukshetra, Karnal, Sonapat and Yamunanagar. However, state being 3rd largest producer of button mushrooms in India, 2nd largest producer of green peas, Kinnow being the most prominent citrus fruit having maximum production followed by mango and guava and vision of Horticulture departments to take total cropped area under horticulture crops from 7.58% to 14% by 2022 and development of 340 villages as “Baagwani villages/ Horticulture villages”, the demand for further extending cold storages and related infrastructure in the state will arise.

The state has 106 principal market yards, 178 sub-market yards and 187 other market yards. Haryana State Agricultural Marketing Board (HSAMB) is responsible for creation, maintenance and regulation of agri-marketing infrastructure in the state.

In Haryana total 81 mandis have been linked on e-nam platform as on 30.06.2020. (<https://enam.gov.in/>). Haryana Government has decided to integrate packhouses on the e-NAM platform of the Government of India, under which 3 packhouses of Farmer Producer Organization (FPO) from the state will be integrated. Packhouses have been set up under the Crop Cluster Development Programme(CCDP) of the State Government. 112 FPOs are working across the state for the supply of fruits and vegetables.

The Government of Haryana has embarked on a revolutionary e-governance initiative through “e-Kharid” project to bring in transparency at all levels in the Food Grains procurement processes, to extend ease of doing business to the traders and to empower the farmers by providing real time information and timely payments.

II. Govt. Initiatives

- a) Consequent upon the announcement of an allocation of Rs. 5000 crore to NABARD in the budget for 2013- 14, for supporting creation of infrastructure for storage of agricultural commodities, Reserve Bank of India (RBI) issued guidelines for creation of Warehouse Infrastructure Fund (WIF) in NABARD. With a view to operationalising WIF, NABARD has formulated a scheme viz., NABARD Warehousing Scheme 2013- 14 (NWS), which envisages extension of loans to Public and Private Sectors for construction of warehouses, silos, cold storages and other cold chain infrastructure. Funds under this scheme would be utilized for meeting the growing demand for storage capacity for agricultural commodities in the entire country and also in the wake of enactment of National Food Security Act 2013.
- b) The Union Cabinet in July 2020 has approved a new pan India Central Sector Scheme called Agriculture Infrastructure Fund. The scheme shall provide a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support. The duration of the Scheme shall be from FY2020 to FY2029 (10 years). Under the scheme, Rs. One Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies,

Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Start-ups, Aggregation Infrastructure Providers and Central/State agency or Local Body sponsored Public Private Partnership Project.

- c) In the Union Budget 2020-21, Govt. of India had announced that NABARD will 'Map and Geo-tag Agri-warehousing, cold storage and reefer van facilities' across the Country.
- d) New Agricultural Marketing Infrastructure (AMI) sub-scheme of Integrated Scheme for Agricultural marketing (ISAM) - The AMI scheme envisages back-ended capital subsidy for credit linked investment in eligible storage and marketing infrastructure projects. Storage infrastructure like godowns including stand-alone silos for storage of food grains with necessary ancillary facilities like loading, unloading, bagging facility etc., are eligible for subsidy.
- e) In order to provide farmers particularly small and marginal ones with proper marketing facilities nearer to farm-gate and improve farmer- market linkages, Government announced in the Union Budget, 2018-19 to develop and upgrade existing approximately 22,000 rural haats into Gramin Agricultural Markets (GrAMs). In these GrAMs, physical infrastructure is to be strengthened using MGNREGS and other Government Schemes; and an Agri-Market Infrastructure Fund (AMIF) with a corpus of Rs. 2000 crore is also to be set up with NABARD for developing and upgrading agricultural marketing infrastructure in the 22,000 Gramin Agricultural Markets (GrAMs) and 585 Agriculture Produce Market Committee (APMC) Markets. The GrAMs are to be linked to electronic National Agricultural Market (e-NAM).
- f) Recently, to address the difficulties faced by the farmers due to the COVID19 lockdown crisis, the Union Minister of Agriculture & Farmers' Welfare, Shri Narendra Singh Tomar, on 2nd April 2020 launched 3 new modules of eNAM.
 - FPO Module on eNAM: This enables FPOs to conduct trade of commodities from their collection centres declared as "Deemed Market" or "Sub Market yards".
 - Warehouse based Electronic Negotiable Warehouse Receipts (eNWR) trading and
 - Logistics Module to facilitate transportation of the commodities from farm to Mandis and from Mandis to warehouse/consumption centres.
- g) Government of India in Union Budget 2020 has presented 16 point action plan to revive the agriculture sector, wherein it has been clearly mentioned that the Warehouses will be set up, viability gap funding to be provided to set up warehouses, village storage scheme run by SHGs to provide holding capacity for farmers, women in villages can regain their status as *Dhaanya Lakshmi*. The **One District One Product** initiative of GoI will also fundamentally rely heavily on creation of scientific storage infrastructure in the country.

III. Issues & Suggested Action Points

- a) The current food grain storage capacity in Haryana amounts to 115.28 Lakh MT with around 90 Lakh MT of covered storage capacity. As per the potential assessed by NABARD there is scope for at least another 20-25 Lakh MT storage capacity creation. As the crop procurement basket expands, there will be requirement for creation of new scientific storage units.
- b) Taking into account the need for scientific storage and avoid wastage, State Govt. agencies may take necessary steps to convert the CAP storage to covered storage.
- c) Government may incentivise/encourage construction of silos.
- d) The warehouse may be accredited with WDRA to enable the farmers to avail loans against negotiable warehouse receipts.
- e) Storage infrastructures may be promoted through PPP mode.

- f) Govt. may promote area and crop specific small storage structure whose management and maintenance may be entrusted to local PACS or FPOs.

IV. Potential Credit Outlay

The total credit potential under Storage and Market Yards for the State during FY 2021-22 has been estimated at Rs. 4048.57 crore as compared to Rs. 3967.63 crore in 2020-21. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.3.2 Land Development, Soil Conservation and Watershed Development

“Haryana has made great strides in food production during the era of Green Revolution. However, this success has also led to the second generation problems such as declining resource base, especially reduction in soil organic carbon content, multi- nutrient deficiencies, soil degradation, decline in factor productivity, increase in cost of cultivation, hydrological imbalance and decline in underground/above ground biodiversity and pollution of soil, water and environment. About 65% of ground water of Haryana is of poor quality. There is also an emerging threat of climate change. Therefore, there is an urgent need to address the complex issues of natural resource management for sustainable development of agriculture.” - Haryana Kisan Ayog (HKA)

There is an urgent need to discover, develop, implement, and constantly improve ways to use land that sustains its productive capacity and enhances the environment at the same time. Proper management of soil and water is required for sustainable agricultural production. It is therefore imperative that all developmental agencies and financial institutions have concern for judicious use and conservation of these resources.

I. Present Scenario

- a) Soil of Haryana State is mainly consisting of alluvial deposits, which cover around 98% of the state while hard rock covers around 2%. Alluvial deposits are of older and newer types and consist chiefly of clay, silt and fine to medium sand. Other deposits are piedmont deposits, which are confined to a narrow zone, about 2 to 4 km wide, between Shivalik Hills and alluvial plains.
- b) The twin problem of soil salinity and water logging is reaching an alarming proportion in Haryana. As per Central Soil Salinity Research Institute (CSSRI) nine districts of Haryana have this problem. Rohtak is the worst-hit district in the state with 47.20 per cent of its area falling under ‘potentially waterlogged category’ and 9.90 percent of the area coming under ‘existing waterlogged and saline’ area. In Jhajjar, 40.50 per cent of its land comes under ‘potentially waterlogged and saline’ category and 6.90 percent of the area suffers from acute salinity. It is followed by Sonapat. “In flood irrigated areas with brackish underground water, soil salinity is increasing in the absence of effective drainage. Substantial area of land is affected by water logging, particularly in Rohtak, Jhajjar and Sirsa and water deficit districts of Mewat and Bhiwani. Around 50,000 ha area is under critical water table depth, which needs proper attention for its reclamation and proper use.”
- c) Tube wells are the main source of irrigation in Haryana, followed by canals. Overexploitation of groundwater resources is occurring in many parts of the State as evidenced by the decline in groundwater levels, particularly in the north-eastern and southern districts. On the other hand, in the central western part of the state, the water table has arisen causing water logging. Faridabad, Gurugram, Kurukshetra, Kaithal, Panipat, Palwal and Sirsa districts are in the category of “over-exploited” now, while most blocks of remaining districts fall in either “critical” or “semi-critical” category.
- d) Further, a large portion of the ground water in the State is saline which need to be treated for irrigation purposes.

- e) The problem of alkalinity (sodic) is spread all over the State, but most affected areas are the central districts viz. Kurukshetra, Karnal and parts of Sonapat and Jind. Also, the reclaimed sodic soils are showing resodification symptoms after 6-7 years, and thus need regular monitoring.
- f) The area affected by soil erosion due to runoff water is mostly confined to the foothills of Shivalik and Aravali-ranges falling in Panchkula, Ambala, Yamunanagar and parts of Mahendragarh, Rewari and Gurgaon. The area affected by wind erosion is mostly confined to western & southern parts of the State in Sirsa, Fatehabad, Hisar, Bhiwani, Rewari & Mahendragarh.
- g) Farmers are invariably having concern for consistent decline in factor productivity, which has resulted in increased cost of cultivation. The low response to higher inputs especially, nutrient application is an emerging problem. Soil compaction and low carbon content in the soil are other issues being faced.

II. Govt. Initiatives:

Several Centrally Sponsored schemes and State Govt. schemes like Promotion of Agricultural Mechanization for In-situ Management of Crop Residue, Scheme for Promotion of Crop Diversification (sub-scheme of RKVY), National Mission on Sustainable Agriculture and National Mission on Sustainable Agriculture, Soil Health Cards Scheme, Scheme for Development of Saline/ Waterlogged Soils in Haryana State, Scheme for Desert Control etc are operationalized in the state for the development of land resources in the state.

III. Issues and Suggested Action Points

- a) There is a need to popularize the drainage/bio drainage system to reclaim water logged saline areas. Reclamation of such soil may be carried out by drainage i.e. surface and sub-surface drainage, vertical drainage & horizontal drainage, bio drainage etc. Pisciculture is another option in saline water logged areas either alone or along with agro-forestry system.

- b) Government sponsored programmes being implemented for various land development activities in the State with subsidy and grant component may be linked to bank finance in order to increase the coverage. Departments of Agriculture and Irrigation are implementing a host of schemes and programmes for watershed development, reclamation of waterlogged and saline soils

Potential bankable Activities	
Soil and Water Conservation	Contour bund, contour trenches, retaining wall, check dam etc.
Water harvesting structure	Farm pond, check dam
Land Reclamation	Reclamation of saline and alkaline soil- Drainage development with underground pipeline & application Of suitable soil amendment materials such as gypsum, sulphur, molasses, press mud etc.
On Farm Development	Land leveling, bunding, construction of irrigation/drainage channels
Water management	Lining of water courses, pipeline for water distribution, land leveling of commands of MI structures
Farm Fencing /protection	Fencing with barbed wire, stone fencing or live fencing, retaining wall
Composite Farm Development	Land leveling, bunding, compost making, improved farm implements, fencing, water harvesting structure along with distribution system
Soil/land improvement	Tank silt application, sand casting

etc., which need to be shared with bankers, in order to enable them to act more proactively for financing specific needs arising in the context of land development.

- c) Since the organic carbon is the key issue to improve soil health in the puddled rice fields, there is a need for promotion of green/brown manuring through Dhaincha (sesbania), use of organic manure (FYM/compost/vermi-compost) and in situ residue management to improve carbon content and soil health in rice-wheat system. Cultivation of pulses improve soil health through nitrogen fixation and at the same time reduce import burden of the country.
- d) As per Statistical Abstract of Haryana 2018-19 (2017-18 provisional figures), the state has an area of 49,000 hectares classified as 'Culturable but barren land' and 186,000 hectares as 'Fallow land, including current fallows'. Some of this area can be brought under productive agriculture.
- e) There is a need for comprehensive soil survey at regular intervals. Soil Health Cards may be used for monitoring and decision making in matters related to maintenance of soil health, judicious use of fertilizers etc.
- f) Financing of modern farm machinery like Laser Land Leveller, zero tillage machine, Happy Seeder etc. for conservation tillage will help conserve water and improve soil health by retaining biomass.
- g) Acreage of rice needs to be decreased to release some pressure on water resources.
- h) Need for strengthening measures to recharge ground water using technologies developed by CSSRI, Karnal and CCSHAU under AICRP on Water management and AICRPDA.
- i) Government and banks may also involve their field level officials to jointly ascertain the credit requirements of inhabitants of watersheds and to provide bank credit for identified activities in the watersheds.

IV. Potential Credit Outlay

The total credit potential under Land Development for the State during FY 2021-22 has been estimated at Rs. 1866.31 crore. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.3.3 Others – Tissue culture, agri biotechnology, vermicompost, etc.

In terms of revised Priority Sector Guidelines, agriculture infrastructure investments like tissue culture labs, seed production units, bio fertilizer / bio-pesticide units, vermi-compost units, organic farming etc. have been classified as agriculture infrastructure items under agriculture credit.

I. Present Scenario:

- a) Biotechnology has tremendous scope in agriculture especially in plant protection. Biotechnological application includes the products ranging from those used in maintaining and increasing soil fertility, pest management and veterinary feed additives or supplements.
- b) **Tissue Culture:** The technologies used in the agriculture and horticulture are DNA manipulation, Tissue Culture, Gene Transfer, etc. Tissue Culture is the science of cultivating animal/ plant tissues in a prepared medium. Technologies based on this can be harnessed to achieve crop improvement objectives. Micro-propagation has been carried out in several crop which include, potato, sweet potato, yams, garlic, lime, banana, pineapple and papaya; spices including ginger, small cardamom, turmeric, black pepper and several aromatic and medicinal plants such as sarpgandha and antamul. Elite genotypes of banana, papaya, coconut, small cardamom and oil palm have been multiplied on a commercial scale by private seed companies. Micro propagation of ornamental plants such as gladioli, orchids and bougainvillea which have tremendous export value has been achieved. The application of tissue culture is in the fields of

multiplying bamboos, mass multiplication, micro propagation etc. have huge opportunities.

- c) **Vermicompost:** Heavy use of agro-chemicals since the 'green-revolution' of the 1960's boosted food productivity, at the cost of environment and society. It adversely impacted the beneficial soil organisms and destroyed their natural fertility, impaired the power of 'biological resistance' in crops to make them more susceptible to pests and diseases. Vermicompost is an environmentally sustainable alternative to the agro-chemicals. It is necessary to promote the vermi-composting of diverse organic wastes by vermi-culture technology using waste eater earthworms into a nutritive 'organic fertilizer' and using them for production of 'safe food', both in quantity and quality without recourse to agro-chemicals. Earthworms restore and improve soil fertility and boost crop productivity by the use of their excreta - 'vermicast'. They excrete beneficial soil microbes, and secrete polysaccharide, proteins and other nitrogenous compounds into the soil. They promote soil fragmentation and aeration and bring about 'soil turning' and dispersion in farmlands.
- d) **Organic Farming:** Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment. Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. It promotes the use of crop rotations and cover crops, and encourages balanced host/predator relationships. Organic residues and nutrients produced on the farm are recycled back to the soil. Cover crops and composted manure are used to maintain soil organic matter and fertility. Preventative insect and disease control methods are practiced, including crop rotation, improved genetics and resistant varieties. Integrated pest and weed management, and soil conservation systems are valuable tools on an organic farm.

II. Govt. Initiatives:

Government is promoting organic farming through various schemes/ programmes under National Mission for Sustainable Agriculture (NMSA), National Programme for Organic Farming (NPOF), Paramparagat Krishi Vikas Yojana (PKVY), RKVY, Mission for Integrated Development of Horticulture (MIDH), National Mission on Oilseeds & Oil Palm (NMOOP), Network Project on Organic Farming of ICAR.

III. Issues & Suggested Action Points

- a) Necessary arrangements for certification of organic produce and promotion of organised marketing channel for organic produce have to be put in place on a priority basis.
- b) For some crops like cotton, organic inputs substantially reduce cost of inputs while improving soil health. As it will take around 2-3 years to achieve optimum yield, some farm income schemes may have to be integrated for small and marginal farmers so that their farm loss is off-set during this period. Higher realization of output and increased reliability & productivity of land shall ultimately be beneficial for the farmer as well as the environment.
- c) Production of organic inputs (like vermicompost, compost from fruit and vegetable waste and biofertilisers/biopesticides) on a commercial scale would facilitate adoption of organic and natural farming by more number of farmers. Subsidy is available under various government schemes for activities like production of compost from fruit and vegetable waste and biofertiliser/biopesticides, certification etc.
- d) Commercial production of Organic Inputs viz. Bio-fertilizers, Vermi-compost/ vermi hatcheries, Compost from vegetable & fruits, traditional seed banks etc. may be taken up by farmer aggregates like PACS, Producer Societies etc.

- e) Organic farming as a viable commercial activity requires creation of awareness among farmers as well as bankers. Banks have to play a catalytic role by formulating and implementing model projects for organic farming and production of organic inputs for adoption by farmers.
- f) Promotion of organic farming by Farmer Producer Organisations (FPOs) and Village Producers Organisations (VPOs) in large clusters need to be encouraged.
- g) Integrated farming system models like crop + dairy, crop + dairy+ agro forestry, crop + Dairy + Fisheries, crop + sheep/goatery+ agro forestry, etc. advocated by local KVKs and State Agri Universities as part of alternate farm activities to enhance farmers income, mitigate climate change risk and enhance adaptive capacity of the farmers in rainfed areas should be promoted.

IV. Potential Credit Outlay

The total credit potential under Agriculture Infrastructure-Others for the State during FY 2021-22 has been estimated at Rs. 866.55 crore as compared to Rs.850.11 crore during the FY 2020-21. The assessment of district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.4 Ancillary Activities

4.1.4.1 Food and Agro Processing

Food processing industry plays a significant role in development of economy because of integration and synergy it provides between agriculture and industry, the two pillars of economic prosperity. The growth of food processing sector is also essential to meet the twin national objective of 'inclusive growth' and 'food security'. Haryana is predominantly an agricultural state with favourable weather conditions for both Rabi and Kharif crops. It has achieved self-sustainability status in food production and milk products. Haryana is the second largest food grains producer in the country. The State enjoys the locational advantage of its proximity to one of the largest consumer market of NCR. The State has a huge potential for establishment of agro - based and food processing industry.

Haryana with its production capabilities, infrastructure and large consumer base provides a unique opportunity to industries in food processing sector. Besides regular food processing industries, some of the other agriculture and food business opportunities include vegetable & fruit processing including storage and sale, health foods including products with medicinal value, value added dairy products etc. Favorable climate for the production of quality fruits and vegetables, fertile soil and proximity to major market-NCR makes agro processing a potential money spinner for the farmers of Haryana.

I. Present Scenario

Haryana has more than 3000 operative food processing units which are engaged in processing of food grains and fruits and vegetables.

Nine cold chain projects are currently being implemented under MoFPI assistance. Out of these, 4 projects have already been completed and 5 are on-going. The processing of food grains and oil mills which includes millings of various cereals like rice and wheat, mustard and rapeseed, contribute 75 percent of the total processing industry in terms of the number of units. The state has 106 principal market yards, 178 sub-market yards and 187 other market yards.

Under Crop Cluster Development Programme (CCDP) of the Govt. of Haryana, primary processing centre are being created for forward and backward linkage for effective marketing of horticulture produce.

In Haryana, there are 4 food parks with 2 fully functional food parks at Rai and Saha. Mega Food Parks at Barhi, Sonapat and Rohtak are being set-up with the state of the art common

infrastructure facilities. The MFP is being set up under the Mega Food Park Scheme (MFPS) of Ministry of Food Processing Industries (MoFPI), GoI.

Haryana has more than 100 registered rice mills. Several districts of the state are producing different crops and can be classified in production clusters viz.-

- Egg - Panchkula, Ambala, Karnal, Jind
- Wheat - Sirsa, Hisar, Jind, Fatehabad
- Brinjal - Kurukshetra, Karnal, Panipat, Sonipat
- Mango - Yamunanagar, Ambala, Kurukshetra, Karnal
- Onion - Panchkula, Ambala, Yamunanagar, Sonipat
- Milk - Kaithal, Sirsa, Jind, Hisar
- Potato - Ambala, Kurukshetra, Karnal, Sonipat
- Livestock - Karnal, Jind, Hisar, Kaithal

II. Govt. Initiatives

- a) **Pradhan Mantri Kisan Sampada Yojana (PMKSY)** - GoI is implementing the Central Sector Scheme with an allocation of Rs. 6,000 crores for the period 2016-20 coterminous with the 14th Finance Commission Cycle. Under PMKSY, The Ministry of Food Processing Industries is implementing various schemes for the food processing sector.
- Mega Food Parks (ongoing)
 - Integrated Cold Chain and Value Addition Infrastructure (ongoing)
 - Creation/Expansion of Food Processing & Preservation Capacities (New)-
 - Infrastructure for Agro-processing Clusters (New)
 - Creation of Backward and Forward Linkages (New)
 - Food Safety and Quality Assurance Infrastructure (ongoing)
 - Human Resources and Institutions (ongoing)
 - Operation Green- TOP (New)
- b) Government of India facilitates the investment in the food processing sector through a number of tax incentives announced from time to time which includes:
- Service Tax on pre-conditioning, pre-cooling, ripening, waxing, retail packaging and labelling of fruits and vegetables exempted in cold chain projects.
 - Entities in infrastructure development for food processing unit are given a tax deduction of 100 percent for the first 5 years & 30 percent for the next 5 years for the calculation of taxable income.
 - Customs duty on all imported capital goods, raw materials and other inputs is exempted. There is a provision for duty-free import replenishment of inputs, subject to basic input-output norms for approximately 600 export categories.
 - Import duty scrapped on capital goods and raw materials for 100 percent export-oriented units. 100 percent tax exemption for 5 years followed by 25 percent in subsequent years.
 - Tax exemption for the next 5 years for new agro-processing industries. Full excise duty exemption for goods that are used in installation of cold storage facilities.
 - 100 percent export-oriented units are allowed by Government to sell up to 50 percent of their produce in the domestic market. Export earnings are exempted from corporate taxes.
- c) **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** - Government in its Union Budget, 2019-20 has announced a new scheme, the Pradhan Mantri Matsya Sampada Yojana (PMMSY). One of the major objectives of the scheme is to Modernize and

strengthening of value chain - post-harvest management and quality improvement, specially under the fisheries sector.

