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Social Security



Garib Kalyan Rojgar Abhiyaan Launched

Prime Minister Sri Narendra Modi launched a massive employment-oriented public works campaign named 'Garib Kalyan Rojgar Abhiyaan' to empower and provide livelihood opportunities in remote villages witnessing large numbers of returnee migrant workers affected by COVID-19. The Abhiyaan was flagged off from village Telihar, Block Khagaria, district Bhadrak, Bihar on June 20, 2020 through video-conference. This Abhiyaan of 125 days, will work in mission mode, will involve focused implementation of 25 categories of works/ activities in 116 districts, each with a large concentration of returnee migrant workers in 6 states of Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha. Public works to be undertaken during this campaign will have a resource envelope of Rs. 50,000 crores.

The Prime Minister interacted through remote video conferencing with the villagers of Telihar in the Khagaria District of Bihar from where the Prime Minister Garib Kalyan Rojgar Abhiyaan was formally launched. Shri Modi inquired from some of the migrants their current state of employment and also whether the various welfare schemes launched during the Lockdown period were available to them. Shri Modi said, both the Centre and the State Governments were concerned about the welfare of the poor and the migrants. He said the Central and State Government also ran special Shramik Express Trains for the migrant labour who wished to return home. This campaign is dedicated for our labourers, for the youth, sisters and daughters living in our villages.

Shri Modi announced that an amount of Rs. 50,000 crores will be spent for building durable rural infrastructure under the Garib Kalyan Rojgar Abhiyaan. He said 25 work areas have been identified for employment in villages, for development of various works. These 25 works or projects are related to meet the needs of the villages like rural housing for the poor, plantations, provision of drinking water through Jal Jeevan Mission, Panchayat Bhawan, community toilets, rural mandis, rural roads, other infrastructure like cattle sheds, Anganwadi Bhavans etc.

He said, Abhiyaan shall also provide modern facilities in rural areas. He said it is of great necessity that high-speed and cheap internet be provided in every rural household to help the youth and children. The Prime Minister said it is the first time that the rural areas are using more internet than the urban areas. Hence the laying of fibre cable and provision of internet are also made a part of the Abhiyaan. These works will be done while staying in his own village, while staying with his family.

The Prime Minister said that Self-Help (AatmaNirbhar) farmers are equally essential for a Self-Reliant India (AatmaNirbhar) Bharat. He said the Government took a major step by removing various shackles of unwanted rules and regulations so that the farmer can freely sell his produce anywhere in the country and connect directly with traders who offer a better price for his produce. Shri Modi said the farmers are being directly linked to the market and that the Government has provided an investment of Rs. 1,00,000 crore for linkages like cold storage etc.

The major objectives of the initiative include:

- Provide livelihood opportunity to returning migrants and similarly affected rural citizens
- Saturate villages with public infrastructure and create livelihood opportunities viz. Roads, Housing, Anganwadi, Panchayat Bhawans, various livelihood assets and Community Centres among others
- The basket of a wide variety of works will ensure that each migrant worker is able to get an opportunity of employment according to his skill, in the coming 125 days. The Program will also prepare for expansion and development of livelihoods over a longer term.

Empowering Migrants to be Self-Reliant

Focal Implementation of Garib Kalyan Rojgar Abhiyaan in 6 States



State/Union Territory	Districts	Total Number of Villages
Bihar	31	15
Uttar Pradesh	31	13
Madhya Pradesh	24	4
Rajasthan	22	3
Odisha	4	1
Jharkhand	3	3
Total districts	116	28



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Subscription rates to carry the message of Rural Development to all people. It serves as a forum for free, frank and serious discussions on the problems of Rural Development with special focus on Rural Poor.

The views expressed in the columns by various contributors may not necessarily reflect the views of the Government or the organization they work for.

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Editorial

Today, the Country and the World is going through an unprecedented crisis because of COVID-19 or coronavirus pandemic. Nations across the globe have gone into lockdown and people are struggling to find ways to fight the disease and its spread. As the government and people of India are giving a befitting reply to the COVID-19 pandemic, Centre's announcement of *Aatmanirbhar* package has come as a big relief to many especially for the migrants and the farming community besides those involved in infrastructure sector and business. The 20 lakh crore economic package under the *Aatmanirbhar Bharat Abhiyan* announced by Prime Minister Shri Narendra Modi is aimed at providing an aid to the country's population out of the coronavirus crisis by making them self-reliant.