- d) **Agro-processing Clusters (APC)** - MoFPI under Scheme for Creation of Infrastructure for Agro processing Clusters has approved total 57 APCs, out of which following 03 APCs have been approved in Haryana.
- e) The GoI has given its approval to a new Centrally Sponsored Scheme - "**Scheme for Formalisation of Micro food processing Enterprises (FME)**" for the Unorganized Sector on All India basis with an outlay of Rs.10,000 crore. The expenditure will be shared by GOI and the States in ratio of 60:40.
- f) **The Operation Greens (TOP to TOTAL)** scheme has been approved on 10.06.2020, Scheme guidelines notified on 11.06.2020 by Ministry of Food Processing Industries (MoFPI). MoFPI has recently extended the Operation Greens Scheme from Tomato, Onion and Potato (TOP) to all fruits & vegetables (TOTAL) for a period of six months on pilot basis as part of Aatmanirbhar Bharat Abhiyan. The objective of intervention is to protect the growers of fruits and vegetables from making distress sale due to lockdown and reduce the post -harvest losses.
- g) A new scheme namely Crop Cluster Development Program (CCDP) has been launched by Govt. of Haryana with budget outlay of Rs. 510.36 crore. Under this program, in each cluster, marketing infrastructure and post-harvest management facilities like pack house, primary processing centre, grading-sorting machine, storage facilities, refer vans, input and quality control facility etc. shall be created for forward and backward linkage for effective marketing of horticulture produce.
- h) The 'Haryana Agri -Business and Food Processing policy 2018 endeavours to give the required impetus to the Food Processing Industry in the state. It aims to create greater employment opportunities across the entire food value chain by establishing efficient forward and backward linkages, thus promoting agriculture and rural prosperity. GoH has exempted market fee on pulses which are used as a raw material in the food processing industries located in the state by making amendment in Haryana Agri Business and Food Processing Policy 2018.

- i) The Enterprise Promotion Policy 2015 has identified Food processing as a thrust sector and has offered attractive fiscal incentives for sector promotion. In addition, this policy lays equal emphasis on providing skilled manpower, robust infrastructure and conducive business climate for all round development of sector. New drivers of growth such as Agro -marketing reforms, development of Mega Food Parks and Mini Food Parks, encouragement to

Potential Area for Processing Clusters Development		
SN.	Product	Potential Area/ Districts
1	Wheat	Entire state
2	Rice	Entire state
3	Milk	Entire state
4	Broilers	Jind, sonapat, Gurgaon,
5	Layers	Panchkula, Jind,
6	Eggs	Mainly Ambala and Hisar
7	Fish	Fatehabad, Gurgaon, Hissar, Jajjhar, Rohtak, Sonapat and Yamunanagar
8	Fruits	Yamunanagar, Ambala, Gurgaon
9	Vegetables	Entire state
10	Honey	Karnal, Ambala
11	Mushroom	Sonapat, Kurukshetra, Panipat

Farmer Producer Organizations, support to agri and food cooperatives, promotion of start-ups in agri-business space have been given due emphasis in the policy. The new Policy has envisaged Capital Investment Subsidy for Agro and Food Processing for new units and in order to promote registered Farmer Producer Organizations (FPOs) and

Agro/Food Cooperatives which cover all agriculture and cooperative institution of farmers, milk producers, fishery/poultry/piggery etc, Capital Investment Subsidy will be provided for units in 'C' and 'D' category blocks.

III. Issues & Suggested Action Points

- a) Linkage between growers and the processing industry may be addressed. For a consistent and healthy growth of the sector, proper and appropriate backward and forward linkages need to be ensured.
- b) The entrepreneurial capabilities of the sector owners may be improved further by giving them the necessary training and exposure
- c) Create awareness on the facilities available in Designated Food Parks/Agro Processing Clusters so that more individual units are established.
- d) Infrastructure in terms of power, water, transport, silo, cold storage may be created both by Govt of India as well as Govt of Haryana. This will also ensure continuous supply of raw material needed for the growth of the agro processing industry.
- e) Issues of inadequate financial assistance need to be improved for make the financial assistance available at the right time and in right amount.

IV. Potential Credit Outlay

The total credit potential under Food and Agro Processing Sector for the State during FY 2021-22 has been estimated at Rs. 2580.49 crore. The assessment of district-wise financial potential for 2021-22 is furnished in Annexure-I.

4.1.4.2 Ancillary Activities - Others

Loans up to Rs.5 crore to co-operative societies of farmers for disposing of the produce of members, loans under Agri Clinics and Agri Business Centres (ACABC) and Bank loans to Primary Agricultural Credit Societies (PACS), Farmers' Service Societies (FSS) and Large-sized Adivasi Multi-Purpose Societies (LAMPS) for on-lending to agriculture have been included under the list of eligible activities under Agri Ancillary Activities – others.

I. Present Scenario:

- a) **Loans for setting up of Agri-clinics and Agri-business centres** – Agri. Clinics are envisaged to provide expert advice and services to farmers on various aspects to enhance productivity of crops/animals and increase the incomes of farmers. Whereas, Agri-Business Centres are commercial units of agri-ventures established by trained agriculture professionals. Such ventures may include maintenance and custom hiring of farm equipment, sale of inputs and other services in agriculture and allied areas, including post-harvest management and market linkages for income generation and entrepreneurship development. Ministry of Agriculture, Government of India had introduced a central sector scheme Establishment of Agri-clinic and Agri-business Centres (ACABC) in which NABARD is the subsidy channelizing agency. At present, the Indian Society for Agricultural Professionals (ISAP), located at Karnal, is the Nodal Training Institute (NTI) accredited by MANAGE for imparting training to eligible candidates in Haryana. The banks, in coordination with the NTI, may identify potential entrepreneurs for providing loans with prescribed subsidy to set up their own units to guide the rural poor in general and the farmers in particular.
- b) **Lending by banks to NBFCs and MFIs for on-lending in agriculture**
 - Microfinance has an important role to play in in the present Indian economy. The economically challenged and the underprivileged sections of the society are benefitting in a positive way from microfinance. Apart from banks and other Financial Institution, Micro finance Institutions lend assistance to under banked sections of the society. They

not only give financial help to the economically challenged sections of the society but also educate them on how to utilize the offered fund in a better way.

- Bank credit extended to registered NBFC-MFIs and other MFIs (Societies, Trusts etc.) which are members of RBI recognised SRO for the sector, for on-lending to individuals and also to members of SHGs / JLGs will be eligible for categorisation as priority sector advance under respective categories of agriculture
- Bank credit to registered NBFCs (other than MFIs) towards on-lending for 'Term lending' component under agriculture will be allowed up to Rs. 10 lakh per borrower under PSL.

II. Issues & Suggested Action Points

- Banks may come forward to actively implement the ACABC scheme in order to strengthen the agriculture extension and marketing services.
- There are a good number of NBFCs and MFIs financing in the state. Banks may support such small NBFCs/MFIs through bank credit or on lending model.
- Follow up and hand holding by Nodal Training Institutes needs to be strengthened by appointing suitable experts.
- The State Government may closely coordinate with MANAGE and NABARD to popularize the scheme and make the ventures successful.
- Banks may come forward and take the benefit of the credit guarantee risk cover being given by SFAC.

III. Potential Credit Outlay

The total credit potential under these sectors in the State is assessed at Rs.1219.97 crore for the year 2021-22. District- wise and activity-wise financial projections for 2021-22 are given in Annexure-I.

4.2 Micro, Small and Medium Enterprises (MSME) Sector

I. Present Scenario

Haryana has emerged as one of the most industrialized States in the country. State has made impressive strides over the years to carve out a niche for itself in the fields of engineering, automobiles, textiles, leather, Information Technology, electronic hardware and hi-technology industries. The State has been a leader in manufacture of a number of products like cars, two-wheelers, tractors, scientific instruments, footwear etc. Gurugram has emerged as the Business Process Management (BPM) Capital of the country, besides being home to offices of a number of International & National Corporates. MSME are playing very important role in the GDP of country, contributing around 40 % export income of the country and employment generation. On account of recent COVID-19 pandemic, MSME sector has been affected badly and needs interventions from centre & state governments as well as from banking sector. GoI has also revised the definition of MSME as under

Revised Classification applicable w.e.f 1st July 2020			
Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover not more than Rs. 250 crore

II. Govt. Initiatives

- a) **Haryana MSME Policy, 2019-** In line with the objectives stated in the Haryana Enterprise Promotion Policy 2015's "ease of doing business", Haryana MSME Policy-2019 aims at augmenting the competitiveness of MSMEs across the thrust sectors of the state by creating state of the art infrastructure, advancing inclusivity through regional balanced growth, creating gainful employment and fostering innovation, with a view to provide a conducive eco-system for promoting growth of MSMEs. The MSME Policy for Haryana 2019 has further adopted a comprehensive approach by aligning itself with the Haryana Enterprise Promotion Policy 2015 and dovetailing strategies for skill development, cluster development and institutional strengthening
- b) **Enterprises Promotion Policy, 2015** - With a special focus on manufacturing and services enterprises, especially for the balanced regional growth of MSMEs, the Haryana Government announced its new Industrial Policy described as "Enterprises Promotion Policy 2015," with an aim to envisage ease of doing business and enhancing competitiveness of the industry. Enterprise Promotion Policy 2015 sets the following vision for the State:
- "To position Haryana as a pre-eminent investment destination and facilitate balanced regional and sustainable development supported by a dynamic governance system, wide scale adoption of innovation and technology, and skill development for nurturing entrepreneurship and generating employment opportunities."
 - The policy is aligned with the 'Make in India', 'Digital India' and 'Skill India' campaigns of the Government of India. Key incentives offered to MSMEs include investment subsidy, interest subsidy, freight assistance, employment generation subsidy, market development assistance, etc.
- c) The State Government has also enacted the "**Haryana Enterprises Promotion Act, 2016**" which provides assistance for setting up of Haryana Enterprises Promotion Centre (HEPC) to provide single roof clearances in a time bound manner (maximum 45 days) to the entrepreneurs for setting up their ventures.
- d) Recognizing that the Micro, Small and Medium Enterprises (MSMEs) constitute the backbone of the manufacturing Sector with huge employment potential, the Government adopted the strategy for establishment of Common Facility Centers (CFCs) in Public-Private-Partnership mode under the Cluster Development Scheme in order to support the MSME Sector and generate employment opportunities.
- e) The State Government has been taking steps to create a sizeable pool of technical and skilled manpower to take advantage of the knowledge economy with the establishment of institutes like Indian Institute of Management (IIM) at Rohtak, Indian Institute of Corporate Affairs (IICA) at Manesar, National Institute of Food Technology,

Various Steps taken for Revival of COVID-19 affected MSME Sector

Recently, Post Covid-19, Government has taken a number of initiatives under Aatma Nirbhar Bharat Abhiyan to support the MSME Sector in the country especially in Covid-19 pandemic. Some of them are:

- Rs 20,000 crore Subordinate Debt for MSMEs.
- Rs. 3 lakh crores Collateral free Automatic Loans for business, including MSMEs.
- Rs. 50,000 crore equity infusion through MSME Fund of Funds.
- New revised criteria for classification of MSMEs.
- No global tenders for procurement up to Rs. 200 crores, this will help MSME
- An online Portal "Champions" has been launched on 01.06.2020 by the Prime Minister. This covers many aspects of e-governance including grievance redressal and handholding of MSMEs.

Entrepreneurship & Management (NIFTEM) at Kundli, National Automotive Testing and R & D Infrastructure Project (NATRIP) at IMT Manesar, Footwear Design & Development Institute (FDDI) at Rohtak, Central Institute for Plastic Engineering and Technology (CIPET) at Murthal. National Institute of Design (NID) has also been sanctioned for Haryana.

- f) Invest Haryana portal (www.investharyana.in) has become as the single point of contact for granting all industrial approvals on digital platform.
- g) Haryana Micro and Small Enterprises Facilitation Council will facilitate micro and small enterprises in recovery of delayed payment from buyer anywhere in India if the dues are pending for more than 45 days.
- h) GoI's e-Marketplace (GeM) is assisting in creating a Unified Procurement System in the country for providing a single platform for procurement of goods, services and works. Stating that it offers a great opportunity for Medium, Small and Micro Enterprises (MSMEs), she stated that 3.24 lakh vendors are already on this platform and is proposed to take its turnover to Rs 3 lakh crore.
- i) A National Logistics Policy will be released soon and it will clarify the roles of the Union Government, State Governments and key regulators. It will create a single window e-logistics market and focus on generation of employment, skills and making MSMEs competitive.
- j) GoI in budget 2020-21 has proposed to make necessary amendments to the Factor Regulation Act 2011. This will enable NBFCs to extend invoice financing to the MSMEs through TReDS, thereby enhancing their economic and financial sustainability.
- k) It is evident that Govt. of India has widened the definition of MSME on the basis of investment and annual turnover and eliminated the difference on the basis of manufacturing & service criteria. After broadening of the definition, banking sector would be able to extend more credit to the MSME sector. During COVID period, RBI has extended the moratorium period for repayment of loans and announced various measures for credit availability of functional and viable MSME.
- l) State Government had announced 'Haryana MSME Revival Interest Benefit Scheme' under which it is providing 100% interest benefit (maximum 8%) on term/working capital loans availed for payment of wages and/or other expenses upto a maximum of Rs 20,000 per employee. Interest benefit is limited to interest paid to bank/FI upto a period of six months. All MSME units working in Haryana as on 15th March 2020 were eligible for the benefit under the scheme.
- m) PM Street Vendor's Atma Nirbhar Nidhi (PM SVANidhi): The Central Sector scheme i.e. fully funded by Ministry of Housing and Urban Affairs has been launched for street vendors to facilitate working capital loan upto Rs 10,000 (tenure 1 year) without collateral.
- n) SLBC, Haryana shared only the block wise status of the scheme. Bank wise progress is not provided
- o) Other Schemes of GoI.
 - Pradhan Mantri Mudra Yojana (PMMY)
 - Prime Minister's Employment Generation Programme (PMEGP)
 - Stand Up India
 - Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
 - Pradhan Mantri Karam Yogi Maandhan Scheme (PMKYMS)
 - Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
 - A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)

- Interest Subvention Scheme for Incremental Credit to MSMEs,
- Micro and Small Enterprises Cluster Development Programme (MSE-CDP),
- Credit Linked Capital Subsidy and Technology Upgradation Scheme (CLCS-TUS).

III. Issues & Suggested Action Points

- Timely sanction of loans and covering the same under CGTMSE by banks.
- Working capital as well as investment needs of Medium, Small and Micro enterprises, and artisan/ handicraft units should be adequately met in hassle free manner.
- Government to ensure supply of uninterrupted quality power supply to the industries.
- Banks to consider the credit requirement of traditional sub-sectors of handlooms, handicrafts, village artisans, KVI units to protect the livelihood of the sector and their employment generation potential.
- Promotion of Off Farm Producer Organizations in the identified clusters with handloom and handicraft works as their core or sub-core activities.
- Awareness may be created by DIC amongst the entrepreneurs about the opportunities in the MSME sector and available government incentives & schemes.
- Assistance through venture capital may be provided for activities such as information technology, e-commerce, multi-media, data communication etc.

IV. Potential Credit Outlay

The total credit potential under Micro, Small and Medium Enterprises Sector for the State during FY 2021-22 has been estimated at Rs. 47474.93 crore as compared to Rs. 42,302.09 crore in 2020-21. The assessment of district-wise financial potential for 2021-22 is furnished in Annexure-I.

4.3 Export Credit

Exports play a vital role in the economic growth of Haryana as the state's performance on the export front has been excellent. The major export items from the state are software, handloom products, scientific instruments, garments, automobiles and automotive components, electrical appliances, rice, pickles, etc. More than 60% of export of Basmati rice from India takes place from Haryana alone. About 2/3rd of the passenger cars, 50 per cent of the tractors and 60 per cent of the motorcycles produced in the country are manufactured in Haryana. Haryana has been one of the top contributors for Auto exports. The textile industry is also flourishing the export from the state, mainly from the cities such as Faridabad, Hisar, Panipat, Sonapat and Gurugram. The agro-based industry of Haryana still holds a strong potential for exports. Further, providing more facilities/incentives to the exporting units would increase exports from the state. The growth prospects of the state are very bright keeping in view the dynamic and vibrant growth provoking sectors of the state economy supported with a strong policy environment.

As per revised Priority Sector Guidelines, 2020, the Export Credit extended as per the details below would be classified as priority sector.

Domestic banks / WoS of Foreign banks/ SFBs/ UCBs	Foreign banks with 20 branches and above	Foreign banks with less than 20 branches
Incremental export credit over corresponding date of the preceding year, up to 2 per cent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure (CEOBE) whichever is higher, subject to a sanctioned limit of up to Rs. 40 crore per borrower.	Incremental export credit over corresponding date of the preceding year, up to 2 percent of ANBC or CEOBE whichever is higher.	Export credit up to 32 per cent of ANBC or CEOBE whichever is higher.

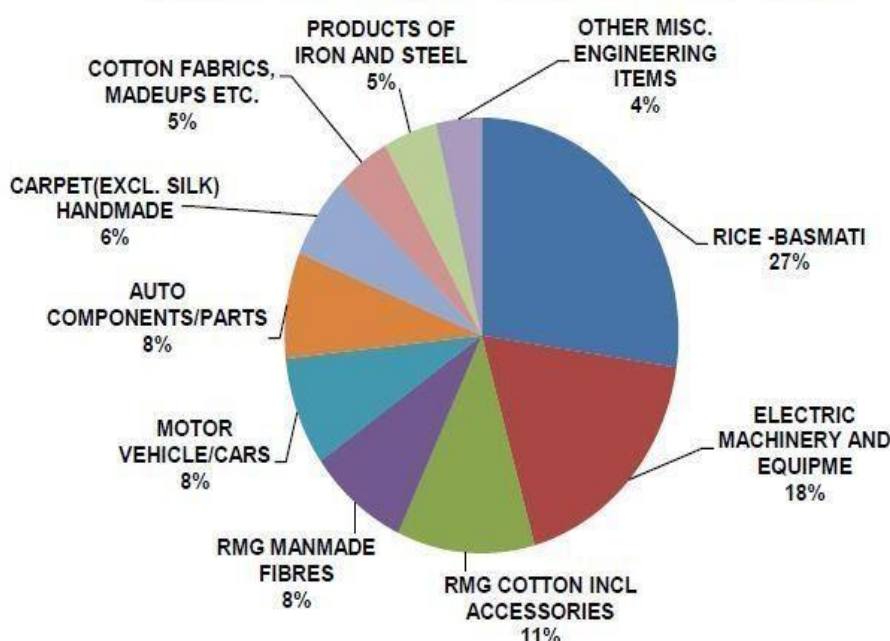
Export credit includes pre-shipment and post-shipment export credit (excluding off-balance sheet items) as defined in RBI (Department of Banking Regulation) Master Circular on Rupee / Foreign Currency Export Credit and Customer Service to Exporters.

I. Present Scenario

(values in US\$ Bn)

Details	2014-15	2015-16	2016-17	2017-18	2018-19	CAGR
Exports from Haryana	11.29	10.34	10.69	13.26	13.83	5.19%
Exports from India	310.35	262.29	275.85	303.53	330.07	1.55%
Rank of Haryana	7 th	7 th	7 th	6 th	7 th	
Share of Haryana in India's export	3.63%	3.94%	3.87%	4.37%	4.19%	

MAJOR COMPOSITION OF HARYANA'S EXPORTS



II. Govt. Initiatives

- Export of Goods and Services from India is governed by the Foreign Exchange Management Act 1999 (42 of 1999), read with Notification No. G.S.R. 381(E) dated May 3, 2000 viz. Foreign Exchange Management (Current Account Transactions) Rules, 2000, further read with FEMA Notification No.23(R)/2015-RB dated January 12, 2016. These Regulations are amended from time to time to incorporate the changes in the regulatory framework and published through amendment notifications.
- The Foreign Trade Policy (FTP) 2015-2020 provides a framework for increasing exports of goods and services as well as generation of employment and increasing value addition in the country, in line with the 'Make in India' programme. The Foreign Trade Policy (FTP) 2015-20, launched on 1st April, 2015, has introduced two new schemes, namely, 'Merchandise Exports from India Scheme'(MEIS) for incentivizing export of specified goods to specified markets and 'Service Exports from India Scheme' (SEIS) for increasing exports of notified services from India. This Policy has also introduced several measures for facilitating trade and improving ease of doing business' by reducing the number of mandatory documents required for export and import to three each. Notified goods exported to notified markets would be rewarded on realized Free On Board (FOB) value of exports.