In India, social security has been a prime focus area across various plans and policies of the Government. Over the last two decades or so, there have been a major slew of measures in sync with the need for greater recognition to social and economic rights.

In this issue of Kurukshetra we have focused on how the *Aatmanirbhar Abhiyan* can ensure social security to the people of the country. The COVID-19 pandemic and prolonged lockdown of economic activities have caused health and income insecurity amongst the socio-economically weak and vulnerable sections of the society. Considering the severity of this unprecedented situation on livelihoods of millions of citizens, the Government of India is taking all necessary steps to ensure that we are prepared well to face the challenges and threats posed by COVID-19.

Social security might be defined as a provision of protection for individuals and households, to ensure their health and income, especially in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a sole earning member. Thus, social security can help in reduction of poverty and inequality and therefore support inclusive growth through enhancing human capital and its productivity. It indirectly also influences domestic demand and facilitates growth of an economy. Several important reforms have already been enacted to realize this goal in the first year of MOD 2.0 Government.

Education is a key factor towards ensuring social security. Education is considered as the backbone of development and is recognized as one of the most important instruments to alleviate poverty and reduce inequality. It can guarantee social security with ripple effects across other critical dimensions of human development, through its correlation with improvements in health, strengthening the democracy and ensuring good governance.

MGNREGA, being a public works programme, has the capability to effectively harness the productive power of rural unemployed towards their socio-economic development. Undoubtedly, the programme has emerged as one of the largest social security net to the people of the country. MGNREGA is capable of meeting challenges of economic shocks and rural income and employment during post-COVID-19 period and can be productive and active catalyst in building a self-reliant rural India.

Initiatives in the form of *Aatmanirbhar Bharat* with much-needed reforms in agricultural marketing and deciding the price while entering into contract farming with sponsors (private companies) and land tenancy reforms, the Government has recently taken several policy decisions for imparting social security to millions of farmers and agricultural workers including the animal rearers and fishermen.

We have also discussed in this issue about empowering the senior citizens and government efforts to ensure that they are socially secured. Several schemes related to social security have been discussed in this issue. We hope that our authors will be able to enlighten the readers and get all information related to the theme. Stay Home Stay Safe.



MGNREGA-A Social Security Net

KOMAL GUPTA AND SHIKHA SINGH

MGNREGA, being a public works programme, has the capability to effectively harness the protective power of rural unemployed towards their socio-economic development. It is also capable of not only supplementing the income of jobseekers; the whole process would actually fulfil an excellent social security and insurance mechanism by stabilising employment during the off-peaks agriculture seasons in the rural areas. The programme is capable of ensuring livelihood security and can be a game changer in rural economy provided the implementing States take some positive actions towards fulfilling the legal provisions with a well-coordinated approach. MGNREGA has the capability to empower poor rural households to withstand economic shocks. It can manage and deal with situations to address effects of business cycles in a large rural economy like India.

The COVID-19 or Coronavirus pandemic and prolonged lockdown of economic activities have caused health and income insecurity amongst the socio-economically weak and vulnerable, especially, the migrants, the daily wage earners and the casual labourers. Considering the severity of this unprecedented situation on livelihoods of millions of citizens, Indian Prime Minister, gave a clarion call for initiation of the Aatmanirbhar Bharat Abhiyan (Self-reliant India Movement) on May 17, 2020. The Aatmanirbhar Bharat Abhiyan is expected to stand firm on five vital pillars –economy, infrastructure, vibrant human resources, demand and technology-driven arrangements and systems. Union Finance Minister Mr. Nirmala Sitharaman, subsequently, announced a slew of stimulus measures which, inter alia, included a package of assistance for rejuvenating rural and agricultural economy. Since poverty alleviation and employment generation have been the major objectives of India from the 1990s, the government, vested its renewed focus on reviving rural economic growth through broadening wage employment opportunities to the jobseekers.

Rural Employment and MGNREGA

Farm risks and uncertainties, population pressure on cultivable land, lack of alternate occupational choices, rural-urban income differentials and rising rural economic distress had, earlier, prompted massive rural-urban migration in India. But, the nation, with a migrant workforce of more than 423 million (Census 2011, Government of India) in cities and metros from



States other than the origin, is now witnessing unrelenting reverse migration due to COVID-19 impact. During the next few months, the farm and non-farm sectors are expected to experience various ill-effects of under-employment and unemployment due to swelling in the existing workforce, in the respective regions. It is thus important to ensure adequate livelihoods through broadened occupational choices to the millions of workforce of the countryside.