- c) In order to provide an impetus to agricultural exports, the GoI has come out with a comprehensive “Agriculture Export Policy 2018” aimed at doubling the agricultural exports and integrating Indian farmers and agricultural products with the global value chains. With the help of the new Agriculture Export Policy, the agri. exports from India is likely to reach the export target of US\$ 60 billion by the year 2022.
- d) The state Govt. has launched many policies such as Retail Trade Policy 2017 and Haryana Textile Policy 2019, Micro, Small and Medium Enterprises Policy, 2019 which aim towards enhancing the export sector.
- e) The government has launched the very ambitious scheme of Special Economic Zones (SEZs) in order to reduce bureaucratic hurdles in importing inputs for exports and exporting finished products from India. Currently, Haryana has 7 SEZs.

Both agriculture and MSME sectors of Haryana can take benefits of the new FTP and contribute to economic growth of the state. However, the most important constraints in extending export credit in the state are the absence of specialized branches, data availability as regards rates, competitive market etc.

III. Issues & Suggested Action Points

- a) Lack of information and clarity on procedural norms and regulations of various countries regarding specification as well as methods of sampling, inspection and testing.
- b) Ensuring availability of funds to exporter such as reduction in ECGC premium, availability of pre-shipment and post-shipment credit. Issues such as availability of foreign currency, credit to exporters at competitive terms, high interest cost high service charge by banks, charges for renewal and enhancement of credit limits etc need to be addressed.
- c) Updating exporters regarding various central government schemes
- d) Air cargo facilities need to be established to facilitate exports
- e) Exporters need to organize themselves unitedly to face global competition instead of each exporter trying to export in small quantities in the most unorganized manner.
- f) Product diversification based on global consumption pattern and demand.
- g) Increasing availability of quality seed and planting material keeping in view the global trends. For this purpose, export houses may explore the possibility of entering into MoU with ICAR and AU/Institutes/Colleges engaged in research activities for this purpose.

IV. Potential Credit Outlay

The total credit potential under Export Sector for the State during FY 2021-22 has been estimated at Rs. 2929.79 crore. The assessment of district-wise financial potential for 2021-22 is furnished in Annexure-I.

4.4 Education

India is witnessing a demographic transition which is likely to impact the global economy. There is now a large workforce and few dependents thus reducing the dependency ratio (ratio of those under 15 and over 65 vs. those who are 15 to 65). India will have about 63 per cent of its population in the working age group by 2022.

However, growth in per capita income is driven by growth in labour productivity which is directly linked to the skill and knowledge of the work force. For maximising the productivity of the youth, Government of India has given due impetus both to skill development and education.

As per Revised Priority Sector Guidelines, 2020, loans to individuals for educational purposes, including vocational courses, not exceeding Rs. 20 lakh will be considered as eligible for priority sector classification. Loans currently classified as priority sector will continue till maturity.

I. Present Scenario

As per the Economic Survey of Haryana 2019-20, the literacy rate in the State is 75.6% as against all-India literacy rate of 74%. Male & female literacy accounts for 84.10% and 65.90% respectively (as per 2011 census) in Haryana. The State has 1965 Higher Secondary (Class 6-12), 1287 Secondary (Class 6-10), 2403 Upper Primary (Class 6-8), 8743 Primary Schools (Class 1-5). The State has 254 colleges, out of which 104 colleges are exclusively for girls. While 157 are government colleges, the private sector is partnering with 97 colleges. There are 35 Government/ Government-aided Polytechnics in the State.

II. Govt. Initiatives

- a) The **New Education Policy** was released under the Government of India's Ministry of Human Resource Development (MHRD) on 30 July 2020. With the motto of Educate Encourage Enlighten, this is the first education policy to be released in the last 34 years in India. The aim of the policy is to prepare the children of India with 21st century skills. The NEP proposes sweeping changes including opening up of Indian higher education to foreign universities, dismantling of the UGC and the All India Council for Technical Education (AICTE), introduction of a four-year multidisciplinary undergraduate programme with multiple exit options, and discontinuation of the M Phil programme.
- b) **Educational Loan Scheme for pursuing higher education in India and abroad (2015)** - The Indian Banks' Association (IBA) has formulated the captioned scheme for adoption by any bank or financial institution. The Scheme provides broad guidelines to the banks for operationalising the Scheme and the implementing bank will have the discretion to make changes as deemed fit, subject to guidelines/ instructions issued by Reserve Bank of India.
- c) **Credit Guarantee Fund Scheme for Education Loans (CGFSEL)** - The GoI has set up a Credit Guarantee Fund for Education Loans to cover education loans extended by Member Lending Institution(s) without any collateral security and/ or third-party guarantee to an eligible borrower as per IBA scheme, on or after entering into an agreement with NCGTC provided that the lending institution applies for guarantee cover in respect of education loans so sanctioned within such time period and as per the procedures prescribed by NCGTC for the purpose.
- d) **Central Sector Interest Subsidy Scheme 2009 (As revised w.e.f. 01 April 2018)** - The scheme provides for full interest subsidy during the moratorium period (course period + one year) on modern education loans without any collateral security and third-party guarantee, for pursuing technical/ professional courses in India for students whose annual gross parental/ family income is up to Rs. 4.5 lakhs.
- e) While replying on the State budget 2020-21, the Hon'ble Chief Minister of Haryana announced a new scheme under which the State Government would give credit guarantee against education loan for students. For the purpose, a credit guarantee fund would be set up by the Government for students under various categories of medical, engineering and other professional courses, for which a provision had been made in the budget 2020-21.

Banks need to give focused attention to the education loan portfolio. The students availing loans for education need to be sensitized about the need to ensure that the terms and conditions of sanction are adhered to.

The potential of credit flow for this sector has been mapped out, based on the number of educational institutions in the state of Haryana that specializes in offering professional courses, as also by assessing potential number of candidates seeking admissions in various foreign universities and educational institutions across different educational institutions in Haryana.

III. Issues & Suggested Action Points

- a) Professional courses of high employability rate may be given priority to ensure repayment of loan, to check the rising NPA levels under educational loans
- b) Building and infrastructure related with engineering and medical colleges may be given priority by state government to create conducive atmosphere in the district.
- c) Banks may be given support by the government in recovery of education loans where borrower has defaulted despite having repaying capacity.

IV. Potential Credit Outlay

Based on the PLP projections across all the districts of Haryana and aggregating it to the State level, the potential for this sector for the year 2021-22 has been worked out at Rs. 2228.16 crore. The assessment of sub sector-wise, district-wise financial potential for 2021-22 is furnished in Annexure-I.

4.5 Housing

Housing, as one of the three basic needs of life, always remains the top priority of any person, Government and society at large. The requirement of housing is growing in the context of the development of knowledge, changes in the civilization, people becoming more aware about the privacy, sanitation, consciousness of health, environment, infrastructural facilities etc.

As per revised PSL guidelines, bank loans to Housing sector as per limits prescribed below are eligible for priority sector classification:

- a) Loans to individuals up to Rs.35 lakh in metropolitan centres (with population of ten lakh and above) and up to Rs.25 lakh in other centres for purchase/construction of a dwelling unit per family provided the overall cost of the dwelling unit in the metropolitan centre and at other centres does not exceed Rs. 45 lakh and Rs. 30 lakh respectively. Existing individual housing loans of UCBs presently classified under PSL will continue as PSL till maturity or repayment.
- b) Loans up to Rs. 10 lakh in metropolitan centres and up to Rs. 6 lakh in other centres for repairs to damaged dwelling units
- c) Bank loans for affordable housing projects using at least 50% of FAR/FSI for dwelling units with carpet area of not more than 60 sq. m.
- d) Bank loans to HFCs (approved by NHB for their refinance) for on-lending, up to Rs. 20 lakh for individual borrowers, for purchase/construction/ reconstruction of individual dwelling units or for slum clearance and rehabilitation of slum dwellers,

I. Govt. Initiatives

- a) **Pradhan Mantri Awaas Yojana – Gramin (PMAY-G):** In order to address the gaps in the rural housing program and in view of Government's commitment to provide "Housing for All" by 2022, IAY was re-structured into Pradhan Mantri Awaas Yojana –Gramin (PMAY-G) in 2016. PMAY-G aims at providing a pucca house, with basic amenities, to all houseless families as also to those families living in kutcha and dilapidated house, by 2022. In the second phase of PMAY-G, during 2019-20 to 2021-22, 1.95 crore houses are proposed to be provided to the eligible beneficiaries with amenities such as toilets, electricity and LPG connections.
- b) GoI in its Budget Budget 2020 proposed to extend the Rs 1.5 lakh benefit on interest paid on affordable housing loans by a year to March 2021.
- c) **"Pradhan Manti Awas Yojana (Urban) – Housing for All"** Mission for urban area is being implemented during 2015-2022 and this Mission will provide central assistance to implementing agencies through States/UTs for providing houses to all eligible families/beneficiaries by 2022.

- d) **Slum in-Situ Rehabilitation Policy** - The State Government has notified the Slum-in-Situ Rehabilitation Policy under Housing for All-2018 vide Notification dated 17 May 2018. The policy is based on the 'Slum Development for Slum Dwellers through PPP mode' component of PMAY-U.

II. Issues & Suggested Action Points

- a) State Governments, Local Bodies, Development Authorities to periodically update their Master Plans and Zoning Plans, which should, inter alia, adequately provide for housing and basic services for all.
- b) Focus on Housing need to move from “access to shelter” to “access to habitat” implying access to civic infrastructure as well as livelihood and community infrastructure such as anganwadis, primary health centres, etc., will create an opportunity for unleashing the human potential of families to pursue a quality of life with dignity.
- c) Ensuring larger flow of funds for fulfilling housing and infrastructure needs through innovative financial instruments.
- d) Facilitating availability of serviced land and housing with focus on EWS and LIG groups.
- e) Accelerated development of housing and infrastructure sectors along with forging strong partnerships between public, private & cooperative sectors
- f) Developing cities / towns in a manner, which promotes a healthy environment, encouraging use of renewable energy resources and ensuring effective solid-waste management.
- g) Rural Housing Finance need to be made an integral part of the Financial Inclusion Plan of all Banks.
- h) Housing Loans need to be focused upon in rural and semi urban areas

III. Potential Credit Outlay

Based on the PLP projections across all the districts of Haryana and aggregating it to the State level, the potential for this sector for the year 2021-22 has been worked out at Rs. 9622.64 crore. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.6 Social Infrastructure

Infrastructure are basic essential services that are required to be put in place to enable development to occur. Socio-economic development can be facilitated and accelerated by the presence of social and economic infrastructure. The Economic Survey 2018-19 highlights the importance of investing in social infrastructure, especially education and health, as a key priority in the development strategy to achieve inclusive growth. Social Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services.

The provisioning of drinking water, sanitation, education, and health defines the quality of life of an individual. These services affect day-to-day life of people and have long-term impact in terms of longevity and earning capacity. Piped drinking water which is treated and transported to households is an expensive commodity and more so in sparsely populated villages. Swachha Bharat campaign has re-emphasized the need for basic amenities for hygiene and dignity of an individual. Education of the young takes center stage for future growth. Government of India through various programmes has strived to achieve 'Education for All'. To keep the work force active and contributing to the GDP, delivery of health care especially in the rural area has taken priority. The National AYUSH Mission aims to provide cost effective and equitable AYUSH healthcare throughout the country by improving access to these services.

I. Present Scenario:

As a proportion of Gross Domestic Product (GDP), the expenditure of GoI on social services has registered an increase of 1.5 percentage points during the period 2014-15 to 2019-20 from 6.2 to 7.7 per cent. The expenditure on education, as percentage of GDP increased from 2.8 per cent to 3.1 per cent between 2014-15 and 2019-20 (BE). Similarly, expenditure on health increased from 1.2 per cent to 1.6 per cent during the same period as percentage of GDP. (Economic Survey 2019-20)

NITI Aayog has also included quality Education, Clean Water and Sanitation and Good Health in the 17 goals defined in the Sustainable Development Goals (SDGs), the United Nations Development goals 2016-30 aimed at ensuring sustainable development and shared prosperity.

As per revised Priority Sector Guidelines, 2020, Bank loans to social infrastructure sector as per limits prescribed below are eligible for priority sector classification

- a) Bank loans up to a limit of Rs. 5 crore per borrower for setting up schools, drinking water facilities and sanitation facilities including construction/ refurbishment of household toilets and water improvements at household level, etc. and loans up to a limit of Rs. 10 crore per borrower for building health care facilities including under 'Ayushman Bharat' in Tier II to Tier VI centres. In case of UCBs, the above limits are applicable only in centres having a population of less than one lakh.
- b) Bank loans to MFIs extended for on-lending to individuals and also to members of SHGs/JLGs for water and sanitation facilities subject to the criteria laid down in paragraph 21 of these Master Directions. (not applicable to RRBs, UCBs and SFBs.)

II. Issues & Suggested Action Points

- a) For creating awareness among the people about proper sanitation, the Village Water and Sanitation Committees may be formed.
- b) Participation of the beneficiaries, especially women, in water supply schemes may be ensured right from planning to the management stages.
- c) Convergence between drinking water supply and sanitation need to be strengthened.
- d) Operation and Maintenance of assets created needs to be ensured.

III. Potential Credit Outlay

Based on the PLP projections across all the districts of Haryana and aggregating it to the state level the potential for this sector for the year 2021-22 has been worked out at Rs. 1385.92 crore. The assessment of sub sector-wise, district- wise financial potential for 2021-22 is furnished in Annexure-I.

4.7 Renewable Energy

Economic growth of a country is inextricably linked to the energy security of a country. Though not accounted directly by mainstream economists amongst the factors of production, namely land, labor and enterprise, it is a key intermediate input required for production. However, the issue of climate change has emerged as a global threat and considering the environmental impacts of non-renewable energy resources, the shift towards renewable energy has become imperative rather than a choice.

I. Present Scenario

- a) India's commitment in the Paris Agreement is to reduce the emissions intensity of its GDP to 33-35% and to achieve at least 40 percent of the cumulative electric power installed capacity from non-fossil fuel based energy resources from 2005 levels by 2030. Further, the Central Government has set an objective of introducing 175 GW of framework associated renewable power limit from different renewable power sources by 2022 which

includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro power.

- b) The estimated renewable energy potential of Haryana is about 6.47 GW, i.e. 0.72% of the estimated potential for India, from commercially exploitable sources viz. Wind 0.093 GW – (at 80-meter mast height); Small Hydro – 0.11 GW; Bio-energy – 1.707 GW; and 4.56 GW solar power. Haryana, has a potential of 93 MW of wind power and 110 MW and small hydro power.
- c) Haryana has surplus biomass availability of 8416 thousand tons which has tremendous potential for utilization of the residues of these crops to generate electricity/biogas/ bio-CNG/bio-manure/bio-fuels etc. The total estimated bio energy potential is 1707 MW, viz. biomass power- 1333 MW, bagasse cogeneration- 350 MW, and Waste to Energy- 24 MW. The total estimated bio energy potential is 1707 MW, viz. Biomass power- 1333 MW, Bagasse cogeneration- 350 MW, and Waste to Energy- 24 MW. The need to tap this potential has been further necessitated due to the aggravated environmental issues, such as burning of crop residues in fields.
- d) The state of Haryana is endowed with high solar radiation levels with more than 300 days of clear sunlight. The estimated solar energy potential of the state is 4560 MW. The commissioning status of grid-connected solar projects is 249 MW in Haryana. Further, the state has a cumulative off-grid installed capacity of 56,727 solar lights, 93,853 solar lamps, 34,625 solar street lights, 1,292 solar pumps and 2.32 MW of solar power plant.
- e) Haryana being a dairy abundant state, the estimated potential production of biogas based on the combined population of cattle and buffaloes of 6.3 million heads comes to about 688 million m³/ year, considering 75% collection recovery of the cattle dung wastes alone. Haryana has an estimated potential of 3,00,000 family type/ small biogas plants, out of which the cumulative achievement so far is 62,942. Haryana has already achieved an installed capacity of 73.50 MW through small hydro power.

II. Govt. Initiatives

- a) The Department of Renewable Energy is responsible for formulating policies and programmes necessary for implementing various non -conventional renewable sources of energy in the State. The department is also focussing to promote schemes concerned with utilizing solar energy, biogas, micro hydel, biomass etc. A nodal agency called Haryana Renewable Energy Development Agency (HAREDA) formulates policies and programmes required for popularizing the applications of various non -conventional renewable sources of energy in the State.
- b) Haryana is blessed with Solar Energy Resource of more than 300 sunny days in an year. To harness this valuable resource, GoH had formulated Haryana Solar Power Policy 2016 to promote the generation of power from solar energy and to meet its solar repurchase obligation of 8% of total consumption of energy by 2022.
- c) To tackle the issues of Crop Residue burning, GoH has formulated Haryana Bio-energy Policy 2018 to promote generation of energy from surplus biomass in the state and has set a target to achieve minimum of 150 MW biomass based power generation by 2022. A support of Rs.7,500-Rs.25,000 per unit is available for setting up these biogas plants under the New National Biogas and Organic Manure Programme.
- d) Fresh impetus is being given by the Central Govt. for adoption of solar energy under the KUSUM scheme through setting up of 10,000 MW Decentralized Grids Connected Solar along with other RE power plants on barren/ fallow land through installation of 17.50 lakh stand-alone agriculture pumps and solarization of 10 lakh grid connected agriculture pumps.
- e) In order to meet farmer's need of electricity for running water pumps, Haryana state government is providing a subsidy of Rs. 15,000 on setting up a 150-watt solar panel under Manohar Jyoti Yojana Scheme.

- f) Govt. had also formulated a scheme to provide solar water pumps with 75 percent State subsidy and 25 percent user share. The Govt. also plans to install 50,000 off- grid solar pumps of 3 HP to 10 HP capacity to be implemented with loan from NABARD, with 75 percent State subsidy in two phases. 15000 pumps were planned to be installed in the first phase in 2018-19 and 35,000 in second phase in 2019-20.

III. Issues & Suggested Action Points

- a) Although, the solar intensity is relatively higher in the state, the limited land area does not encourage big scale harnessing of solar energy. Therefore, the State has been depending on the thermal power plants and hydropower plants from the jointly owned projects. There is an urgent need to shift on to renewable energy sources for conserving the limited natural resources. It is suggested to create awareness about the needs to tap renewable energy, especially solar energy and available financial assistance under various Central Government & State Government Schemes. Investments in technology and research & development are required to lower the energy generation costs to make it affordable for the farmers.
- b) Despite 75% upfront subsidy, the adoption of solar pump sets is limited in the state due to highly subsidized agricultural power available for grid connected pump sets. There is a need to popularize the scheme through Govt. support and interventions.
- c) There is a need for creation of synergy between corporate sector, Govt labs/ institutions and NGOs so that low cost renewable energy technologies can be developed and disseminated in rural areas.
- d) The CSR initiatives of corporates to be tapped for implementing renewable energy power projects.

IV. Potential Credit Outlay

The total credit potential under this sector for the year FY 2021-22 has been estimated at Rs. 735.29 crore. The assessment of district-wise financial potential for 2021-22 is furnished in Annexure-I.

4.8 Others - Miscellaneous

The following loans as per the Revised Priority Sector Lending Guideline, 2020, are eligible for priority sector classification:

- a) Loans not exceeding Rs. 1.00 lakh per borrower provided directly by banks to individuals and individual members of SHG/JLG, provided the individual borrower's household annual income in rural areas does not exceed Rs. 1.00 lakh and for non-rural areas it does not exceed Rs. 1.60 lakh, and loans not exceeding Rs. 2.00 lakh provided directly by banks to SHG/JLG for activities other than agriculture or MSME, viz., loans for meeting social needs, construction or repair of house, construction of toilets or any viable common activity started by the SHGs.
- b) Loans to distressed persons (other than distressed farmers indebted to non-institutional lenders) not exceeding Rs. 1.00 lakh per borrower to prepay their debt to non-institutional lenders.
- c) Loans sanctioned to State Sponsored Organisations for Scheduled Castes/ Scheduled Tribes for the specific purpose of purchase and supply of inputs and/or the marketing of the outputs of the beneficiaries of these organisations.
- d) Loans up to Rs. 50 crore to Start-ups, as per definition of Ministry of Commerce and Industry, Govt. of India that are engaged in activities other than Agriculture or MSME.

I. Issues & Suggested Action Points

- a) Training, capacity building and exposure visits for the bankers may be arranged by the SRLM/NABARD to understand the needs of JLG financing and facilitate quick credit linkage.
- b) DCCB and RRB may step up for financing SHGs/JLGs on larger scale. SBI has entered into an MoU with NABARD at state level to finance JLGs in the state.
- c) Capacity building of SHG and JLG for enabling them to undertake economic activities.
- d) Conduct of NGOs/Banks interface meets to sort out the operational issues in the SHG Bank linkage programme.
- e) Training programme for govt officials so as to sensitise them to form bankable SHGs and provide support to the banks in recovery of loans.

II. Potential Credit Outlay

The total credit potential under this sector for the year FY 2021-22 has been estimated at Rs. 2725.67 crore. The assessment of district-wise financial potential for 2021-22 is furnished in Annexure-I.

Chapter 5

Infrastructure Planning

5.1 Introduction

Rural Infrastructure plays a vital role in regional and sectoral development and the pace at which the economy grows. Adequate infrastructure raises productivity and lowers production costs, but it has to expand fast enough to accommodate growth aided by latest technology. Infrastructure is a “social capital” that positively affects the entire society, reducing the vulnerability of the poor. Rural Infrastructure is crucial for agriculture, agro industries and overall economic development of rural areas. It is the foundation for achieving the objective of doubling of farmer’s income by 2022 and providing basic amenities that improve the quality of life. However, infrastructure projects, including those in rural sector, involve initial investments, long gestation periods, high incremental capital output ratio, high risk and low rate of returns on investment. Thus the involvement of public sector becomes imperative. For the purpose of accelerating the overall growth rate, the development of infrastructure in the sectors like irrigation, other agriculture related sectors, rural connectivity, storage, marketing and processing facilities, power and social sector, viz. drinking water, health care, education, etc., needs more emphasis in the agrarian economy of India.

To enhance farmers’ prosperity, interventions for creation and up-gradation of rural infrastructure are required to be made in the State, such as latest technologies in agriculture for enhancing productivity, agro industries, food processing for value addition in agriculture sector, ensuring scientific storage facilities and adopting latest marketing techniques. Further, financing of rural infrastructure requires identification of infrastructure gaps where they are most needed and are critical to the development of local areas, strategic mobilization of funds and its proper and efficient allocation.

NABARD has been supporting creation of rural infrastructure for about two decades by identification of potential for infrastructure development in district-wise Potential Linked Credit Plans (PLPs) and financing through “Rural Infrastructure Development Fund (RIDF)”. The list of sectors that qualify for infrastructure lending in terms of RBI circular dated November 25, 2013 includes Transport, Energy, Water and Sanitation, Communication, Social and Commercial Infrastructures. Out of the same, the relevant sectors for rural India include inter-alia Solid Waste Management, Water Supply Pipelines, Water Treatment Plants, Sewage Collection, Treatment And Disposal System, Irrigation (Dams, Channels, Embankments etc), Common Infrastructure for Industrial Parks, SEZ, Tourism Facilities and Agriculture Markets, Fertilizer (Capital Investment), Post-Harvest Storage Infrastructure For Agriculture and Horticultural Produce Including Cold Storage, Terminal Markets, Soil-Testing Laboratories, Cold Chain. Thus, even the corporate sector can associate in the strengthening of rural infrastructure as regards sub-sectors.

5.2 Status of the different rural infrastructure sectors along with opportunities & critical infrastructural gaps

The economy of the state of Haryana is one of the fastest growing in the country with excellent growth in last few years. The infrastructure in the state is also well developed and has supported the development of the State. The status of various infrastructure projects in major sectors in the State is as under:

5.2.1 Agriculture and related Sectors:

The State has made rapid strides in agricultural production. However, productivity of most of the crops in Haryana has reached a plateau. The State is implementing various schemes for increasing the production of different crops. The thrust areas are diversification of agriculture, Hi-Tech agriculture including protected farming, organic farming and harvest/post-harvest management, natural resources and farm water management.

5.2.1.1 Irrigation & Water Resource Management

In order to enhance agricultural productivity, efficient water resource management is a pre-requisite. Haryana is mostly arid or semi-arid with limited rainfall ranging from 300 mm in the south-west to 1100 mm in the north east. The ratio of net irrigated area to net area sown is around 91 % for Haryana. While this is higher than the national average of 48.80% there is simultaneous need to increase water use efficiency.

Haryana has developed extensive canal network consisting of 1,461 channels having length of 14,085 km which includes Bhakra system (522 Canals with a total length of 5,961 KM), Yamuna system (446 Canals with a total length of 4422 KM) and Lift system (493 Canals with a total length of 3,702 KM). Besides, the State has vast network of drainage of about 800 drains covering 5,150 KM length which is used for flood protection and irrigation. However, the canal network in the state is old and the capacity of carrier channels has been reduced due to siltation and degradation of civil structures. The work of fresh construction, remodelling and rehabilitation of water channels ranging from Major Irrigation Projects to Water-Courses is being taken up in a phased manner by the Irrigation & Water Resources Department.

Irrigation works have been accorded highest priority by NABARD ever since the inception of the Fund with RIDF assistance available to the extent of 95% of the Total Financial Outlay. Cumulatively, 2282 Projects have been sanctioned to Irrigation Department under RIDF including Major, Medium, Minor Irrigation and Drainage Projects with a total RIDF Loan of Rs. 4351.69 Crore. Out of the which, 1656 projects have been completed by the Department. Some of the major projects recently supported by NABARD under RIDF include the Rehabilitation and Remodelling of JLN Feeder, Loharu Feeder, Mahendragarh Canal and JLN Canal System. Other major projects include -Rehabilitation of Parallel Delhi Branch Canal, Remodeling of Augmentation Canal etc.

Irrigation from groundwater plays an increasingly critical role in Haryana's farm sector. The annual replenishable ground water resource of the state has been estimated as 10.15 bcm and net annual ground water availability is 9.13 bcm. The annual ground water draft is 12.50 bcm and stage of ground water development is 137%. Currently, Haryana's share of irrigated cultivation in total cultivated area, at about 91 percent. The annual ground water draft has also decreased from 13.92 to 12.50 bcm. The number of tube wells operated by the diesel engine being 2,75,211 and that operated by electrical motor 5,46,188 taking to a total number to 8,21,399 in the State (Statistical Abstract 2018-19, Haryana State). State Government has recently taken the initiative of replacing the Diesel Engines with both Stand-Alone and Grid – Connected Solar Powered Pumps. It is envisaged that not only will the move facilitate reduction in government spending on subsidy for Diesel for farmers, but also it will result in reduction of pollution.

Another important aspect of improvement in water usage efficiency is Watershed based area development. Watershed development is very crucial for the economic and ecological development of the Shivalik region. In order to increase the soil water conservation measures in this region, NABARD had sanctioned two projects under Watershed Development Fund (WDF) – one covering an area of 2016 ha (CBP-120, FIP-1896 ha) area in 15 villages of Raipur Rani Block of Panchkula district. The second project was sanctioned in Mallah Watershed covering area of 1431 ha in Pinjore block of Panchkula district (CBP-122 ha, IP-99, FIP-1210 ha) in 12 villages of Pinjore block. Both the projects are now in Full Implementation Phase. The upper command area lying above the river bed level in the Shivalik foot hill area of the state in Yamunanagar, Ambala and Panchkula districts may also be similarly developed for irrigation by constructing the Infiltration gallery / subsurface check dams. In this FY, NABARD has sanctioned another watershed project in Mahendragarh district.

The traditional Indian Water Management practices revolved around the Village Pond System. Ponds have also remained the epicenter of activities in Haryana. However overuse of the ponds, drainage of sewerage into the ponds have slowly degraded the pond ecosystem. There is a felt need to rejuvenate the 14000 Village Pond Networks in Haryana for utilisation in

Irrigation. The water from the rejuvenated ponds based on its purity can be used for Irrigation, bathing of livestock and supplementing farm income through fisheries. In order to conserve and rejuvenate the village ponds, the state government has set up Haryana Pond and Waste Water Management Authority. The authority could potentially provide promising avenues for future tie-ups with NABARD.

5.2.1.2 Horticulture

The State, being in the vicinity of NCR, has got the locational advantage and, as a result, has taken several initiatives for production and marketing of vegetable and horticultural crops. Horticulture crops cover 5.26 lakh hectare area which is 7.99 percent of the gross cropped area of the State. Production of horticultural crops in the State was 86.38 lakh M.T. during the year 2018-19

MoFPI has also approved 3 food parks in the state i.e one in Ambala and two in Sonapat districts. Food parks at Rai (Sonapat) and Saha (Ambala) are developed and maintained by the Haryana State Industrial and Infrastructure Development Corporation (HSIIDC).

A terminal market of International standards for horticulture produce is being developed in the National Capital Region (NCR) at Ganaur in the Sonapat district on an area of 500 acres. The market is being positioned as a potential hub for export of fruits, flowers and vegetables from all over the country.

The State may establish Horticulture Vigyan Kendras for demonstration, capacity building and extension services to promote Horticulture and helping diversification from paddy-wheat rotation. Efforts need to be made for the infrastructure for custom hiring of Farm Machinery for small and marginal farmers.

A new scheme - Crop Cluster Development Program (CCDP) has been launched with budget outlay of Rs 510.4 crore by the Government of Haryana. Under this program, Crop Clusters/Baagwani Villages are sought to be developed. Within each cluster marketing infrastructure and post harvest management facilities like pack house, primary processing centre, grading-sorting machine, storage facilities, refer vans, input and quality control facility shall be created to have forward and backward linkage for effective marketing of horticulture produce.

Investment in Research Centres for leveraging advances in Biotechnology like production micro-tubers in Potato, introduction of new varieties through tissue culture will have significant multiplier effect in terms of horticultural productivity. A “Horticulture Vision” document to double the area and three times the production in 15 years by 2030 has also been prepared by Government of Haryana.

It has been envisaged that 15 percent of the total cultivated area would come under Horticultural Crops. The Horticulture sector thus presents a good opportunity for partnership with NABARD in rural infrastructure financing of the entire agri-value chain. The infrastructure facilities required for achieving the vision viz. Seed/Horticultural farms , Grading /Certifying Mechanism are all eligible activities under RIDF holding significant potential .

5.2.1.3 Storage and Marketing infrastructure

The State Government has focused its attention on the need for creation of scientific storage infrastructure in the state. HAFED is implementing the PEG Scheme of FCI in the State. In addition to this, State Government is also making efforts to create capacity through Silos. The state government will construct steel silos for 6.50 lakh MT at Ambala 1,00,000, Faridabad 50,000, Bhiwani 50,000, Rohtak 50,000, Jagadhari 50,000, Karnal 75,000, Taroari 75,000, Hansi 50,000, Uchana 50,000 and Kurukshetra 1,00,000 MT on PPP mode. The Government can utilize the land available with the PACS to create small godowns, which can be used as procurement centres as well as by local farmers to store their produce to avoid distress.

The current foodgrain storage capacity in Haryana amounts to 115.28 Lakh MT with around 90 Lakh MT of covered storage capacity. As per the potential assessed by NABARD there is scope for at least another 20-25 Lakh MT storage capacity creation. As the crop procurement basket expands, there will be requirement for creation of new scientific storage units.

5.2.1.4 Animal Husbandry

Animal husbandry and dairy are the potential sectors for supplementing the income levels of the farmers. As per Livestock Census 2019, livestock population of the State is 69.38 lakh including 20.72 lakh cattle and 43.68 lakh buffaloes. Livestock sector in Haryana contributes about 40% to its agricultural GDP. It is also a major source of employment and provides crucial supplementary income. There are 2,879 veterinary institutions in Haryana, on an average one veterinary institution for every three villages.

In view of the importance of the sector for Haryana's agricultural economy, it is crucial to make provisions for adequate and accessible veterinary services for the livestock. Hence, NABARD has provided RIDF assistance to Government Projects for construction of 105 Government Veterinary Hospitals and 207 Government Veterinary Dispensaries under RIDF XXIII and RIDF XXIV. Over the 25 tranches Rs. 311.26 Crores have been sanctioned to 1113 Projects under Animal Husbandry Sector to strengthen the veterinary infrastructure of the state.

A project for construction of new campus of Lala Lajpat Rai University of Animal Husbandry and Veterinary Sciences in Hisar is also being implemented with RIDF support of Rs. 411 Crores from NABARD.

5.2.1.5 Fisheries

Haryana Government has estimated the annual growth rate of Aquaculture at 7.4%. However, the overall contribution of fishery sub-sector in GSVA of Agriculture and Allied Sectors is merely around 2%, leaving scope for transforming fisheries into a major income generator for agripreneurs.

Fish culture as a supplementary source of income is slowly becoming popular among fish farmers of the State. A total area of 18,975 hectare has been stocked for fisheries in the State. Fish culture is mainly done in the farmers' ponds, community ponds, micro water sheds and running water. Fish farmers are not only rearing popular varieties of fish like rohu, mrigal, catla, common carp, silver carp and grass carp but also shrimps and prawn. Over the next one year, an area of 21,000 Ha will be brought under fish culture and 2,41,000 MT fish is expected to be produced.

The Government has sought to strengthen various components of the entire value chain of fisheries sector. Seed farms have been constructed at Ottu (Sirsa) with capacity of 30 Lakh Fish Seed per Year. Ornamental Fish Seed Hatchery has been established at Saipura (Karnal). A Hi-tech and Ultra Modern Ornamental Fish Hatchery is proposed to be established in Jhajjar by the Govt. of Haryana. The Fisheries Department will also establish and incentivize use of Recirculatory Aquaculture System (RAS) based units at high stocking rate in indoor tanks to boost fish production and fish productivity in the State which will help in doubling the income of the Fish Farmers. The Government efforts have resulted in 80% Village Ponds in Haryana being brought under fish farming.

Further, in order to fully utilize the around 4 Lakh Ha of saline affected and water logged areas in the State, the Fisheries Department has introduced a new project under Rastriya Krishi Viskas Yojana for White Shrimp in saline affected areas of district Jhajjar, Rohtak and Hisar and fish culture in water logged areas of district Mewat and Palwal.

ICAR - Central Institute of Fisheries Education, Rohtak (ICAR-CIFE) undertakes research in developing suitable technologies for degraded salt affected inland areas through aquaculture using underground saline water. On-farm demonstrations and demand driven training programs are also conducted for state fisheries personnel, fish farmers, entrepreneurs and NGO's. The Center has soil and water testing lab facility and scampi (giant freshwater prawn) hatchery. CIFE, Rohtak centre has taken initiatives for conversion of salinity affected

agricultural fields into saline aquaculture farm. With support from the Fisheries Department of GoH, over 128 hectares of salinity-affected areas in Rohtak, Hissar, Bhiwani, Jind, Sonapat and Jhajjar districts has been already brought under white shrimp farming.

5.2.2 Power

The total installed capacity available to the State at present is 11,971.42 MW. It includes 2,582.4 MW from State's own stations, 846.14 MW from jointly owned projects (BBMB) and the balance as share in central projects and Independent Private Power Projects. The power availability from these sources during the year 2018-19 was 5,15,733 lakh KWH. The power sold during the year 2018-19 was 4,07,090.10 lakh KWH.

The State is making all efforts to increase the generation capacity and Strengthening, modernization and expansion of transmission and distribution network along with reducing the losses in the system. The transmission infrastructure is being strengthened by HVPNL in the State through various measures, including assistance from NABARD under NIDA.

5.2.2.1 Solar Energy

The state of Haryana is endowed with high solar radiation levels with more than 300 days of clear sunlight. The estimated solar energy potential of the state is 4560 MW. The Government of Haryana has formulated Haryana Solar Power Policy 2016 to promote the generation of power from solar energy and to meet its solar repurchase obligation of 8% of total consumption of energy by 2022.

In order to meet the irrigation needs of farmers the Department of New and Renewable Energy, GoH & HAREDA had formulated a scheme to provide solar water pumps in the State. Since inception, around 3542 solar powered water pumps were installed with subsidy from the State and Central Government. The Department has undertaken installation of 15,000 off-grid solar pumps of 3HP to 10HP capacity being implemented with loan from NABARD. The project for 15000 Solar Water Pumps which was sanctioned under RIDF XXIV (2018-19) is to be dovetailed with Government of India's flagship scheme PM-KUSUM.

Ministry of New and Renewable Energy (MNRE) had launched the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme for farmers for installation of solar pumps and grid connected solar and other renewable power plants in the country. The scheme aims to add solar and other renewable capacity of 25,750 MW by 2022 with total central financial support of Rs. 34,422 crore including service charges to the implementing agencies.

Further, a pilot project involving the installation of 468 solar pumps totaling a cumulative capacity of around 2.9 MW is proposed to be installed in Biana in Karnal district and Marupur in Yamunanagar district to establish Net Metering as a viable economic alternative for the farmers of Haryana. This will serve to supplement their income at the same time reducing water consumption.

Additionally, Rooftop Solar Connections for Anganwadi Centres/ Primary Health Centres/ Government Veterinary Hospitals and Dispensaries located in rural areas will ensure availability of clean, renewable energy for the government institutions.

5.2.2.2 Bio-Mass Energy

Haryana has surplus biomass availability of 8416 thousand tonnes which has tremendous potential for utilization of the residues of these crops to generate electricity/biogas/ bio-CNG/bio-manure/bio-fuels etc. The total estimated bio energy potential is 1707 MW, viz. Biomass power- 1333 MW, Bagasse cogeneration- 350 MW, and Waste to Energy- 24 MW. The need to tap this potential has been further necessitated due to the aggravated environmental issues because of burning of crop residues in fields. The Government of Haryana has formulated Haryana Bio-energy Policy 2018 to promote generation of energy from surplus biomass in the state and set a target to achieve minimum 150 MW biomass based power generation by 2022. To tackle the issue of straw burning and to promote paddy straw-based biomass power projects in the State, the Govt. has allotted 4 paddy straw based biomass

power projects of 49.8 MW capacity in Kurukshetra, Kaithal, Jind and Fatehabad on pilot basis. These projects are likely to be commissioned by mid of 2020. This will allow the farmer's to generate supplementary income from resources hitherto considered as waste and ensure efficiency in agri-resource utilization. This is in line with NABARD's vision of promoting clean energy and doubling of farmers' income.

Thus, there is immense scope for collaboration between NABARD and State Government in terms of Rural Energy Infrastructure. Separate Feeder Lines, Infrastructure Works related with alternate sources of energy, viz. Solar, Wind and Energy Conservation in rural areas are eligible activities where State Government may seek assistance under RIDF.

5.2.3 Rural Connectivity

Rural-urban connectivity is multi-beneficial, enabling better access to services located in urban areas such as healthcare, education, and for increased economic and social participation. Connectivity to urban markets allows lengthening of market chains and connecting rural producers to the wider market, enabling participation in the national and regional economy. When rural areas are isolated from other rural, urban and semi-urban zones they are more likely to be trapped in poverty due to decreased access to healthcare and educational provision and participation in social and economic activities and affecting a higher proportion of disadvantaged groups, particularly women, the elderly and the disabled.

A World Bank study showed strong correlation between reduction in incidence of poverty and improved rural access. A study that based on Indian Road Density concluded that it contributed directly to agricultural production by 7 per cent. Studies in India found that road construction could impact healthcare accessibility by 30 per cent.

Haryana has one of the highest rural road density in India. The details of the various roads as per information available with PWD(B&R) is as under:

SN.	Type of Road	Length in Kms (Up to 30.11.2019)
1	National Highways	State PWD – 72 NHAI – 3,011
2	State Highways	1,491
3	Major District Roads	1,337
4	Other Roads	20,974
Total		26,885

Source: Economic Survey 2019-20, Haryana

NABARD has laid special emphasis on boosting rural connectivity and there has been good cooperation with PWD(B&R) ever since the operationalization of RIDF in Haryana. Cumulatively, 567 Rural Roads have been sanctioned to the Department with RIDF Loan of about Rs.2202 Cr over 26 RIDF tranches. Additionally, 86 bridges have been sanctioned to the department with RIDF Loan of Rs. 205.45 Cr. Out of the total 567 Projects sanctioned to the department 465 projects have been completed.

5.2.4 Social sector Infrastructure

The social sector development has been considered as an essential prerequisite for sustained human development and economic growth of an economy. Social sector development sets the foundation for rising income and employment opportunities, productivity growth, and technological advancement and hence, helps to enhance the quality of life of people. Since the development of the social sector is indispensable for the achievement of inclusive growth in India, the Government of Haryana has also spent substantially on education, healthcare, housing, sanitation and social security and labour welfare for the economic growth and development in Haryana.

5.2.4.1 Health

The Integrated Child Development Scheme (ICDS) scheme is being implemented in the state to provide children with basic services for a better start in life. Large number of delivery centers of these services i.e. “Anganwadi Centers” are functioning in rented premises. 148 ICDS Blocks and 25,962 Anganwadis (cumulative), including 512 Mini Anganwadi centres are in operation in the State. Only 7055 AWCs are running in own constructed buildings whereas 5959 are running in private rented buildings. The availability of own premises has been shown to significantly improve the service delivery in the AWCs.

Thus in order to improve the nutritional and health status of children of age group 0-6 years, the State is implementing a project for construction of 2411 Anganwadis for areas/villages where AWCs are running in private / rented buildings on priority basis under RIDF.

5.2.4.2 Education

The State Government is providing educational facilities within a minimum distance (radius) to children. The educational facilities are available within a radius of 1.52 Km. and 2.28 Km. for High and Senior Secondary Schools respectively. With an objective of ensuring availability of quality education to the children of farming community in rural areas and also to improve the delivery of Science/Math/Commerce Education in rural areas, 6 Kisan Adarsh Vidyalaya have been opened in various districts. The State is taking up construction of additional classrooms, Head Master rooms, separate girl toilets, electrification, drinking water facility, boundary walls and barrier free elements & ramps for strengthening the infrastructure. Moreover, State Government may also explore the option of establishing Technical Education Institutions to cater to rural population which would further push the vision of Make-in India and Rural Entrepreneurship. Under RIDF XXVI, project for construction of 27 school buildings has been sanctioned with loan of Rs. 99.47 crore.