The perpetual concern on productive absorption of rural surplus workforce, besides building quality and productive community assets and enterprises, had pressed for enactment of a demand-driven wage guarantee programme – Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in September 2005. MGNREGA, an entitlement-driven and self-target-oriented employment generation scheme, aims at enhancing the livelihood and economic security of the rural poor households.

MGNREGA's Role in Self-reliant Rural India

MGNREGA, being a public works programme, has the capability to effectively harness the productive power of rural unemployed towards their socio-economic development. It is also capable of not only supplementing the income of jobseekers; the whole process would actually roll out an excellent social security and insurance mechanism by stabilising employment during the off-peak agriculture seasons in the rural areas. Considering its employment generation potential and productive absorption capacity of surplus work force during and after the pandemic, the Government revised its earlier earmarked allocation to Rs. 1,01,500 crore for 2020-21 by additionally allocating Rs. 60,000 crore under the package of Atmanirbhar Bharat.

Before delving into the MGNREGA implementation framework to find out the potent it has for ensuring a self-reliant rural India in future, one needs to explain and understand the central objectives of the Act. The principal objectives of MGNREGA, 2005 as defined in the Schedule I, Para (2) of the Act are:

- Provision of at least 100 days of unskilled manual work at a guaranteed wage employment in a financial year to every willing rural household as per demand resulting in the creation of quality, durable and productive community assets;
- Reinforcing the livelihood resource base of the poor;
- Ensuring social inclusion; and
- Strengthening Panchayati Raj Institutions.

In this context, this article is making an attempt to find out an answer to an often-asked question – will the world's largest public works programme, MGNREGA be a game-changer towards ensuring adequate rural employment and income in a post COVID-19 situation?

MGNREGA: Status of Implementation

MGNREGA is implemented in 621 districts covering 2.65 lakh Gram Panchayats (GPs). As in May 2020, out of 18.82 crore registered rural households, 25 percent (4.75 crore) could actively participate in the scheme. Data [available

MGNREGA Allocation

A sum of Rs. 1,01,500 crore has been made under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in the current financial year 2020-21. It is the highest ever amount of funds under the programme.

A sum of Rs. 31,693 crore has already been released in 2020-21, which is more than 30 percent of the budget estimate of the current financial year.

A total of 81.89 crore person-days has been generated so far and work has been offered to 8.69 crore persons. Average number of persons to whom work offered in May 2020 has been 2.30 crore per day, which is 12 percent higher than the work offered in May last year, which was 1.65 crore persons per day.

A total of 19.56K weeks have been completed so far during the current financial year 2020-21. A distinct focus is on taking up works related to water conservation and irrigation, plantation, horticulture and individual livelihood works for livelihood promotion.

[Source: Press Information Bureau dated June 08, 2020]

at www.mnrega.nic.in] on performance of the scheme during 2016-17 to 2019-20 indicates that the Government of India has released Rs.2.29,445 crore of which Rs. 1,79,869 crore (78 percent) was spent on wages (Table 1, see on page no.7). Table 3 indicates that on an average, Rs. 44,967 crore has been paid as wages to generate 236 crore person-days of annual wage employment. That, on average of 78 percent annual central releases

Atmanirbhar Bharat Package

MGNREGA Support to Returning Migrants

- 100,000 migrant workers
- 25,000 migrant families
- Support to migrant workers returning to their villages

MGNREGA Support to Returning Migrants

Table 1: Select Indicators on Implementation of MGNREGA during 2016-17 and 2015-20

Year	Wage Employment As per Labour Budget		Average Days of Employment provided to HHs	Percent HHs Completed 100 days of Employment	Central Reserve	Expenditure on Wage Payments	Expenditure per PD of Employment Generation
	Approved	Generated					
I	II	III	IV	V	VI	VII	VIII
2016-17	770.9	231.5	46.0	5.14	40,411.7	40,750.7	221.2
2017-18	231.5	231.7	42.7	9.81	55,699.9	43,328.5	221.7
2018-19	216.6	267.0	50.9	6.78	42,125.1	47,272.5	247.2
2019-20	276.3	256.1	49.4	9.23	71,248.7	48,817.4	258.6
Average	248.4	256.1	47.7	—	57,381.4	44,967.3	239.7

Source: Data compiled by the Authors which is drawn from the MGNREGA APP of Ministry of Rural Development, Government of India (available at mnregaportal.nic.in)

Note: PD=Person Day; HH=Household.

under MGNREGA is utilised towards payment of wages during 2015-2019. That, with the present enhanced allocation of Rs. 1,01,500 crore, about Rs. 79,200 crore will be available for wage payments in 2020-21. Table 1 also reveals that, one person-day wage employment generation under the Act costs on an average Rs. 251 in 2015-20. By that estimate, the present allocation under MGNREGA has the potential to generate about 480 crore person-days if a proper strategy of implementation is ensured at the grass-root level.