5.2.4.3 Drinking Water Supply

At least one safe source of drinking water in all the villages of Haryana was made available by 31st March, 1992. At present, however large regions in arid and semi-arid parts of Haryana are facing significant ground-water depletion along with deterioration in water supply quality being provided through Ground Water based Drinking water Supply Schemes. In view of same, projects pertaining to augmentation / strengthening the water supply levels are being implemented in drinking water deficient villages. The existing drinking water supply facilities are to be improved/ strengthened in the villages to raise the status of water supply to 70 litres per capita per day through augmentation of existing canal based schemes, creating new canal based water works, etc.

The State Govt. has been availing financial assistance from NABARD under various projects focusing on the traditionally water deficient areas of South –West Haryana covering districts of Rewari, Mahendragarh, Nuh, Mewat and Palwal. It involves Canal based Drinking water Schemes based on Rapid Sand Filtration system moving ahead from Slow Sand Filtration Systems. Innovative project designs in the form of Ranney Wells are being established in Palwal and Mewat and are being implemented to exploit the potential of the Yamuna Floodplains. RIDF Loan of Rs. 1852.70 Crores have been sanctioned to 849 Drinking Water Projects sanctioned under different tranches of RIDF. 764 of the projects have been completed. The projects aim to cover around 10 Lakh households in Haryana either through new household connections or enhancing the earlier available water supply.

The State Government of Haryana has set the target of ensuring 24x7 Drinking water supply in rural areas by 2022. In keeping with the objective, a major push will be required to ensure 100% coverage which will require enhancement of the capacities of Water Works and Distribution Networks. RIDF provides a major avenue of timely available, cost-effective funds for the State.

5.2.4.4 Sanitation

Swachh Bharat Abhiyan - The Cleanliness drive has been given thrust in the form of Swachh Bharat Mission. It is a demand-driven and people-centered sanitation program. The objectives of the scheme are to bring about an improvement in the general quality of life in the rural areas, It shall cover the remaining schools not covered under Sarva Shiksha Abhiyan (SSA) and Anganwadi Centers in the rural areas with proper sanitation facilities and undertake the proactive promotion of hygiene, education, and sanitary habits among students, develop community managed environmental sanitation systems, focusing on solid & liquid waste management for overall cleanliness in the rural areas and motivate communities and Panchayati Raj Institutions promoting sustainable sanitation facilities through awareness creation and health education. NABARD has sanctioned a project to the state government for construction of separate Toilet Block in 2,910 Girl schools under RIDF.

Public Health and Engineering Department, GoH is also involved in implementation of the flagship scheme of “Swaran Jayanti Mahagram Vikas Yojana” wherein it is envisaged inter-alia, to provide Sewerage Treatment facilities in villages above the population of 10,000. Such projects will play a crucial role in aiding the vision of Swachagrah besides providing urban amenities in rural Haryana stemming rural-urban migration. NABARD Haryana looks forward to extensive engagement with the Department in order to fulfil the dream of a “Swachh and Swastha Bharat”.

5.2.5 Micro Infrastructure

Income level has gone up in villages both because of increase in agricultural productivity, prices of produce and because of implementation of employment generation programmes. However, lack of infrastructure, modern amenities and services necessary for decent living in rural areas has often resulted in a sense of deprivation and dissatisfaction amongst a large percentage of population, which has led to migration of people to urban areas.

In this connection, NABARD is exploring the feasibility of supporting development of micro infrastructure in villages. NABARD could support the ‘Gram Panchayat’ to develop micro infrastructure projects in villages such as bore well, sanitation, electrification (solar/ biogas/ windmill), warehouse to store farm produce and farm equipment – power tiller, combine harvesters, reapers etc. NABARD will be providing financial assistance for the new scheme-Deenbandhu Haryana Gram Uday Yojna announced during the State budget for FY 2017-18. It is aimed at bringing about planned development of basic infrastructure and services, in villages in the state, in order to provide better living condition at par with towns. Villages with population between 3,000 and 10,000, would be developed under the scheme. Components of the scheme such as 481 Anganwadi Centres, 700 Village Knowledge Centres, 53 Government Veterinary Hospitals and 92 Government Veterinary Dispensaries have been sanctioned under Mahagram Yojana with RIDF Loan of Rs. 265.41 Crores.

The infrastructure in these villages would be strengthened with the required amenities for which it is proposed that resources be mobilized through convergence of various schemes of the Government besides financial assistance from NABARD under the scheme, for focused development of these villages.

5.3 Available NABARD Assistance for Infrastructure Development

5.3.1 Rural Infrastructure Development Fund (RIDF)

The Government of India, announced the formation of RIDF in the budget of 1995-96 with an initial corpus of Rs.2000 crore (RIDF-I). Presently, in terms of RBI guidelines, corpus of the RIDF is contributed by domestic commercial banks, having shortfall in achievement of priority sector lending target. Since inception the scheme has been continued with the announcements of subsequent tranches in the successive Union Budgets. The Tranche XXVI (2020-21) had a corpus of Rs.30000 Crore. The State of Haryana has received Normative Allocation of Rs. 1100 crore under Tranche – XXVI for sanction of projects under 37 activities.

5.3.1.1 Broad category of Eligible Activities under RIDF

- i) **Agriculture and related sectors** – 27 activities (RIDF loan: 95%)
- ii) **Social Sectors** – 08 activities (RIDF loan: 85% / Hill States 90%)
- iii) **Rural connectivity** – 02 activities (RIDF loan: 80% / Hill States 90%)

The support from RIDF is extended in the form of loans to the State Governments and State owned Corporations for taking up the eligible infrastructure development activities. However, coverage of the Fund has also been extended for execution of projects by Panchayati Raj Institutions (PRIs), Self-Help Groups (SHGs) and Non Governmental Organizations (NGOs).

The priority would be given to the incomplete, ongoing projects and the new projects which could be completed within three years. Further, though the irrigation and rural connectivity will continue to be supported, due priority may be given to projects related to Animal Husbandry, Dairy development, Fisheries, Sub-sectors related to agriculture and projects from backward/ disturbed areas. The Finance Department of the State Government is the Nodal Department for submission of projects, availing funds and making repayments to NABARD.

5.3.1.2 Sector wise sanctions & disbursements in Haryana under RIDF

The sector-wise details of sanctions/disbursements in the State under RIDF since inception of the Fund in 1995-96 till 15 December 2020 are given below:

(Rs. Crore)

SN	Sector	No of Projects	RIDF Loan Sanctioned	Cum. Disb'ment	% Ach	No of Projects Completed
1	Irrigation	2282	4351.69	2461.19	56.56%	1656
2	Allied (AH, VKC, WH)	1840	652.88	302.19	46.29%	808
3	Rural Connectivity	933	2755.96	1833.65	66.53%	465
4	Social Sector	1442	2710.47	1805.39	66.61%	837
5	Power Sector	153	203.49	139.80	68.70%	150
	Total	6650	10674.49	6542.22	61.29%	3916

5.3.2 Long Term Irrigation Fund (LTIF)

LTIF was operationalized in NABARD during 2016-17 for fast tracking the completion of the 99 identified Medium and Major Irrigation projects, spread across 18 states, in mission mode by December 2019. Further, GoI has since approved the continuation of the arrangement for funding of the 99 prioritised projects under PMKSY-AIBP and CADWM beyond December 2019. Under LTIF, NABARD provides loan towards Central Share as well as State Share with a tenor of 15 years. The Central Share is provided to National Water Development Agency (NWDA), an agency working under the aegis of Ministry of Jal Shakti, GoI, whereas the loan towards State Share is availed by the State Governments.

5.3.3 Micro Irrigation Fund (MIF)

Govt. of India had approved setting up of Micro Irrigation Fund with NABARD in 2018-19 with a corpus of Rs.5000 crore. The main objective of the fund is to facilitate the States in mobilizing the resources for extending coverage of Micro Irrigation. The States may access Micro Irrigation Fund for innovative integrated projects including projects in the Public Private partnership (PPP) mode. States may also access MIF for incentivizing micro irrigation through an additional (top up) subsidy over and above the one available under PMKSY-PDMC. The Fund has been envisaged to facilitate States to mobilize resources for their initiatives to achieve the annual target of about 2 Million ha in 2018-19, 2.4 Million ha in 2019-20 and 208 Million ha in 2020-21 under Per Drop More Crop Component of PMKSY as recommended by the Group of Secretaries.

The loan scheme was envisaged to be extended by NABARD to the State Government during the remaining period of 14th Finance Commission i.e. during 2018-19 and 2019-20 with allocation of Rs. 2000 crore and Rs. 3000 crore respectively. However, with extension of the 14th Finance Commission till 2020-21, the loan scheme has also been extended for operation during 2020-21 with existing Guidelines /Operational Mechanisms and the initial corpus amount. The Borrowings shall be paid back in 7 years including the grace period of 2 years starting from 2018-19 to 2026-27 under Micro Irrigation Fund. Interest Subvention will be capped a 3 percent with a ceiling of Rs. 150 crore of budgetary outlay fixed per year for the same. This cost shall be met with from the ongoing scheme of PMKSY-PDMC.

NABARD Haryana has sanctioned 04 projects under MIF with loan component of Rs. 790.94 crore in Haryana against total project outlay of Rs. 1192.81 crore. The projects will extend the coverage of micro irrigation over an area of 96,300 hectares across the state.

5.3.4 Agriculture Infrastructure Fund (AIF)

The Union Cabinet in July 2020 has approved a new pan India Central Sector Scheme called Agriculture Infrastructure Fund. The scheme shall provide a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support. The duration of the Scheme shall be from FY2020 to FY2029 (10 years). Under the scheme, Rs. One Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Start-ups, Aggregation Infrastructure Providers and Central/State agency or Local Body sponsored Public Private Partnership Project.

5.3.5 Animal Husbandry Infrastructure Development Fund (AHIDF)

The recently announced Prime Minister's Atma Nirbhar Bharat Abhiyan stimulus package including setting up of Rs. 15000 crore Animal Husbandry Infrastructure Development Fund (AHIDF) for incentivizing investments by individual entrepreneurs, private companies, FPOs. The objective of the scheme is to help increase milk and meat processing capacity and product diversification thereby providing greater access for unorganized rural milk and meat producers to organized milk and meat market. Assistance from the fund is available for dairy processing, value added product manufacturing, meat processing and value addition of facilities and establishment of animal feed manufacturing and strengthening of existing units/plants.

5.3.6 Dairy Processing & Infrastructure Development Fund (DIDF)

Consequent to the Union Budget 2017-18 announcement, Dairy Processing & Infrastructure Development Fund has been set up with a corpus of Rs. 8,004 crore with NABARD to modernize the milk processing plants and machinery and to create additional infrastructure for processing more milk. The project focuses on building an efficient milk procurement system by setting up of processing and chilling infrastructure & installation of electronic milk adulteration testing equipment at village level. The Scheme envisages providing loan assistance to State Dairy Federations, District Milk Unions, Milk Producers Companies, Multi State Cooperatives and NDDB subsidiaries across the country who are termed as Eligible End Borrowers (EEBs). The funding period (2017-18 to 2019-20) of the scheme to be revised to 2018-19 to 2022-23 and the repayment period to be extended upto 2030-31 with spill over to first quarter of the FY 2031-32. Out of Rs 10,881 crore of financial outlay for project components of DIDF, Rs 8,004 shall be loan from NABARD to NDDB/NCDC, Rs 2,001 crore shall be end borrowers contribution, Rs 12 crore would be NDDB/NCDC's share and Rs 864 crore shall be contributed by DAHD toward interest subvention.

5.3.7 Fisheries and Aquaculture Infrastructure Development Fund (FIDF)

Department of Fisheries, Ministry of Agriculture and Farmers Welfare, Govt of India has set up a dedicated Fisheries and Aquaculture Infrastructure Development Fund (FIDF) under NABARD for creation of fisheries infrastructure facilities both in marine and inland fisheries sectors to augment the fish production to achieve the target of 20 million tonnes by 2022-23. The fund creates a special window for the State Governments/UTs and State entities, cooperatives and individual entrepreneurs to avail concessional finance for development of fisheries infrastructure. NABARD will fund for creation of public infrastructure projects to the tune of about Rs. 2600 crore through State Governments. Assistance will be available for establishment of fishing harbours, establishment of fish landing centres, development of fish markets, modernisation of state fish seed farms, establishment of fisheries training centres, establishment of disease diagnostic centres, establishment of aquatic quarantine facilities etc.

5.3.8 Agri Marketing Infrastructure Fund (AMIF)

In Budget announcement 2018-19, Government of India has announced to develop and upgrade existing 22,000 rural haats into Gramin Agricultural Markets (GrAMs). In these GrAMs, physical infrastructure will be strengthened using MGNREGS and other Government Schemes. Further, the Government has announced to set up of an Agri-Market Infrastructure Fund with a corpus of Rs. 2000 crore with NABARD for developing and upgrading agricultural marketing infrastructure in the GrAMs and Agriculture Produce Market Committee (APMC) Markets. There are 81 APMCs in the state, of which 54 have been identified by GoI for upgradation of marketing infrastructure.

5.3.9 Warehouse Infrastructure Fund (WIF)

Consequent upon the announcement of an allocation of ₹5000 crore to NABARD in the budget for 2013- 14, for supporting creation of infrastructure for storage of agricultural commodities, Reserve Bank of India (RBI) issued guidelines for creation of Warehouse Infrastructure Fund (WIF) in NABARD. With a view to operationalising WIF, NABARD has formulated a scheme viz., NABARD Warehousing Scheme 2013- 14 (NWS), which envisages extension of loans to Public and Private Sectors for construction of warehouses, silos, cold storages and other cold chain infrastructure. Funds under this scheme would be utilized for meeting the growing demand for storage capacity for agricultural commodities in the entire country and also in the wake of enactment of National Food Security Act 2013.

In Haryana, a sum of Rs. 295.80 Crores has been sanctioned under WIF for creating a scientific storage capacity of 6.74 Lakh MT. Against the Sanction, Rs. 118.86 Crores have been released as of June 2020 to various implementing agencies viz. Haryana State Warehousing Corporation (HSWC), Food and Supplies Department, Govt of Haryana, Haryana Agro Industries Corporation (HAIC) and HAFED.

5.3.10 Food Processing Fund (FPF)

Government of India (GoI) has accorded top priority for the development of the food processing industry in the country and accordingly the Hon'ble Union Finance Minister had announced setting up of a Food Processing Fund of Rs.2,000 crore in NABARD in 2014-15 to make available affordable credit to agro-processing units in designated Food Parks. Assistance from the Fund will be provided by NABARD either directly or through consortium arrangements with other financing agencies. State Governments, entities promoted by State / Central Governments, Joint ventures, Cooperatives, Federation of Cooperatives, SPVs, Farmers' Producers Organizations, Corporates, Companies, Entrepreneurs, etc., may avail loans from this Fund for establishing the designated Food Parks and also for setting up of individual food/agro processing units in the designated Food Parks. The loans under FPF will be provided at concessional rate of interest to State Governments and Corporations.

NABARD has sanctioned a term loan of Rs. 71.01 Crore to HSIIDC for setting up Mega Food Park in Barhi, Sonapat and Rs. 54.04 crore has been disbursed against this loan till date.

HAFED has been sanctioned a term loan of Rs.55.00 Crore for setting up MFP in Rohtak district.

5.3.11 Micro Food Processing Fund

With a view to providing financial, technical and business support for upgradation of existing micro food processing enterprises, the Ministry of Food Processing Industries (MoFPI) has launched an all India “Centrally Sponsored PM Formalisation of Micro food processing Enterprises (PM FME) scheme” to be implemented over a period of five years from 2020-21 to 2024-25 **with an outlay of Rs 10,000 crore**. The expenditure under the scheme would be shared in 60:40 ratio between Central and State Governments, in 90:10 ratio with North Eastern and Himalayan States, 60:40 ratio with UTs with legislature and 100% by Centre for other UTs.

The Scheme adopts One District One Product (ODOP) approach to reap benefit of scale in terms of procurement of inputs, availing common services and marketing of products. The States would identify food product for a district keeping in view the existing clusters and availability of raw material. Support for common infrastructure and branding & marketing would be for ODOP products. The Scheme also place focus on waste to wealth products, minor forest products and Aspirational Districts.

NABARD Infrastructure Development Fund (NIDA)

Considering the large infrastructure requirements of State Govt and limited availability of funds under RIDF a new window of support, NABARD Infrastructure Development Assistance (NIDA) has been designed to directly finance the State Governments/State owned institutions/ Corporations/SPVs for both ‘on-budget’ as well as ‘off-budget’ creation of rural infrastructure, outside the ambit of RIDF borrowing. The terms of support under NIDA are flexible and with repayment period extending up to 15 years and moratorium of up to 3 years.

Haryana RO has sanctioned Rs. 696.84 cr. to Haryana Vidyut Prasaran Nigam Limited (HVPNL) for strengthening the power supply since 2014-15 onwards for strengthening the power supply arrangements in all districts of Haryana. NABARD is supporting HAFED for construction of 12 godowns having capacity of 172965 MT in 8 districts of Haryana from NIDA

5.4 Infrastructural Gaps and Interventions Required

District wise critical infrastructural gaps and interventions required are summarized in **Annexure III**.

Chapter 6

Collectivization of agricultural produce for enhancing farmer's income

6.1 The Indian Scenario: As per the Agriculture Statistics of 2014, nearly 430 people depend on farming in India while 263 million people are either farmers or agricultural workers. Farmers are major contributors to the growth of Indian economy and their concern impact policies in the country.

Nearly 87 percent of farmers in India has less than two hectares of land while 69 percent does not even possess a hectare of land. These farmers are able to earn only Rs. 50,000 per year or even less indicating how alarmingly low their income is. Further, due to highly fragmented, scattered and heterogeneous landholdings, rising cost of cultivation and limited access of small/marginal farmers (SF/MF) to public resources and markets, etc., the small holding-based agriculture has gradually become unviable. Low marketable surplus, lack of farmers' access to public resources; lack of access to quality inputs, credit facility, modern technologies, etc. and frequent crop failures, lack of assured market, income safety, lengthy and fragmented supply chain, etc., have resulted in high dependency of farmers on the exploitative intermediaries and local money-lenders.

The above factors led to the necessity of structural reforms and transformational initiatives towards the revitalisation of Indian agriculture both by way of stepping up investments for productivity enhancement as also reforms in agricultural marketing and postharvest agri logistics for boosting agricultural growth. In this context, a sustainable solution lies in collectivisation of agricultural produce and value addition/ marketing by achieving the economy of scale and creating commodity-specific agri value chains with participation of agri entrepreneurs and primary producers on the equitable terms.

Therefore, in order to give farmers' collectivisation a competitive edge, Govt. of India constituted a high powered committee in 2009 under the chairmanship of Prof. Y.K. Alagh to recommend a suitable institution of Farmers, collectivization which can withstand and can come with the private players in the field of farming. Alagh committee suggested the formation of Farmers Producers Organizations as an entity accommodated under the Company's Act and Co-operative Societies Act.

6.2 Benefits of Farmers' Collectives through Farmers Producers Organisation

Some of the important benefits of organizing farmers into collectives, as demonstrated through various pilots, are as under:

- a) Optimizes cost of production by procuring all necessary inputs in bulk at wholesale rates
- b) Reduces marketing cost through aggregation of produce and bulk transport and thus, enhance net income of the producers.
- c) Produce aggregation enables to take advantage of economies of scale and attracts traders to collect produce at farm gate
- d) Facilitate access to modern technologies, capacity building, extension and training on production technologies and ensuring traceability of agricultural produce.
- e) Minimize post-harvest losses through value addition and efficient management of value chain
- f) Enable regular supply of produce and its quality through proper planning and management
- g) Manage price fluctuation with practices like contract farming, marketing agreements, etc.
- h) Provide access to information about price, volume and other farming related advisories
- i) Access to financial resources against the stock
- j) Easy access of funds and other support services extended by the Government / donors / service providers
- k) Help to improve bargaining power and social capital building.

6.3 Status of FPOs' formation in India:

Farmers' Producer Organizations (FPOs) are farmers' collectives with membership comprising small/marginal farmers (around 70 to 80%). 6000 FPOs (including FPCs) have been formed in India under various initiatives of the Govt. of India (including SFAC), State Governments, NABARD and other organizations during in the last decades. Of these, around 3200 FPOs are registered as Producer Companies and the remaining as Cooperatives/ Societies, etc. Majority of these FPOs mainly are in the nascent stage of their operations with shareholder membership ranging from 100 to over 1000 farmers and require not only technical handholding support but also adequate capital, Credit linkages, infrastructure facilities, including market linkages for sustaining their business operations.

6.4 The Haryana Scenario:

Agriculture is the primary sector of Haryana and majority of the population is directly or indirectly dependent on agriculture and its allied activities. Agriculture has been the top priority for the state since decades. The strong infrastructure facilities like metalled roads, rural electrification, network of canals, development of market yards etc. were created that provide the needed impetus to agriculture development in the State. Such facilities coupled with agriculture research support and excellent extension network to disseminate the information related to improved farm practices for farmers yielded tangible results.