MGNREGA: The Game Changer?

Low levels of education and limited skill-set of the country's rural labour force have always impacted the labour productivity and the resultant income growth. In this situation, MGNREGA accords an opportunity to broaden the occupational choices and wage income for the willing less-educated, unskilled job seekers by tapping their productivity through execution of quality community asset creating projects. Ministry of Rural Development has notified a series of activities of public works to be performed under the Act. As many as 361 combinations of works are permissible under MGNREGA. Out of this, 182 works can be linked to Natural Resource Management and 164 works are related to agriculture and allied activities.

MGNREGA has the capability to empower poor rural households to withstand economic shocks. It can manage and deal with situations to

address effects of business cycles in a large rural economy like India. The recent pandemic has prompted national lockdown and has given an early signal of a prolonged depressed business-like environment. MGNREGA can effectively give a stimulus to the rural economic activities via wage income disbursals resulting in rising purchasing power of rural population. Increment in individual income in turn will transform into higher expenditure on food and essential items, thereby lubricating and stimulating a depressed economy in the post-pandemic era.

Changing the Game

MGNREGA permits several categories of public works relating to (a) Natural Resource Management (NRM) Works (b) works on individual assets for vulnerable sections, (c) setting up of common infrastructure for National Rural Livelihood Mission compliant Self-Help Groups, (d) building rural infrastructure. At least 80 percent of public works in terms of cost at the district level under MGNREGA should be devoted to creation of quality productive assets directly linked to Agriculture and Allied Activities.

However, the big challenge for the implementing States is now how to elevate the absorption capacity of implementing mechanisms without diluting the legal provisions of the Act. In this context, the States must take immediate steps to ensure social protection and productive absorption of surplus rural workforce.

Firstly, the district administration should ensure that the data on returning migrants, coming from urban and metro cities to their respective native villages, are collected, compiled and checked with the existing scheme database to understand the magnitude of the administrative burden on the implementing machineries for ensuring wage entitlements to all under the provisions of the Act. Accordingly, household surveys/verifications shall be immediately conducted by each GP to register/re-register the surplus yet excluded job-seekers under MGNREGA within the next 15 to 30 working days.

All job-seekers, through a campaign mode, should be made aware of the processes leading to offer of works. Job applications must be obtained/sought frequently by following easy-to-handle methods and, if required, application collection boxes be kept at prominent places in the village itself to elicit appropriate demand.

Looking at the degree and intensity of the on-going reverse migration, the approved list of MGNREGA projects for 2020–21 may not be sufficient to meet the potential work-demand in the post-COVID situation in rural areas. Hence, on-going works must be assessed and an additional labour budget exercise initiated

to ensure adequate block/UP-wise additional shelf of projects along with their timely technical and financial approvals. While identifying and prioritising additional works under MGNREGA for 2020–21, attempts shall be made to ensure creation of more and more quality community assets in the areas of NRM and agriculture and allied activities.

Some of the NRM works could include works related to (i) water security like construction of farm ponds, wells, earthen check dam, stop dam and other water harvesting structures with a special focus on recharging groundwater including the sources of drinking water (ii) Watershed management works like contour trenches, terracing, contour bonds, boulder check, spring shed development (iii) micro and minor irrigation works (iv) renovation of traditional water bodies including de-silting of irrigation tanks and other water bodies (v) afforestation, tree plantation and horticulture in common and forest lands and (vi) land development works in common land. If these works are planned and prioritised in a systematic manner and executed scrupulously without diluting provisions of the Act can unlock immense opportunities for communities' socio-economic growth in the years to come.

Effective implementation of public works programme depends largely on how the community engages itself from identification of works to their planning and transparent execution. Decentralised planning under MGNREGA envisages preparation of district perspective plan that identifies the development needs and gaps in the local areas. Section 16 (4) of MGNREGA 2005 empowers the GPs to prepare a development plan and maintain a shelf of projects for execution upon demand. Since excellence of community MGNREGA assets rely on quality grass-root level decentralised planning, the human resource base at GP level needs to be adequately strengthened. A panel of experts drawn from the departments of Agriculture, Rural Development, Panchayati Raj, Soil Conservation, Forestry, etc. could be immediately directed to assist GPs to effectively implement MGNREGA works.

MGNREGA allows work site amenities like medical aid, shade, drinking water creche facilities,

Additional services viz. provision of masks, soap, water, sanitizer, etc. should be ensured to address COVID-19 risks. This should be made a frequent feature at least for a year or until the fear about the pandemic subsides.

Programme administration should ensure timely wage payments to encourage adequate job response. Wage payment is often delayed due to delay in work measurement, calculation of wages, wage-bill preparation, etc. Hence, all measurements of works done should be taken every week immediately after the closure of the muster; task-wise wages calculated and fed into the MGNREGA MIS for online wage disbursals to the respective job-seeker accounts.

States need to ensure implementing a strong quality management system to ensure that the assets created under the Act is functional by location, design, operational management and with the provision of adequate and regular maintenance support services. It shall also be ensured that the assets so generated or are getting generated conform to sound engineering standards in terms of design and workmanship.

A review of MGNREGA works indicates that though the scheme has large financial absorption capability, it has not been able to generate quality community assets due to lack of focus on quality asset creation, faulty work plan and design, improper selection of projects and work sites, lack of survey of works, inaccurate work design estimates, inefficient work execution and inadequate technical supervision. Thus, just before utilising the funds of MGNREGA, the asset generating potential and technical viability of the projects should be reviewed and revisited.

Lastly, only silver lining during this pandemic has been the resilience of our agriculture. The farm sector has grown by 3.7 percent during 2019–20 and is expected to grow between 3.5 to 3 percent in 2020–21. Thus, appropriate work planning and execution may help in bringing back the migrants into agriculture. There are 260 permissible works under MGNREGA of which about 160 pertains to agriculture and allied activities. 60 percent works at district level in terms of cost are to be utilised for creation of

productive assets linked to agriculture and allied activities viz. farm pond, earthen check dam, well, field drainage, water harvesting structures, etc. Further, the Act permits works viz. irrigation, horticulture, land development on private land belonging to SCs/STs, tribal families, Small and Marginal Farmers, etc. About 87 percent of the total farmers are small or marginal farmers who possess more than 40 percent of all cultivable landholdings. Thus, MGNREGA can play a vital role in raising agricultural productivity by incentivising the surplus workforce to carry out with farming and shifting themselves from casual labourers to cultivators.

MGNREGA is capable of meeting challenges of economic shock and rural income and employment during post-COVID period and can be productive and active catalyst in building a self-reliant rural India. Undoubtedly, enhanced allocation for MGNREGA will increase public investment in rural areas and ensure a suitable local fallback option for rural workforce. The programme is capable of ensuring livelihood security and can be a game changer in rural economy provided the implementing States take extra positive actions towards fulfilling the legal provisions with a well-coordinated approach.

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Progress in Agriculture Sector to help in making the country self-reliant says Shri Narendra Singh Tomar

Union Minister of Agriculture & Farmers' Welfare Shri Narendra Singh Tomar has emphasized on increasing private investment in the field of agriculture. Addressing an international webinar organized by Ch. Charan Singh University, Meerut and a national webinar organized by Amagadh Agricultural University June 15, 2020 in New Delhi, Shri Tomar said that this will increase prosperity in the agriculture sector, which in turn will increase self-reliance and prosperity in the country. He also called upon scientists to contribute in increasing agricultural production and mitigate difficulties.

In the webinar organized by Meerut University, Shri Tomar said that in foodgrain production, India is not only self-sufficient but also surplus. Farmers have demonstrated that they are capable of dealing with difficult challenges. To deal with the growing population of the country which is expected to reach 160 crores by the year 2050, plant breeders and scientists in India are faced with the challenge of increasing production of quality foodgrains and providing enough nutritional food to all Indians by undertaking progressive farming to develop disease-resistant and pest-resistant varieties that require less area and are able to grow in unfavourable conditions like dry climate, high temperature, saline and acidic soils. Bio-fertilization strategy must also be used to develop high quality crop varieties having high protein, iron, zinc etc. nutritional content. For this, plant breeders have to use latest biotechnology methods in addition to traditional methods of farming.