The State has been converted to a food surplus State. Haryana is one of the largest contributors of food grains to India's central pool with a share of around 15%. The main agricultural crops produced in the state are rice, wheat, sugarcane, cotton, oilseeds, gram and barley. Haryana is an agricultural state with nearly 80% of the state's total geographical area under cultivation. The state has diverse agro-ecology and cropping pattern. There are mainly three agro Eco regions in the state.

The state enjoys first position in the production of basmati rice, pearl millet, rapeseed & mustard. More than 60% export of Basmati Rice from India takes place from Haryana.

The main horticultural crops of the state having good potential are cauliflower, onion, potato, tomato, chillies, guava and kinnow. The state is well known for Murrah buffaloes which are exported to other states of the country and even abroad.

Status of FPOs' formation in Haryana: Approx. 460 FPOs (including FPCs) have been formed in Haryana under various initiatives of the Govt. of India (including SFACH), State Governments, NABARD and other organizations during the last decades. The activities being handled by them range from grain procurement (i.e. Wheat, rice, mustered) bee keeping, dairy based activities, vegetable cultivation, custom hiring centre, primary processing, basmati rice etc. In addition to ongoing FPOs' projects, NABARD will promote 100 FPOs in next four years (from 2020-21 to 2023-24) under CSS scheme of GoI.

6.5 Government Schemes for FPOs: Two schemes being administered by GoI through SFAC for FPOs as under:

- a) **Equity matching scheme:** SFAC provides matching equity grant up to Rs. 15 lakh to the FPCs to strengthen their financial position and thus enables the entities to access bank credit.
- b) **Credit Guarantee Fund:** The Fund was set up with the primary objective of providing a Credit Guarantee Cover to Eligible Lending Institutions (Scheduled Commercial Banks included in 2nd schedule of RBI Act), RRBs, NCDC, NABARD and its subsidiaries) to enable them to provide collateral free credit to FPCs by minimising their lending risks in respect of loans with the primary objectives.
- c) **Tax exemption:** 100% tax exemption was declared in the union budget 2018-19 by the GoI for FPOs with annual turnover of up to Rs. 100 crores for a period of 5 years.

- d) **Launching of 10,000 FPOs:** After successful implementation of different schemes for promotion of Farmers Producers Organization through NABARD and Govt. agencies, GoI has approved a central Sector Scheme (CSS) for formation and promotion of 10000 new FPOs to provide adequate handholding and professional support to develop economically sustainable FPOs. The implementation of the scheme is to be done through the NABARD, SFAC and NCDC.
- e) **One product one district approach for FPOs:** In continuity to the announcement for promotion of 10,000 FPOs in five years, the formation process has also been advised on a 'one product one district' approach. Such new FPOs are to be formed by specialist 'Cluster Based Business Organisations (CBBOs)' engaged by Implementing Agencies in Cluster (s) / State (s). The basis of such FPO formation shall be production clusters in agriculture and allied sector, advocating 'one district one product' concept to promote marketing, processing and export. Detailed guidelines for FPO formation in this regard are awaited from government.

6.6 Special mention FPOs supported by NABARD in Haryana

- a) **Orchards Developers Producer Company Limited** promoted by Gramin Utthan Samiti in Fatehabad District. FPO is involved in production, procurement and processing of fruits and vegetables with turnover of Rs 168 Lakh in the Financial Year 2019-20. Company is in process of establishing grading /sorting line of carrot of 5 MT/per hour village Kheri Barki under CCDP. Also FPO has distributed fruits and vegetables at the doorsteps during lockdown with authorization from district administration.
- b) **Shakti Vardhak Milk Producer Company Limited** promoted by Gramin Utthan Samiti in Hisar District. FPO is involved in production, procurement, processing and Marketing of dairy products with turnover of Rs 350 Lakh in the Financial Year 2019-20. Also FPO has distributed Milk, fruits and vegetables at the doorsteps during lockdown with authorization from Hisar district administration.
- c) **Horticulture Farmers Producer Company Limited** promoted by Indian Society of Agribusiness Professionals in Karnal District. FPO is involved in production, procurement and processing of food grains (Chemical Free Wheat and Basmati Rice) with turnover of Rs 45 Lakh in the Financial Year 2019-20. The agreement has been made by the FPO with the Urban Market for supplying of Organic Rice, Wheat & Honey. Also FPO has distributed fruits and vegetables at the doorsteps during lockdown.
- d) **Pro Growers Producer Company Limited** promoted by Indian Society of Kisan Sanchar in Karnal District. . FPO is involved in production, procurement and processing of vegetables and food grain with turnover of Rs 71.99 Lakh in the Financial Year 2018-19. The sale outlet of the ProGrowers Producer Company limited as inaugurated by the then DDM Nabard Karnal on 14 June 2016. Since then outlet is providing products and services to member farmers, presently working on pack house and processing to support the vegetables farmers of FPC clusters in nearby 10 villages.
- e) **Kanod FPC** in Mahendergarh district promoted by Tagore Samajik Avm Siksha Samiti (TSASS) is dealing with mustered and wheat procurement. The FPC has also availed Mandi license and have registered under e-NAM. The FPC worked as commission agent and procured 6079 quintile mustard for HAFED during the previous F.Y. Its reported business was of Rs.3.42 cr. in previous F.Y. 2019-20.
- f) Five FPOs in Rewari district promoted by the NGO- The Lord Krishna Educational Foundation are the women centric FPOs. The business activities of the FPOs are dairy based activities. More than 90% of shareholding of these FPOs are in the hands of Women.
- g) **Jaivik Aahar FPC** in Jhajjar district promoted by Vegetable Growers Association of India (VGAI) is engaged in supply of fresh vegetables (i.e. cucumber, bitter-gourd, pumpkin, capsicum, tomato & potato) in Delhi, Jhajjar and nearby area. The FPC has its own sales outlet for sale of seed and fertilizers, through this, the FPC has achieved the

turnover of Rs. 1.20/-Crore during 2019-20. FPC got permission for Vegetables & Fruits supply during the lockdown period due to the COVID-19.

Twelve FPOs promoted by NABARD in the state are dealing with Custom Hiring Centre. The FPCs purchased different agri-machineries (i.e. rotavators, bailers, happy seeders, cutter-cum-spreader, Mulchers, Tractor etc.) and provide services to the local farmers on concessional rate.

Aterna Organic Farmers Producer Company Limited

Aterna FPO has been promoted by The Gulab Fruits and Vegetable Growers and Marketing Cooperative Society Ltd. with NABARD support in village Aterna, Sonapat which is known for baby corn. After identifying baby corn as the commodity, all the members conducted various meetings to motivate the growers to shift to vegetables and high value crops viz. sweet corn, baby corn, mushroom etc. to harness the locational advantage of proximity to NCR markets. NABARD had motivated the PoPI & FPO for increasing membership, marketing arrangements and also establishment of Custom Hiring Centre, Pack House under schemes of GoH.

The FPO was able to establish excellent linkage for marketing of their produce to local & NCR mandis, exporters and processing units. Additionally, the FPO has also entered into contract with 2-3 agencies who are involved in catering to National and International clients. The FPO has also established Custom Hiring Centre and developed a system to sell straw bales to Nandi Foundation (A subsidiary company of Mahindra Group in Village Palla, Delhi) for making compost from paddy straw and thereby addressing paddy straw burning issue too.



At Present there are 509 farmer members with a turn over of Rs. 2.80 crore during 2019-20.

6.7 COVID-19 impact: Economy and employment have been hit hard by the COVID-19 crisis. It brought about a change in consumer demand and preference, as greater expense was seen for essentials – some medicines but mostly food items. GoI had exempted agriculture activities from lockdown restrictions, which resulted not only in timely and orderly grain procurement in the Rabi season, but also that innovative farmers who took upon themselves to directly market their vegetables and other farm produce could get marketing opportunities as well as willing buyers.

FPO and COVID-19 – GoI measures

- a) **Direct Marketing of Agri-Produce:** Post the outbreak of COVID-19, GoI had sent directives to all state governments exempting the services of 'Direct Marketing' directly from farmers, farmer's groups, cooperatives and FPOs from lockdown measures.
- b) **Linking FPOs to e-NAM:** GoI advised exploring FPO collection centres as designated markets for direct marketing under e-NAM. For this, FPOs were advised to register under e-NAM.
- c) **Trading module:** Ministry of Agriculture & Farmers Welfare, GOI on 2nd April 2020 launched an FPO trading module to enable FPOs to upload their produce from their premise/collection centres for bidding and sales.

6.8 Action points and suggestions

There lies a very big opportunity for FPOs now, as both direct marketing as well as outreach have been enabled through these policy changes. It is now left to the farmers to make most of it, as if properly pursued; it can definitely lead to increased income for them. Suggested action points for the stakeholders are:

- a) Capacity building of farmers / promoting institutions
- b) Handholding support and capacity building for farmers to transition into the and e-NAM era
- c) Developing proper storage infrastructures – at farm level, godown and cold storages as well as smaller units for marketing of produce
- d) Making farmers digitally and financially literate
- e) Adequate assaying, grading and packaging services
- f) Development of shorter, localised value chains on the supply side
- g) Aggregation services conjoining local value chains
- h) Development of transport and logistics for local, intra and inter-state services.
- i) Research and innovation for farm machinery and equipment that can reduce process time and manual labour.

Annexure I

(Rs. Lakh)

District-wise & Sub Sector-wise PLP Projection for 2021-22															
Sr. No	District	Crop Loan	Water Resources	Farm Mechanisation	Plantation and Horticulture	Forestry and Wasteland Devt.	AH- Dairy devt.	AH-Poultry	AH_SGP	Fisheries	Other Activities	Agri Term Loan A (4 to 12)	Construction of storage facilities	Land Dev.	Others (tissue culture)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Ambala	218780.00	3428.62	7670.00	1998.99	1653.86	10009.18	3866.44	1380.69	466.66	44435.70	74910.14	2291.81	3578.55	3726.05
2	Bhiwani	346853.78	24635.26	18701.50	8549.24	1848.41	21675.60	12559.00	6409.36	1032.00	7155.00	102565.37	15293.27	4096.80	7820.93
3	Charkhi Dadri	139171.31	11845.80	11608.90	3564.24	930.06	12690.64	17514.00	2609.56	792.18	3150.00	64705.38	9032.64	4399.65	3024.46
4	Fatehabad	386264.48	4870.84	12882.33	7486.42	1169.42	23917.73	4968.46	916.02	1033.47	72334.35	129579.04	26734.88	14115.29	6204.32
5	Faridabad	43122.82	879.27	4068.68	1619.27	352.76	11586.96	1012.10	421.00	111.68	324.00	20375.72	2980.35	231.48	594.72
6	Gurgaon	86033.35	4725.00	11995.20	3602.57	361.80	16785.75	7289.50	3086.55	1990.90	11016.00	60853.27	25958.70	7864.20	1396.80
7	Hisar	433350.68	3596.53	14831.82	8001.16	412.56	26107.65	8127.55	1070.46	1066.82	76324.99	139539.54	33126.63	13568.15	13064.50
8	Jajjar	187327.40	4074.04	14695.60	3005.09	1334.00	9699.02	7462.00	782.63	1464.80	17127.50	59644.68	9003.20	6402.00	3626.11
9	Jind	440415.82	14015.26	17905.55	10986.36	139.96	24056.90	16522.88	329.92	830.70	4760.00	89547.53	34980.00	9250.20	10233.45
10	Kaithal	447133.05	5171.66	24474.43	13595.92	151.02	34686.08	25056.35	511.28	724.41	4112.00	108483.15	30120.00	16202.25	8430.75
11	Karnal	468010.05	6984.05	16837.05	8857.17	1954.80	40881.43	17405.90	2831.79	815.59	41603.48	138171.26	34495.39	32574.62	441.27
12	Kurukshetra	309481.51	5949.00	22393.37	7223.75	827.34	82276.37	10494.98	2463.04	1514.40	18144.00	151286.25	14711.51	4381.60	1090.26
13	Mahendergarh	134811.09	9785.45	5916.16	4677.48	1988.64	13186.66	1353.96	3080.40	261.18	5386.50	45636.43	3772.80	1485.54	2968.02
14	Nuh	115960.00	3138.75	3690.20	2208.78	288.00	6405.50	4232.50	2376.20	504.11	738.00	23582.04	5474.25	6304.50	256.95
15	Palwal	160630.02	2660.76	8865.64	3495.85	775.47	12497.27	1053.18	1001.36	252.84	1254.15	31856.52	8198.55	688.86	1381.16
16	Panchkula	42998.55	991.56	2228.95	1900.17	613.34	5042.85	13950.00	403.44	389.81	12075.48	37595.60	1967.84	1774.84	1030.90
17	Panipat	197036.00	2745.60	14596.96	9305.85	877.50	28219.40	27903.20	1601.66	1178.72	8290.80	94719.69	14740.80	4878.40	1201.20
18	Rohtak	184620.80	1674.42	14708.00	1831.52	599.94	7697.65	2974.00	2562.40	1831.20	21199.00	55078.13	8764.00	7862.80	4907.07
19	Rewari	146697.63	3587.79	14949.49	3312.04	88.87	25734.51	1660.47	525.28	523.08	559.73	50941.26	13748.85	3325.05	2836.42
20	Sirsa	653597.75	8833.84	19611.66	8187.80	7290.00	49829.96	13476.02	4010.25	3065.05	15818.50	130123.08	62789.50	12620.41	6813.01
21	Sonipat	292837.92	3911.84	13187.18	15818.81	538.63	17024.43	10965.30	1336.36	1793.13	4411.40	68987.08	38063.00	6626.68	4310.94
22	Yamunanagar	383126.48	4944.55	9849.68	5919.97	8491.50	49459.80	10888.50	513.44	1004.80	73601.00	164673.24	8609.10	24400.10	1296.58
	TOTAL	5818260.49	132449.89	285668.35	135148.45	32687.88	529471.34	220736.29	40223.09	22647.53	443821.58	1842854.40	404857.07	186631.97	86655.87
Sr. No	District	Agriculture Infrastructure-Agri Term Loan B (14 to 16)	Food & Agro Processing	Others (loans to Coop Soc. Etc.)	Anicillary Activities-Agri Term Loan C (18 +19)	Total Agri Term Loan A+B+C (13+17+20)	Total Agriculture Loan (3+21)	MSME	Export Credit	Education	Housing	Renewable Energy	Others	Social Infrastructure Involving Bank Credit	Total Priority Sector (22 to 29)
1	2	17	18	19	20	21	22	23	24	25	26	27	28	29	31
1	Ambala	9596.41	5189.26	23907.50	29096.76	113603.31	332383.31	115080.00	29575.00	20550.00	39736.25	1385.20	6534.75	20694.31	565938.82
2	Bhiwani	27211.00	15034.50	7110.00	22144.50	151920.87	498774.65	94590.00	5175.00	5265.00	19215.00	2797.20	2650.00	378.00	628844.85
3	Charkhi Dadri	16456.75	4396.50	4680.00	9076.50	90238.63	229409.94	38880.00	1980.00	4140.00	24165.00	1903.50	2000.00	364.50	302842.94
4	Fatehabad	47054.49	2214.40	536.00	2750.40	179383.93	565648.41	98700.00	360.00	10440.00	34920.00	1685.85	55716.25	4145.50	771616.01
5	Faridabad	3806.55	3805.20	1066.50	4871.70	29053.97	72176.79	525150.00	36810.00	8100.00	49275.00	6188.85	27556.50	13684.50	738941.64
6	Gurgaon	35219.70	33066.00	29425.00	62491.00	158563.97	244597.32	1177200.00	54900.00	21600.00	164250.00	751.77	2250.00	2092.50	1667641.59
7	Hisar	59759.28	4785.60	976.00	5761.60	205060.42	638411.10	168187.50	832.00	2160.00	16264.00	30075.47	59022.50	1564.00	916516.57
8	Jajjar	19031.31	1748.00	337.50	2085.50	80761.49	268088.89	86955.00	1702.50	9450.00	18272.00	626.40	17015.00	3026.00	405135.79
9	Jind	54463.65	13980.00	14940.00	28920.00	172931.18	613347.00	96750.00	600.00	1425.00	14943.75	1460.04	2805.00	3745.00	735075.79
10	Kaithal	54753.00	31312.00	10350.00	41662.00	204898.15	652031.20	114012.50	562.50	7380.00	44550.00	1131.53	2450.00	12960.00	835077.73
11	Karnal	67511.28	13721.57	540.00	14261.57	219944.11	687954.16	532500.00	25625.00	4992.00	48000.00	1298.52	2775.00	1117.50	1304262.18
12	Kurukshetra	20183.37	24152.15	180.00	24332.15	195801.77	505283.28	149718.75	420.00	14200.00	63850.00	3318.70	1495.00	5431.50	743717.23
13	Mahendergarh	8226.36	4696.16	2061.00	6757.16	60619.95	195431.04	21900.00	162.00	4143.60	10435.50	4033.19	2730.00	4414.50	243249.83
14	Nuh	12035.70	4283.10	1425.00	5708.10	41325.84	157285.84	10890.00	1237.50	1980.00	5040.00	876.60	2500.00	5670.00	185479.94
15	Palwal	10268.57	5099.85	1872.00	6971.85	49096.94	209726.96	54900.00	2880.00	5652.00	27112.50	1191.60	16613.00	8301.63	326377.69
16	Panchkula	4773.58	6828.00	1553.50	8381.50	50750.68	93749.23	263032.50	4675.00	24650.00	99195.00	831.72	13029.75	13017.11	512180.31
17	Panipat	20820.40	12383.60	2540.00	14923.60	130463.69	327499.69	393150.00	71860.00	12880.00	42126.00	1737.42	2682.50	8376.00	860311.61
18	Rohtak	21533.87	2014.00	360.00	2374.00	78986.00	263606.80	140850.00	750.00	15750.00	47040.00	1594.80	13966.00	6545.00	490102.60
19	Rewari	19910.32	8444.16	252.00	8696.16	79547.74	226245.37	92756.25	14400.00	14985.00	32130.00	254.36	20415.00	1476.18	402662.16
20	Sirsa	82222.92	13468.25	10593.00	24061.25	236407.25	890005.00	164328.75	1173.00	5112.00	20280.00	2515.64	6345.00	4831.20	1094590.59
21	Sonipat	49000.62	13823.90	5964.00	19787.90	137775.60	430613.52	124312.50	6400.00	7362.00	51264.00	5419.49	1611.25	12805.25	639788.01
22	Yamunanagar	34305.78	33602.93	1328.00	34930.93	233909.95	617036.43	283650.00	30900.00	20600.00	90200.00	2451.87	10405.00	3952.00	1059195.30
	TOTAL	678144.91	258049.13	121997.00	380046.13	2901045.44	8719305.93	4747493.75	292979.50	222816.60	962264.00	73529.72	272567.50	138592.18	15429549.18

Annexure II											
Agency-wise, broad sector-wise flow of Ground level Credit (GLC) -2017-18, 2018-19,2019-20 & Target for 2020-21											
State: Haryana											(Rs. Lakh)
Sr. No	Agency/Year	2017-18			2018-19			2019-20			2020-21
	Type of loan	Target	Ach.	% Ach.	Target	Ach.	% Ach.	Target	Ach.	% Ach	Target
1	Crop Loan										
	Comm.Banks	3253200	2922100	89.82	3460629	2711500	78.35	3580400	2744000	76.64	3790712
	StCB/DCCBs	1062600	986300	92.82	1111281	1044000	93.95	1127000	1102000	97.78	1124678
	SCARDB										
	RRB	557700	666500	119.51	583464	766900	131.44	631800	833600	131.94	668253
	Other Agencies				8000	400	5.00	500	0	0.00	554
	Subtotal	4873500	4574900	93.87	5163374	4522800	87.59	5339700	4679600	87.64	5584197
2	Term Loan (MT+LT)										
	Comm.Banks	1674800	1251400	74.72	1793515	1529700	85.29	1974600	1334600	67.59	2168234
	StCB/DCCBs	265500	97100	36.57	295483	59100	20.00	356100	100800	28.31	375186
	SCARDB	67500	20100	29.78	84926	33700	39.68	75100	6300	8.39	65330
	RRB	219200	91500	41.74	237079	54700	23.07	281000	69800	24.84	294239
	Other Agencies				2910	0	0.00	500	0	0.00	525
	Subtotal	2227000	1460100	65.56	2413913	1677200	69.48	2687300	1511500	56.25	2903514
3	Total Agriculture Credit										
	Comm.Banks	4928000	4173600	84.69	5254144	4241200	80.72	5555100	4078600	73.42	5955175
	StCB/DCCBs	1328100	1083300	81.57	1406764	1103100	78.41	1483100	1202800	81.10	1499864
	SCARDB	67500	20100	29.78	84926	33700	39.68	75100	6300	8.39	69102
	RRB	776900	758000	97.57	820543	821600	100.13	912800	903400	98.97	962492
	Other Agencies				10910	400	3.67	1000	0	0.00	1079
	Subtotal	7100500	6035000	84.99	7577287	6200000	81.82	8027100	6191100	77.13	8487712
4	MSME										
	Comm.Banks	2262100	2340100	103.45	2541342	3878400	152.61	2954000	3459800	117.12	4004134
	StCB/DCCBs	69800	34700	49.71	77588	21800	28.10	101400	38600	38.07	75512
	SCARDB	3400	1800	52.94	3809	1100	28.88	5500	800	14.55	5292
	RRB	68500	77400	112.99	57207	45800	80.06	65700	24900	37.90	78514
	Other Agencies	47800	26100	54.60	219525	12400	5.65	71000	19300	27.18	85832
	Subtotal	2451600	2480100	101.16	2899471	3959500	136.56	3197600	3543400	110.81	4249284
5	Other priority Sector										
	Comm.Banks	1462300	964400	65.95	1538089	1178100	76.60	1530600	1081000	70.63	1687324
	StCB/DCCBs	37600	86500	230.05	36932	101200	274.02	44000	75900	172.50	46550
	SCARDB	3500	200	5.71	3557	100	2.81	4800	300	6.25	5943
	RRB	78900	22200	28.14	76380	15100	19.77	85400	15000	17.56	100544
	Other Agencies		200		0	1100	0.00	300	900	300.00	424
	Subtotal	1582300	1073500	67.84	1654958	1295600	78.29	1665100	1173100	70.45	1840785
Total Priority Sector		11134400	9588600	86.12	12131717	11455100	94.42	12889800	10907600	84.62	14577781

Annexure III

Critical Infrastructure Support to be provided

Projects which have not figured in State Plan

Sector	Sr. No.	District	Project Name and Location	Nature of project	Expected benefits	Physical Outlay (Unit)	Approx. Total Financial Outlay	Time required to complete	Outlay for 2021-22
	1	2	3	4	5	6	7	8	9
Irrigation	1	Ambala	Rehabilitation of Kanwala Disty in cutting reaches from 1.848 to 3.500, 4.755 to 5.824, 6.400 to 7.780 and 9.400 to 12.328 i.e. 7 Kms	Irrigation	Benefit to Public Health Deptt, HUDA & surrounding cultivated area of villages	1	50.00	36	20.00
Rural Connectivity	2	Ambala	Const. of bridge at Haroli to Tandwal on Markanda river in Saha block of Ambala Distt	Road – PWD B&R	15 villages benefitted and reduce the distance by 12 kms from Saha to brara and save fuel and time.	Span 1 kms with approaches /abujtments	15.00	24	6.00
Rural Connectivity	3	Ambala	Const. of Bridge from Sohona ato Gheldhi to Rajouli in Barara block of Ambala	Road – PWD B&R	7-8 villages benefitted and reduce distance 03 kms	Span 100 mtrs. With approaches / abutments	0.50	12	0.50
Irrigation	4	Ambala	Major Repair of lining of Narwana Branch canal between RD 160765 to 166000	Irrigation	Villages situated at southern part of haryana viz. ismailpur	1	45.00	36	15.00
Irrigation	5	Bhiwani	Const. store and workshop of Lift Mech, Divn,Bhiwani at P.H. No. 3 Siwani Canal	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.		0.50	24	0.30

Irrigation	6	Bhiwani	Reh. of Talwandi Rukka Disry RD 0-24576 122.68	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.		1.23	24	0.80
Irrigation	7	Bhiwani	Reh. of Dariyapur Disty RD 0 to 10000. 185.02	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.		1.85	24	1.00
Irrigation	8	Bhiwani	Reh. of Ghangala Mr. RD 0 to 13500.	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	1unit of 13500ft	2.50	24	1.30
Irrigation	9	Bhiwani	Reh. of Hassan Disty RD 0 -34000.	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	1unit of 34000ft	3.57	24	1.80
Irrigation	10	Bhiwani	Reh. of Motipura Disty RD 0-95000.	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	1 unit of 95000ft	6.50	36	2.50
Irrigation	11	Bhiwani	Reh. of Siwani Feeder RDI75979 to 249150	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.		30.67	36	12.00

Irrigation	12	Bhiwani	Reh. of Siwani Canal RD 0-75600	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	1 unit of 75600 ft	23.92	36	10.00
Social	13	Bhiwani	Construction of AWCs in different Blocks	AWC	Provision of Supplementary & Nutritious food to adolescent girls & expecting mothers & also serves as schooling & daycare.	25	2.50	36	1.00
Social	14	Faridabad	Clinical Lab Cum Diagnostic Centre, Hospitals & Nursing Homes	Public Health Institution	Provide critical primary and secondary health infrastructure that would reduce mortality, morbidity and enhance human productivity	35 Hospitals & Nursing Homes, 40 Clinical Lab Cum Diagnostic Centres	68.50	36	15.00
Social	15	Faridabad	Construction of Primary and Secondary Schools	Rural Education Institution	Increase human productivity and ensure quality education to children from rural households.	40	80.00	36	15.00
Power	16	Faridabad	20 MW Solar Power Plant at FTPS	Solar Power	Availability of Green power will lead to better productivity in farm as well as non farm activities & less pollution	20 MW	130.60	24	60.00
Agri & Allied	17	Fatehabad	Renovation of 50 Veterinary Hospitals	Animal Husbandary	Accessibility to modern veterinary practices and technology to Small & Marginal Farmers	50, All Blocks ii. Rs. 5 lakh per hospital	2.50	12	2.50
Irrigation	18	Fatehabad	Remodeling of water courses (All blocks of the distt)	Irrigation	I.Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	200 Watercourses @ Rs. 50 lakh on an average	100.00	36	25.00

Agri & Allied	19	Gurugram	Constructions of Checkdams at Villages Ghamroj, Bhondsi, Alipur, Damdama, etc.	Irrigation	To check the runoff of rainy water and storage of water for recharge. Increase in ground water table	4	2.00	24	1.00
Agri & Allied	20	Gurugram	Soil/ Testing Labs at Ferozepur Jhirka and Nuh	Agriculture	There are two Soil Testing Labs in the district (one with Agriculture and Farmers Welfare Department which is out of order and another with Krishi Vigyan Kendra at Shikohpur) Soil and water testing results will bring them closer to precision farming, a necessity for modern agriculture.	2 Labs in Farukh Nagar and Pataudi Blocks	0.60	24	0.30
Social	21	Gurugram	Treatment of STP water for utilization in purposes other than drinking.	Water Supply	The treated water can be used for agriculture and other non-drinking purposes.	Farukh Nagar block	3.00	24	1.50
Agri & Allied	22	Gurugram	Production of vegetables in the district 30370 MT that can be stored	Cold Storage	Farmers may hold their produce for better price	Farukh Nagar, Pataudi and Sohna blocks	50.00	24	25.00
Agri & Allied	23	Hisar	Custom Hiring of Farm Machinery	Agriculture Extension - Farm Mechanisation	Accessibility of modern farm equipment to Small & Marginal Farmers	10 Pacs in the district each year (4 crore each year)	16.00	36	4.00
Irrigation	24	Hisar	ii. Drip and Sprinkler irrigation (All blocks of the district with focus on Balasmand, Nalwa, Adampur area of the district)	Irrigation	i. Help arrest declining water table; ii. Save precious water resources; iii. Wean away farmers from 'wheat-Cotton' to fruits/protected vegetable cultivation; iv. Promote inter-cropping	Rs 40,000 per Ha to 25000 per Ha (1000 HA)	16.00	48	4.00
Irrigation	25	Jind	Construction of new minors and widening of existing minors Uchana block (10 Projects)	Irrigation	Better irrigation facilities for the entire block	10	146.00	60	30.00

Rural Connectivity	26	Jind	Railway overbridge Narwana, Uchana and Julana	Railway Overbridge	Ensure better connectivity in the area, which will support agriculture also	3	105.00	36	30.00
Rural Connectivity	27	Jind	Upgradation of the roads Jind-Naguran,Uchana-Barwala (35 km),Uchana-Hansi	Rural Roads	Ensure better connectivity in the area, which will support agriculture also	50	55.00	36	20.00
Rural Connectivity	28	Jind	Upgradadation of Road Julana to Safidon via Bhambhewa	Road	Direct connectivity between 02 blocks of the district	49 KM	55.00	36	20.00
Storage	29	Jind	Storage godowns (Jind, Uchana, Narwana, Julana, Safidon)	Storage & Marketing	Will ensure safe storage for agricultural produce.	3.5 lakh tonnes storage capacity required	105.00	36	35.00
Agri & Allied	30	Kaithal	Flood control measures in 50,000 ha Guhla and Siwan blocks	Flood Protection / Drainage	Ensure proper drainage of flood water to save crops during rainy season	1 (50,000 Ha)	100.00	48	30.00
Rural Connectivity	31	Kaithal	Upgradation of Road Sanghan-Guhna-Sajuma-Kalayath	Road	Better connectivy of 10 villages	18 KM	25.00	24	12.00
Rural Connectivity	32	Kaithal	Upgradation of the roads Pai-Narar, Sangroli-Teek, Kaul-Kurukshetra, Siwan-Pehowa, Pai-Habri, Jakholi-Pai, Songal-Bhana	Rural Roads	Ensure better connectivity in the area, which will support agriculture also	7	100.00	36	30.00
Storage	33	Kaithal	Storage Godowns at Rajaund and Siwan blocks	Storage & Marketing	Will ensure safe storage for agricultural produce.	1.0 lakh MT	35.00	36	5.00
Agri & Allied	34	Karnal	Govt. nursery for fruit plants like one at Shyamgarh (Nilokheri block) in all remaining five blocks	Plantation and Horticulture	Provision of quality planting material to increase production and productivity of fruits	5	25.00	12	10.00
Agri & Allied	35	Karnal	High Tech Nursery for Vegetables like CEV in Gharunda block in Indri	Plantation and Horticulture	Promotion of cultivation of vegetables by using high quality seedlings	1	5.00	9	5.00

Irrigation	36	Karnal	Drip & Sprinkler Irrigation facilities	Irrigation	Will help arrest declining water table and save precious water resources; Will wean away farmers from 'wheat-paddy' to fruits/ vegetable cultivation; iv. Promote inter-cropping	5000ha	25.00	72	10.00
Storage	37	Karnal	Construction of Storage Godowns in all six blocks and in all market yards not having storage facility	Storage & Marketing	It will help ensure good price by obviating distress sale by farmers & will also make available bank loan against warehouse receipts; ii. Will lead to reduction in post-harvest losses of produce by creation of scientific storage capacity	3.00 lakh MT	105.00	48	35.00
Storage	38	Karnal	Creation of Cold storage facilities in all six blocks	Storage & Marketing - Cold storages	Post harvest Management - Preservation of perishable items and better price for farmers	6	18.00	15	6.00
Agri & Allied	39	Karnal	Post Harvest Management Clusters	Agriculture	Clusters for Tomato, cauliflower, capsicum crops - Infrastructure - such as cleaning, sorting, grading, packing, storage/ cold storage, etc.	100	300.00	6	90.00
Irrigation	40	Karnal	Rehabilitation of WJC from Indri Head to Munak Head	Irrigation	25972 ha	0.004389342	114.00	36	23.00
Rural Connectivity	41	Karnal	Ramana Ramani Road	Road	Connectivity to Nilokheri market and nearby villages - 5 Km length	5 km	3.60	12	0.60
Rural Connectivity	42	Karnal	Barsat to Baran via Faridpur	Road	Connecting to Barsat mandi and other villages - 4.70 Km length	4.70 km	3.15	12	0.50
Rural Connectivity	43	Karnal	Salwan to Fafrana	Road	Ensure better connectivity in the area, which will support agriculture also	4 km	3.00	12	0.50
Rural Connectivity	44	Karnal	Hansi Chowk, Ghoghripur, Munak, assandh	Road	Ensure better connectivity in the area, which will support agriculture also	25.2 km	50.00	12	8.00

Rural Connectivity	45	Karnal	Kutel to Amritpurkalan	Road	Ensure better connectivity in the area, which will support agriculture also	3.5 km	3.00	12	0.50
Social	46	Karnal	Construction of AWCs in different Blocks	AWC	Provision of Supplementary & Nutritious food to adolescent girls & expecting mothers & also serves as schooling & daycare.	50 AWC	5.00	24	0.85
Storage	47	Kurukshetra	Construction of Rural Godowns across the district with focus on Shahbad and Thanesar blocks	Storage & Marketing	For scientific storage, reduction in wastage, to enable the farmers to meet its credit requirement, remunerative prices to the farmers & loan against NWRs	Approx. 1.00 lakh MT capacity	40.00	36	10.00
Rural Connectivity	48	Kurukshetra	Kurukshetra - Dhand Road to Barna - Hatira Village	Road	Better connectivity to 4 villages.	6.30 Km	2.76	12	2.76
Irrigation	49	Kurukshetra	Rehabilitation of Sarsa Distributory RD 0-42000	Irrigation	Irrigation in 8000 acres and resulting benefits to farmers from commercialisation & diversification	1	7.50	24	3.00
Rural Connectivity	50	Mahendragarh	1. Rd. from Mulodi to Aakoli (Nangal Ch) 2. Road from Singhana Rd. to Chinalia via Dohar Kalan and Dohar Khurd,	Rural Rd (Strengthening and Widening)	Will provide direct benefit to 10 to 15 villages	2.5KM + 8 KM	15.00	24	8.00
Rural Connectivity	51	Mahendragarh	Khodma to Jailaf (Narnaul)	Rural Rd (Strengthening and Widening)	Will provide connectivity to 2-3 villages	1.5KM -2KM	3.00	18	2.00
Rural Connectivity	52	Mahendragarh	Faizabad to Koka (Ateli - Kanina Rd.)	Rural Rd (Strengthening and Widening)	Will provide connectivity to 20-25 villages	30km	45.00	30	10.00
Rural Connectivity	53	Mahendragarh	Salooni to Guvani	Rural Rd (Strengthening and Widening)	Will provide connectivity to 2-3 villages	2km -2.5 km	4.00	18	2.00

Rural Connectivity	54	Mahendragarh	Dhanoda to Aghiar	Rural Rd (Strengthening and Widening)	Will provide connectivity to 4-5 villages	2KM -2.5KM	4.00	18	2.00
Agri & Allied	55	Mahendragarh	Veterinary hospital in Gothari, Nangal Chaudhary	Animal Husbandary	Will provide direct benefit to 10 to 15 villages	1	30.00	12	4.00
Irrigation	56	Mahendragarh	Replacement of JLN water works motors and pumps	Irrigation	Irrigation in 10000 acre area		150.00	36	40.00
Social	57	Mahendragarh	Upgradation of LPCD Status at Nangal Chaudhry, augmentation of water supply in Barawas group of villages and Canal based waterworks for village khudana	Water Supply	Will improve drinking water availability	10	40.00	36	8.00
Rural Connectivity	58	Nuh	Hodal-Punhana-Nagina Road - MDR 131 (Four lane)	Rural Roads (MDR)	Ensures better connectivity in the area which will help agriculture also.	40 kms.	80.00	36	13.00
Rural Connectivity	59	Nuh	Nuh-Palwal Road (Four lane)	Rural Roads (MDR)	Ensure better connectivity in the area, which will support agriculture also	30 kms.	90.00	36	14.00
Agri & Allied	60	Nuh	Soil/ Testing Labs at Ferozepur Jhirka and Nuh	Agriculture	There are two Soil Testing Labs in the district (one with Agriculture and Farmers Welfare Department which is out of order and another with Krishi Vigyan Kendra at Shikohpur) Soil and water testing results will bring them closer to precision farming, a necessity for modern agriculture.	2 Labs in the district and both are out of order.	0.60	24	0.30
Agri & Allied	61	Nuh	Constructions of Watershed/ Checkdams	Recharge of ground water	Increase in ground water table	Various locations in F.Jhirka, Nuh and Nagina - Watersheds/Checkdams	3.00	24	1.50

Social	62	Nuh	Treatment of STP water for utilization in purposes other than drinking.	Water Supply	The treated water can be used for agriculture and other non-drinking purposes.	2 in Punhana and Nuh	2.00	24	1.00
Agri & Allied	63	Nuh	Production of vegetables in the district 711821 MT that can be stored	Cold Storage	Farmers may hold their produce for better price	Ferozepur Jhirka, Nuh, Nagina, Punhana	50.00	24	25.00
Social	64	Nuh	Drinking Water Supply in 90 villages of Touru - 80 and Nuh - 10	Drinking Water Supply Scheme	Drinking water for 90 Villages (Touru block - 80 and Nuh block - 10)	90 Villages	200.00	36	60.00
Irrigation	65	Panchkula	Const of water tank for harvesting of natural water for crop production	Social / Irrigation	Harvesting of water for assured irrigation for crop production	450 tanks	6.75	36	2.00
Rural Connectivity	66	Panchkula	Const. of HL Bridge with approach at Kalka Nadi to Oria Villages	Bridge – PWD B&R	Provide connectivity to village Oria, Kandlai etc. by reducing the distance upto 15 kms	Span 50 meters with approaches	8.00	24	4.00
Rural Connectivity	67	Palwal	Road in Hodal Block till UP Border	Road	It will inter-connect 5 roads, benefitting villagers from Pinglota, Shajodpur, Kharbi, Bansava and Barka	9.28 Km .	9.00	36	3.00
Rural Connectivity	68	Palwal	Road from Palwal-Alawpur-Mohan to Ballabhgarh, Fatehpur, Billoch	Road	It will inter-connect 4 roads benefitting villagers from Alawpur, Badram, Sadpur	7.56 Km	7.00	24	3.00
Agri & Allied	69	Palwal	Construction of Rural Godowns in Mirpur NH-2 & Hodal areas	Storage & Marketing	For scientific storage, reduction in wastage/ remunerative prices to the farmers	Total capacity 70000 Mt of various capacity	21.00	30	7.00
Irrigation	70	Panipat	Rehabilitation of Chamrara Minor	Irrigation	Strengthening of Irrigation Infrastructure to boost farm productivity and ensure 'Har Khet ko Pani'	2.7	4.50	24	2.00
Rural Connectivity	71	Panipat	Widening of Meerut-Sonapat, Gohana-Safidon road	Road	Ensure better connectivity in the area, which will support agriculture also	15.24 Km	18.00	36	8.00
Irrigation	72	Panipat	Rehabilitation of Kiwana Minor	Irrigation	It will provide a functional irrigation source to 150-175 farming families.	1	1.78	18	0.78

Rural Connectivity	73	Panipat	Bega via Hathwala Road	Rural Roads	Ensure better connectivity in the area, which will support agriculture also	8 km	8.00	30	3.00
Irrigation	74	Panipat	Rehabilitation of Madlauda Minor from RD o to 68200	Irrigation	Area to be benefitted : 6789 acres: Area to be irrigated afterwards : 16544 acres;	Village covered : Bal Jatan, Shera, Khandra, Thirana, Madlauda, Nara, Waiser, Urlana, Jeetgarh, Atawala etc.)	9.70	36	4.00
Irrigation	75	Panipat	Rehabilitation of Bijawa Minor	Irrigation	Farmers from appx. 7-8 villages will get benefit of assured irrigation.	2.64	4.50	24	2.00
Social	76	Rewari	Installation of R.O Sytem for purification of Drinking Water in all the blocks of the district	Drinking Water	Clean drinking water will prevent spread of disease, ensuring healthier villagers ,increase saving on medical expenses and boost labour productivity.	12	3.00	15	3.00
Agri & Allied	77	Rewari	Construction of 2 additional grain Mandis at Jatsuana and Nahar block	Storage & Marketing	Better prices for farmers in the Mandis, Lower Transportation charges	2 Nos	60.00	36	20.00
Agri & Allied	78	Rewari	Rain Water harvesting (Jatsuana, Nahar, Khol Block)	Rain Water Harvesting	Will increase water level, as four blocks are semi critical and one is in critical category	20	0.50	12	0.50
Agri & Allied	79	Sirsa	Food Processing Unitat Abubsher and Dabwali	Food Processing	The Dabwali block in the district is famous for produce of Kinnu fruits etc. There is only one processing unit of fruits . The processing unit will help the small farmers for process their fruits and will motivate the other farmers for produce the kinnus fruits	2	10.00	24	5.00

Irrigation	80	Sirsa	Irrigation Channel -water courses- New/ upgradation and repair- t)Ding andN.S Chopta areas and other blocks	Irrigation	Help the tail farmers to get canal irrigation water and sandy land can be brought under irrigation and production can be increased and farmers income get a boost.	200 watercourses	40.00	24	25.00
Agri & Allied	81	Sirsa	Installation of Solar Lighting Systems & Solar Water Pumps	Infra for Renewable energy	Significant Energy Savings and Emission as State transitions to cleaner sources of energy	14,000 Street Lights & 67 4HP Pump Sets	23.00	24	10.00
Agri & Allied	82	Sonepat	Renovation and strengthening of existing Hospital and dispensaries - different villages	Animal Husbandary	Veternary care, Increase in milk production	51 Hospitals 87 dispensaries	5.52	12	5.52
Agri & Allied	83	Sonepat	Administrative blockfor Dy,Direcdtor and 4 office rooms - Sonepat	Animal Husbandary	Veternary care, Increase in milk production	1	0.50	6	0.50
Agri & Allied	84	Sonepat	Vet. Diagnostic labs - 6 Blocks except Sonepat	Animal Husbandary	Veternary care, Increase in milk production	6	0.40	12	0.40
Agri & Allied	85	Yamunanagar	Construction of Rural Godowns at block HQ in the district	Storage and Marketing	It will help improve and increase the storage quality	60000 MT	80.00	18	40.00
Agri & Allied	86	Yamunanagar	Construction of Rural Godowns across the district with special focus on Mustafabad block (10000 MT [Jagadhri block], 15000 [Mustafabad block], 15000 [Chhachhrauli block], 5000 [Sadhaura block], 5000 [Bilaspur block], 5000 [Radaur block].	Storage & Marketing	Creation of scientific storage capacity, reduction in wastage/ prevention of distress sale immediately after harvest by providing the facility of loan against NWRS. Remunerative prices to the farmers.	2.07 lakh MT	75.00	48	18.00
Social Sector / Sanitation	87	Fatehabad	Construction of sewerage channels from villages to the nearest natural drains	Sanitation	Improvement invillage sanitation,rehabilitation of village ponds for cattle use/drinking water and development offisheries	100 Ponds	2.50	18	1.50

Rural Connectivity	88	Yamunanagar	Construction of 12 Rural roads and 06 Rural bridges in the Ghad region (shivalik foothills) in Bilaspur, Khizrabad and Chhachhrauli blocks	Rural Road and Bridges	Improvement in connectivity, increase in agriculture and horticulture production, marketing facilitation	12 Roads & 06 Bridges	50.00	36	15.00
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Annexure IV	
S No.	Critical Interventions
1	<p>Crop Production</p> <ul style="list-style-type: none"> a) To promote diversification of agriculture, farmers can be incentivized to move away from wheat-paddy crop cycle to natural resources conserving crop alternatives b) Seed Replacement Rate (SRR) of various crops especially of Gram, Wheat and paddy is poor. Adequate multiplication of certified seed of various crops is pre-requisite to improve the Seed Replacement Rate. c) Development of terminal heat tolerant varieties of wheat, salinity resistant varieties of oilseeds and pulses and hybrids of sunflower, paddy, and pulse is required. d) The Agriculture Department may provide soil health cards to all farmers to ensure balanced use of plant nutrients on the basis of soil test analysis. There are scope for mobile soil testing units. e) Promotion of Producers' Organizations (POs) for niche farming, vegetable growers, horticulture farmers and linking these to the Food processing Industries is necessary for enhancing Farmers' income. f) In Situ Crop Residue Management to be implemented strictly in the state. g) Private entrepreneurs may be associated for hybrid seed production. h) Encourage agri-service custom/ hiring centres run by agri graduates/ trained farm youth and FPOs.
2	<p>Water Resources</p> <ul style="list-style-type: none"> a) No further groundwater exploitation in overexploited areas and restrictive exploitation in critical and semi critical areas are recommended. The alarming situation in the State warrants steps for devising methodologies to conserve water as well as judicious (consumptive) use of the available water. b) Need to discourage flood irrigation and more incentives for adoption of micro irrigation practices like sprinkler and drip irrigation systems to enhance water use efficiency (WUE). c) There is need to introduce Under Ground Pipe Lines (UGPLs) on the farms through which about 20% of the water can be saved and the same can be used to bring more area under irrigation. d) Need to adopt practices like direct seeding of rice, SRI(System of Rice Intensification) and SSI(Sustainable Sugarcane Intervention), alternate furrow irrigation in cotton, plastic mulching and laser land levelling etc. for water conservation. e) The drainage efficiency of canals needs to be enhanced so that irrigation potential of canals can be increases from its present level. f) Renovation of tanks and village ponds for ground water recharge. g) Adoption of integrated water resources management approach for efficient utilization of water resources, promotion of rain water harvesting and ground water recharge structures. h) Implementation of Micro Irrigation Fund (MIF) would be beneficial for the State.