Shri Tomar said in connection with attracting private investment in the agriculture sector, Prime Minister Shri Narendra Modi has announced a provision of Rs. One lakh crore for developing agricultural infrastructure. Similar provisions have also been announced for the fisheries, animal husbandry, bee-farming, herbal farming, food processing etc. sectors. Shri Tomar emphasized on soil health testing and appealed for creating awareness about this.

In the webinar organized by Amagadh Agricultural University, the Union Agriculture Minister stressed on achieving better farm production with less water. Prime Minister Shri Narendra Modi has said unless the villages do not become self-reliant, the country cannot prosper. To strengthen the rural economy, agriculture has to prosper and also its sister concerns. When this happens, the country will be able to face all other challenges.

Shri Tomar said in the Coronavirus crisis when the wheels of the world economy had slowed down, the Indian farmers produced a bumper crop with the resources available in the rural areas. Crop harvesting continued at normal pace during the lockdown, crop production was more than last year and sowing of kharif crops has also been 45 percent more than last year. This shows the resilience of our villages and farmers. Shri Tomar said that no other government has provided so much fund for agriculture and farmers welfare as the Modi Government. The PM-Kisan scheme alone is allotted more budget than the whole agriculture budget previously. He also stressed on linking more and more farmers to the 10000 new Farmer Producer Organizations (FPOs) whose formation has been announced recently.

(Source: Press Information Bureau)

Social Security: Issues, Challenges and Initiatives

MAIN POINTS

Social security might be defined as a provision of protection for individuals and households, to ensure their health and income, especially in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a sole earning member. Thus, social security can help in reduction of poverty and inequality and therefore support inclusive growth through enhancing human capital and its productivity. It indirectly also influences domestic demand and facilitates growth of an economy.

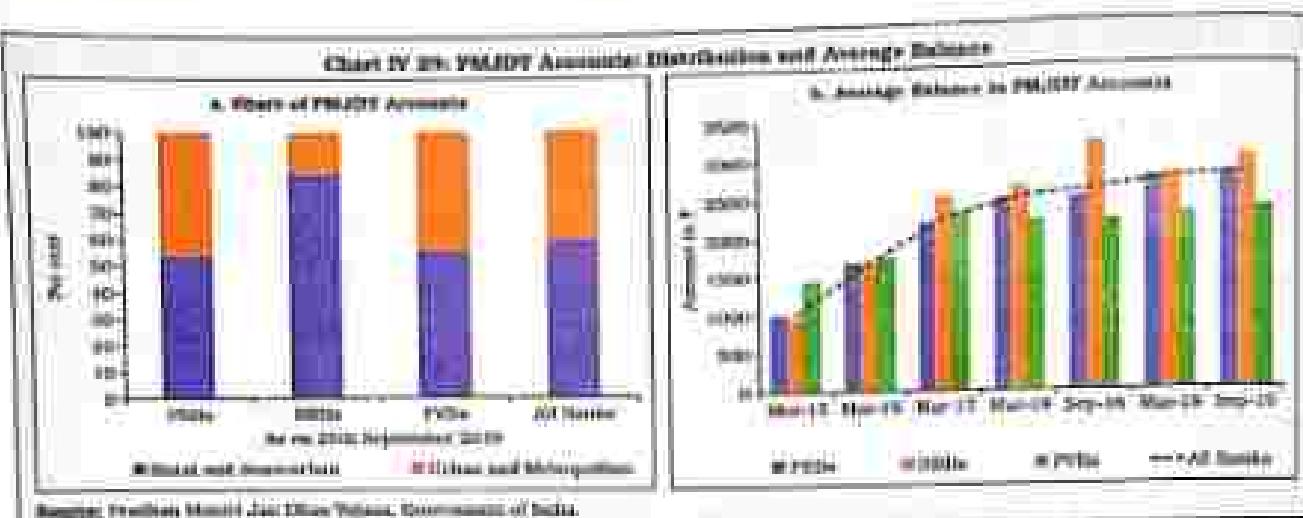
The balanced and overall development of any country requires not only attaining high GDP but also improvement in the quality of life of citizens. Therefore, to promote improvement in the quality of life, ensuring provision of adequate social security to citizens becomes highly significant, especially in a developing country like India. The Prime Minister's recent introduction of new social security schemes to ensure Financial Inclusion, insurance and pension for all is, undoubtedly, a laudable step. These schemes are expected to enhance the welfare of the downtrodden, particularly the workers in the unorganised sector.

Before discussing these schemes at length, let us understand the concept itself. Social security might be defined as a provision of protection for individuals and households, to ensure their health and income, especially in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a sole earning member. Thus, social security can help in reduction of poverty and inequality and therefore support inclusive growth through enhancing human capital and its productivity. It indirectly also influences domestic demand and facilitates growth of an economy.

However, as per International Labour Organisation (ILO-2014 records) only 27 percent of the global population enjoys social security in any form whereas 73 percent is deprived of it. The need for such highly subsidized programmes arises in India because nearly 90 percent of workers in India earn their livelihood in the unorganised sector, which lacks social security. The population in the unorganised sector thus remains most vulnerable to various unforeseen shocks which

hinder poverty alleviation and inclusive growth. In fact, the indirect cost of absence of social security might well be increasing social costs resulting from monitoring and managing of ill health accompanied by various related social and labour problems, including absenteeism. On the contrary, a work force with higher capability and social security could contribute to higher growth, which in turn would enhance aggregate demand in an economy through higher purchasing power of the vast mass of the work force in the unorganised sector.

Now, it is the time to ponder over the social security schemes, launched by the Central Government during the last few years. Realising the grave problem of financial exclusion, in 2014, the government launched Pradhan Mantri Jan Dhan Yojana (PMJDY), a national mission on Financial Inclusion encompassing an integrated approach to bring about comprehensive Financial Inclusion of all the households in the country in two phases. The key features of the scheme are a zero-balance bank account, Rs. 5,000/- overdraft facility for all Aadhar-linked accounts, RuPay Debit Card, pre-loaded with Rs. one lakh accidental insurance cover. Ministry of Finance (MoF) and National Informatics Centre (NIC) have also jointly developed a mobile app called Jan Dhan Darshak with a view to enable common people in locating a financial service touch-point. While over 6 lakh FI touch points (Bank branches, ATMs, Post Offices) have been mapped on this application, approximately 1.6 lakh Bank Mitras have been on-boarded by December 1, 2019. The share of different banks having these accounts and also the balances maintained in them is given in the following chart (see on page 11).



Source: pmjdy.gov.in

Pradhan Mantri Jeevan Jyoti Bima Yojana launched on May 09, 2015, is another important milestone in this direction. It is a government-backed Life Insurance Scheme, available to people in the age group of 18 to 50 years having a bank account who give their consent to join/enable auto-debit. Aadhar would be the primary KYC for the bank account. The Risk Coverage under this scheme is for Rs. two Lakh in case of death of the insured, due to any reason. The premium is Rs.330 per annum which is to be auto-debited in one installment from the subscriber's bank account as per the option given by him/her on or before May 31 of each annual coverage period under the scheme. It is a pure term insurance policy, which covers only mortality with no investment component. Risk cover under PMJDY is applicable only after the first 45 days of enrolment. In other words, insurers do not have to settle claims during the first 45 days from the date of enrolment. However, deaths due to accident will be exempt from the 45-day clause and will still be paid. The scheme is administered through LIC and other Indian private life insurance players. As for the process of enrolment, banks have tied up with insurance companies. One may also approach their banker.

The same day in Kolkata, Prime Minister Suraksha Bima Yojana (PMJSBY) was announced with an objective to help the vulnerable sections stay prepared in cases of unforeseen emergencies, especially when they are faced with unexpected death and impairments. The essence of the scheme is to provide people with a Personal Accident insurance cover at a price that is considerably lower

than what is charged under commercial insurance plans. As of 30 April 2020 nearly 7.05 crore people have already registered for the scheme.

The features and benefits of the scheme, can be glanced at in the following table:

Features of PMJSBY	Benefits
A low-priced policy can be purchased for Rs.12.	Accident insurance cover without spending a lot as compared to other policies.
Money is given to the nominee in case of death.	The welfare of the family in case of death, as the claim amount can be availed by the nominee.
Auto-debit of premium from the bank account.	No regular payment formality worries due to auto-debit facility.
Option to choose a long-term policy or yearly renewability.	Easy processing of continuous cover.
Easy exit and re-entry options.	Flexibility to continue or discontinue as per one's will.
It can help save tax.	Deduction as per Section 80C and Sum Insured of Rs. 1 lakh is permissible as per Section 10(1)(D) of IT Act.