3	<p>Farm Mechanization</p> <ul style="list-style-type: none"> a) New opportunities for specialized equipment in the diversified sectors such as horticulture, medicinal plants and for precision farming have to be explored by Government departments. b) Custom hiring/servicing in farm operations is in vogue. CHCs are emerging as a business avenue for entrepreneurs and this trend needs to be encouraged. c) Group financing for Farm Mechanization through JLGs, Farmers club etc. should be encouraged for SF/ MF. d) On-farm demonstration of the usage and the benefits accruing out of use of various farm implements and machineries need to be promoted for usage of such machineries by small / marginal farmers. e) In the dairy sector, FM is in the initial stage but it can contribute at various stages of production such as grass harvesting, milking parlour, slurry disposal, maize based silage preparation etc. f) Use of solar power operated farm machines/ use of biofuels and its blending with diesel for reducing CO₂/CO emission may be initiated. g) Farm mechanisation penetration involving high capacity and expensive farm machineries needs to be enhanced through agri-start-ups, FPOs and other innovative modes.
4	<p>Plantation and Horticulture</p> <ul style="list-style-type: none"> a) Credit support to plantation and horticulture sector especially in the investment intensive post-harvest facilities needs to be augmented. b) Having close proximity to NCR the requirement of fresh fruits and vegetables has increased manifold. Promotion of fruits and vegetable cultivation in this area, need to be properly prioritized. c) It is estimated that cultivable wasteland, which is lying idle specially in western Haryana, which can be brought under dry land fruit crops like Ber, Aonla, Pomegranate, Karonda etc. without curtailing the area under food crops. d) In view of high export potential in off-shore markets, floriculture, mushroom production, biotechnology, tissue culture and bio-fertilizers were identified as thrust areas for setting up of Hi-tech & Commercial Agriculture projects. e) Production and distribution of genuine quality planting materials at reasonable cost and their mass production and use of quality planting material by tissue culture technique need the attention and support of all concerned. f) Large scale promotion of Integrated Pest Management (IPM) and Integrated Nutrient Management Systems (INM) to help the farmer in cost management and quality production. g) Mushrooms: Both seasonal production and cultivation under controlled conditions has picked up. Districts nearer to New Delhi like Sonapat, Panipat, Gurgaon, Rohtak and Jhajjar have high potential. h) Development of suitable marketing infrastructure with grading, packaging and storage facility for the perishable horticulture crops. Post-harvest infrastructure like pack houses having washing, grading, waxing, packing line may be set up in those districts where Kinnow, Mango, Sweet Orange plantation is existing. Scope for establishment of Processing Industries in fruits (mango, citrus, aonla, strawberry) and vegetables (pea, tomato, potato, carrots, garlic, onion) to be explored.

5	<p>Forestry & Wasteland Development</p> <p>a) The state has a large area falling in category of wastelands such as a) Waterlogged/Marshy land (seasonal), b) Land affected by Salinity/alkalinity, c) Land with Open Scrub & degraded land. Promotion of Agro Forestry or social forestry in those areas, will generate additional income for the farmers.</p> <p>b) In Haryana, there are good number of plywood and veneer industries. There is need to coordinate with such industrialists so as to motivate farmers to adopt farm-forestry</p> <p>c) Various agroforestry systems including - agri- silvi (agriculture + trees); silvi- horti (horticulture + trees); agri-silvi - pastoral (agriculture + animal husbandry + trees); etc, may be adopted to increase farmers' income.</p> <p>d) The State Research Organizations/Agriculture Universities to develop and promote revenue models for species like clonal Bamboo, Melia dubia, Casuarina, etc., which start giving yield within 3 years.</p> <p>e) Suitable species of bamboo may be promoted as a bio-drainage species, in addition to Eucalyptus.</p> <p>f) Nurseries in close vicinity to the plantation sites may be set up for supplying adequate quantity of seedlings.</p> <p>g) Training of bankers in appraisal of forestry projects for facilitating easy credit flow to the entrepreneurs.</p>
6	<p>Animal Husbandry – Dairy</p> <p>a) Investment in the area of 'value-addition' in livestock products and processing, which is crucial for the objective of 'Doubling the farmer's income'.</p> <p>b) Promoting and motivating FPOs to practice 'Organic Animal Husbandry Practices' and create strong marketing links for organic dairy products and also taking steps to get the organic products certified.</p> <p>c) Scientific breeding policy to promote productivity of livestock especially among small farmers through use of AI Technology, Embryo transfer Technology etc.</p> <p>d) Investment in functional livestock products (those products which provide extra health benefits besides nutrition) like 'Nutraceuticals'.</p> <p>e) Since there is a shortage of green fodder because of dependency on monsoon, there is a need to promote silage making and azolla production among the dairy farmers.</p> <p>f) Coordinated efforts are required for promoting Kisan Credit Card (Animal Husbandry) and credit facility for Commercial Dairy.</p>
7	<p>AH - Poultry</p> <p>a) There is need for State Govt. interventions for ensuring strict adherence to Bio security norms to prevent any diseases outbreak while sanctioning proposals for credit/ subsidy.</p> <p>b) Insurance policies for poultry need to be made more attractive and affordable.</p> <p>c) There is need to develop large scale egg and poultry processing facilities.</p>
8	<p>AH - Sheep/ Goat/ Piggery</p> <p>a) Commercial goat rearing and stall fed goat rearing may be encouraged on a large scale around cities and districts bordering other States.</p> <p>b) Awareness may be created amongst the members of SHGs and JLGs about goat rearing.</p>

	<ul style="list-style-type: none"> c) Breeding units, meat processing & wool processing units should be financed to encourage the sector. d) There is a need for an organised market for small ruminant rearers for live animals, meat, milk and wool. Organized processing facilities under SGP and modern abattoirs may be promoted.
9	<p>Fisheries Development</p> <ul style="list-style-type: none"> a) State Government may provide facilities for certification of fish seed and its quality. b) Farmer-friendly insurance schemes need to be formulated by the insurance companies. c) A good Brooder Bank on the lines of that developed in Odisha needs to be developed in the state with NFDB/FIDF assistance. d) Supply chain of fish to internal markets needs to be strengthened so as to enable higher price for the fish producers. e) Fish Farmers' Producer Organisations may be formed in potential regions especially the eastern areas to address the issues of small producers with regard to input supply, aggregation of produce, market linkages etc. f) Inadequate bank security, while considering bank loan for fisheries is an impediment. Village ponds cannot be mortgaged by the borrower. Accordingly, there is need for considering third party guarantee as collateral. g) Department of Fisheries may establish a robust fisheries management framework as per the provisions of Pradhan Mantri Matsya Sampada Yojana (PMMSY).
10	<p>Construction of Storage and Marketing Facilities</p> <ul style="list-style-type: none"> a) The current food grain storage capacity in Haryana amounts to 115.28 Lakh MT with around 90 Lakh MT of covered storage capacity. As per the potential assessed by NABARD there is scope for at least another 20-25 Lakh MT storage capacity creation. As the crop procurement basket expands, there will be requirement for creation of new scientific storage units. b) Taking into account the need for scientific storage and avoid wastage, State Govt. agencies may take necessary steps to convert the CAP storage to covered storage. c) Government may incentivise/encourage construction of silos. d) The warehouse may be accredited with WDRA to enable the farmers to avail loans against negotiable warehouse receipts. e) Storage infrastructures may be promoted through PPP mode. f) Govt. may promote area and crop specific small storage structure whose management and maintenance may be entrusted to local PACS or FPOs. g) There is a need to operationalize Agri Market Infrastructure Fund (AMIF) in the State.
11	<p>Land Development, Soil Conservation and Watershed Management</p> <ul style="list-style-type: none"> a) There is a need to popularize the drainage/bio drainage system to reclaim water logged saline areas. Reclamation of such soil may be carried out by drainage i.e. surface and sub-surface drainage, vertical drainage & horizontal drainage, bio drainage etc. Pisciculture is another option in saline water logged areas either alone or along with agro-forestry system.

	<p>b) Government sponsored programmes being implemented for various land development activities in the State with subsidy and grant component may be linked to bank finance in order to increase the coverage.</p> <p>c) Since the organic carbon is the key issue to improve soil health in the puddled rice fields, there is a need for promotion of green/brown manuring through Dhaincha (sesbania), use of organic manure (FYM/compost/vermi-compost) and in situ residue management to improve carbon content and soil health in rice-wheat system. Cultivation of pulses improve soil health through nitrogen fixation and at the same time reduce import burden of the country.</p> <p>d) As per Statistical Abstract of Haryana 2018-19 (2017-18 provisional figures), the state has an area of 49,000 hectares classified as 'Culturable but barren land' and 186,000 hectares as 'Fallow land, including current fallows'. Some of this area can be brought under productive agriculture.</p> <p>e) There is a need for comprehensive soil survey at regular intervals. Soil Health Cards may be used for monitoring and decision making in matters related to maintenance of soil health, judicious use of fertilizers etc.</p>
12	<p>Food and Agro Processing</p> <p>a) Linkage between growers and the processing industry may be addressed. For a consistent and healthy growth of the sector, proper and appropriate backward and forward linkages need to be ensured.</p> <p>b) The entrepreneurial capabilities of the sector owners may be improved further by giving them the necessary training and exposure</p> <p>c) Create awareness on the facilities available in Designated Food Parks/Agro Processing Clusters so that more individual units are established.</p> <p>d) Infrastructure in terms of power, water, transport, silo, cold storage may be created both by Govt of India as well as Govt of Haryana. This will also ensure continuous supply of raw material needed for the growth of the agro processing industry.</p> <p>e) Issues of inadequate financial assistance need to be improved for make the financial assistance available at the right time and in right amount.</p>
13	<p>Other Activities</p> <ul style="list-style-type: none"> • Since biotechnology has great potential for increasing production in agriculture and allied sector, there is a need for testing the successful techniques in the laboratories for application on a larger scale to establish their applicability at the commercial level. • The setting up of Agri-Clinics by the Agri- Graduates and the Agri- Business centers can be a major facilitator for adequate returns on investment credit/ production credit. • Organic Farming, Vermicomposting, tissue cultures etc. to be encouraged.
14	<p>Micro Small & Medium Enterprises</p> <p>a) Timely sanction of loans and covering the same under CGTMSE by banks.</p> <p>b) Working capital as well as investment needs of Medium, Small and Micro enterprises, and artisan/ handicraft units should be adequately met in hassle free manner.</p> <p>c) Government to ensure supply of uninterrupted quality power supply to the industries.</p>

	<ul style="list-style-type: none"> d) Banks to consider the credit requirement of traditional sub-sectors of handlooms, handicrafts, village artisans, KVI units to protect the livelihood of the sector and their employment generation potential. e) Promotion of Off Farm Producer Organizations in the identified clusters with handloom and handicraft works as their core or sub-core activities. f) Assistance through venture capital may be provided for activities such as information technology, e-commerce, multi-media, data communication etc. g) Basic infrastructure needs to be set up in the Rural Focal Points. h) Small sector unit in service sector such as Mobile repair, auto mobile repair, farm implements repair, computer education may be encouraged as these units will provide employment opportunities to the rural youth. i) The market tie-up of all the Micro and Small Enterprises, Availability of uninterrupted power supply and water, based on the availability of the raw material MSME sector may be promoted.
15	<p>Export</p> <ul style="list-style-type: none"> a) Ensuring availability of funds to exporter such as reduction in ECGC premium, availability of pre-shipment and post-shipment credit. Issues such as availability of foreign currency, credit to exporters at competitive terms, high interest cost high service charge by banks, charges for renewal and enhancement of credit limits etc need to be addressed. b) Air cargo facilities need to be established to facilitate exports c) Exporters need to organize themselves unitedly to face global competition instead of each exporter trying to export in small quantities in the most unorganized manner. d) Product diversification based on global consumption pattern and demand.
16	<p>Education</p> <ul style="list-style-type: none"> a) Professional courses of high employability rate may be given priority to ensure repayment of loan, to check the rising NPA levels under educational loans b) Building and infrastructure related with engineering and medical colleges may be given priority by state government to create conducive atmosphere in the district. c) Banks may be given support by the government in recovery of education loans where borrower has defaulted despite having repaying capacity.
17	<p>Housing</p> <ul style="list-style-type: none"> a) Focus on Housing need to move from “access to shelter” to “access to habitat” implying access to civic infrastructure as well as livelihood and community infrastructure such as anganwadis, primary health centres, etc., will create an opportunity for unleashing the human potential of families to pursue a quality of life with dignity. b) Ensuring larger flow of funds for fulfilling housing and infrastructure needs through innovative financial instruments. c) Facilitating availability of serviced land and housing with focus on EWS and LIG groups. d) Accelerated development of housing and infrastructure sectors along with forging strong partnerships between public, private & cooperative sectors e) Rural Housing Finance need to be made an integral part of the Financial Inclusion Plan of all Banks.

18	<p>Renewable Energy</p> <ul style="list-style-type: none"> a) Although, the solar intensity is relatively higher in the state, the limited land area does not encourage big scale harnessing of solar energy. There is an urgent need to shift on to renewable energy sources for conserving the limited natural resources. It is suggested to create awareness about the needs to tap renewable energy, especially solar energy and available financial assistance under various Central Government & State Government Schemes. Investments in technology and research & development are required to lower the energy generation costs to make it affordable for the farmers. b) Despite 75% upfront subsidy, the adoption of solar pump sets is limited in the state due to highly subsidized agricultural power available for grid connected pump sets. There is a need to popularize the scheme through Govt. support and interventions. c) There is a need for creation of synergy between corporate sector, Govt labs/ institutions and NGOs so that low cost renewable energy technologies can be developed and disseminated in rural areas. d) The CSR initiatives of corporates to be tapped for implementing renewable energy power projects
19	<p>Social Infrastructure</p> <ul style="list-style-type: none"> a) For creating awareness among the people about proper sanitation, the Village Water and Sanitation Committees may be formed. b) Participation of the beneficiaries, especially women, in water supply schemes may be ensured right from planning to the management stages. c) Convergence between drinking water supply and sanitation need to be strengthened. d) Operation and Maintenance of assets created needs to be ensured.
20	<p>Informal Credit Delivery systems</p> <ul style="list-style-type: none"> a) Training, capacity building and exposure visits for the bankers may be arranged by the SRLM/NABARD to understand the needs of JLG financing and facilitate quick credit linkage. b) DCCB and RRB may step up for financing SHGs/JLGs on larger scale. c) Capacity building of SHG and JLG for enabling them to undertake economic activities. d) Training programme for govt officials so as to sensitise them to form bankable SHGs and provide support to the banks in recovery of loans. e) Start Ups to be promoted

ABBREVIATIONS

ACABC	Agri-Clinics / Agri-Business Centers
ACP	Annual Credit Plan
AEZ	Agri- Export Zone
AMIF	Agri Marketing Infrastructure Fund
APMC	Agriculture Produce Marketing Committee
BLBC	Block Level Bankers' Committee
CCDP	Crop Cluster Development Programme
CCF	Climate Change Fund
CDF	Cooperative Development Fund
CDR	Credit Deposit Ratio
CFF	Credit Facility to Federations
CGWB	Central Ground Water Board
CRAR	Capital to Risk Weighted Assets Ratio
CSA	Climate Smart Agriculture
DCC	District Consultative Committee
DCCB	District Central Cooperative Bank
DCP	District Credit Plan
DIDF	Dairy Infrastructure Development Fund
FIF	Financial Inclusion Fund
FITF	Financial Inclusion Technology Fund
FPF	Food Processing Fund
FPOs	Farmers Producer Organisations
GCF	Green Climate Fund
GDP	Gross Domestic Product
GLC	Ground Level Credit
HAREDA	Haryana Renewable Energy Development Agency
HSCARDB	The Haryana State Cooperative Agriculture and Rural Development Bank Ltd.
HSIIDC	Haryana State Industrial and Infrastructure Development Corporation
HStCB	Haryana State Cooperative Bank Ltd
HSWC	Haryana State Warehousing Corporation
ICAR	Indian Council of Agriculture Research
IIFCL	India Infrastructure Finance Co. Ltd.
IIHM	India International Hort. Market
IWMS	Integrated Water Management Scheme
KCC	Kisan Credit Card
KVK	Krishi Vigyan Kendra
LTCCS	Long-Term Cooperative Credit Structure
LTRCF	Long Term Rural Credit Fund
MIF	Micro Irrigation Fund
MOU	Memorandum of Understanding
MSCs	Multi Service Centres
NABARD	National Bank for Agriculture and Rural Development
NABCONS	NABARD Consultancy Services

NAFCC	National Adaptation Fund for Climate Change
NFSM	National Food Security Mission
NIDA	NABARD Infrastructure Development Assistance
NIDA	NABARD Infrastructure Development Assistance
NLM	National Livestock Mission
NMAET	National Mission on Agricultural Extension and Technology
NMOOP	National Mission on Oilseeds and Oil Palm
NMSA	National Mission for Sustainable Agriculture
NRLM	National Rural Livelihoods Mission
NRLM	National Rural Livelihood Mission
OFPO	Off Farm Producers' Organization
OFSPF	Off farm Sector Promotion fund
PACS	Primary Agriculture Cooperative Societies
PCARDB	Primary Cooperative Agriculture & Rural Development Bank
PLP	Potential Linked Credit Plan
PMJDY	Prime Minister Jan Dhan Yojana
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PMMSY	Pradhan Mantri Matsya Sampada Yojana
PRIs	Panchayati Raj Institutions
PRODUCE	Producers Organisations Development Upliftment Corpus Fund
PU	Physical Unit
RBI	Reserve Bank of India
RIDF	Rural Infrastructure Development Fund
RIF	Rural Innovation Fund
RSETI	Rural Self Employment Training Institute
RUDSETI	Rural Development Self Employment Training Institutes
SAMIS	Service Area Monitoring and Information System
SCC	Swarojgar Credit Card
SHG	Self Help Group
SHGB	Sarva Haryana Gramin Bank
SHPI	Self Help Group Promoting Institution
SoF	Scale of Finance
SSI	Small Scale Industry
STCCS	Short Term Cooperative Credit Structure
TFO	Total Financial Outlay
UGPL	Underground Pipe Line
WDF	Watershed Development Fund
WIF	Warehouse Infrastructure Fund
WSHG	Woman Self Help Group