Another initiative, the flagship social security scheme 'Atal Pension Yojana' (APY) has already completed 5 years of implementation and garnered over 2.24 crore subscribers. Any citizen of India between 18-40 years, can join this scheme, administered by Pension Fund Regulatory and Development Authority through National Pension

System (MPS). It provides a minimum guaranteed pension ranging from Rs. 1000 to 5000 on attaining 60 years of age. The amount of pension is guaranteed for lifetime to the spouse on death of the subscriber. In the event of death of both the subscriber and the spouse, the entire pension corpus is paid to the nominee. The scheme has been implemented comprehensively across the country covering all states and UTs with male to female subscription ratio of 57:43. However, only 5 percent of the eligible population has been covered under APY till date. Under the scheme, individuals who have registered before March 31, 2016, will get a co-contribution from the government, which will be 50 percent of the subscriber contribution up to a maximum of Rs. 1,000. The co-contribution will be for 5 years from 2015–16 to 2019–20. The Contributions to the Atal Pension Yojana is eligible for tax benefits similar to the National Pension System. The minimum pension would be guaranteed by the Government, i.e. if the accumulated corpus (based on contributions) earns a lower than estimated return on investment and is inadequate to provide the minimum guaranteed pension, the Central Government would fund such inadequacy. Alternatively, if the returns on investment are higher, the subscribers would get enhanced pensionary benefits. Subscribers can voluntarily exit from APY subject to certain conditions, an deduction of Government co-contribution and return/interest thereon. Thus, the APY is an unequivocally relevant scheme for addressing the challenges of rapidly increasing aging population of India. This feat of bringing in the most downtrodden and vulnerable sections of the society under the coverage of pension could materialise with the untiring efforts of public and private banks, regional rural banks, Payments Banks, Small Finance Banks, the Department of Posts and the support extended by the state level Bankers' committees.

How can Social Security be complete without ensuring a bright future for the daughters of India? Another initiative, worth mentioning here is Suktanya Smriddhi Yojana (SSY), a small-scale savings scheme for the daughter's education and marriage, initiated as a part of government's Beti Bachao, Beti Padhao mission. The government wants to convey a message that if a parent could make a proper plan for their girl child, they can definitely

improve and secure their daughter's future. It is suitable for a daughter up to 18 years of age with annual contribution ranging from a minimum of Rs. 1000 to a maximum of Rs. 150000 and provides an annualised return of 8.1 percent. One withdrawal shall be allowed on attaining the age of 18 years by account holder to meet education expenses upto 50 percent of the balance at the credit of preceding financial year. The account shall mature on completion of 21 years from the date of opening of account or on the marriage of account holder whichever is earlier. The interest declared for the quarter April-June 2020 is 7.6 percent P.A. In this way, SSY carries the highest tax-free return with sovereign guarantee and comes with the exempt-exempt-exempt (EEE) status. The annual deposit (contributions) qualifies for Section 80C benefit and the maturity benefits, compounded annually are also non-taxable.



Ministry of Finance, further, through its notification dated 12 December, 2019, has brought about the following changes in the above flagship scheme:

- Higher interest rate for default accounts which means that even on non-deposit of minimum Rs. 250 SSY A/c will keep on earning the interest rate applicable to the scheme.
- Changes in rules for premature closure of account: The old rules of the scheme allowed closure of the account in two cases - due to death of girl child and in case of change in residency status of girl child whereas now premature closure is allowed even on compassionate grounds including situations such as medical treatment of the account holder for life threatening diseases or death of her guardian.
- Change in A/c opening age: The newly notified rules allow that the account cannot be

operated by the girl child till she attains the age of 18 years as against 10 years as per old rules.

- Opening of accounts for more than two girl children: According to the newly notified rules, if accounts are to be opened in case of more than two girl children, then along with the birth certificates, an individual is required to submit an affidavit instead of Medical Certificate.

These are, undoubtedly, the creditable achievements for the country but these schemes, having already completed a journey of 5 years, need to be reviewed for progress. As per the latest data (MoF) the number of PMJDY accounts stood at around 38.35 crore with deposits of Rs. 1,27,748.43 crore as on 30 April 2020. Over 29 crore account holders have been issued RuPay debit cards but many of them are inactive or carry a zero balance. More women have been enrolled, but a larger gender gap persists in account usage, credit and insurance, etc. So there is a road ahead for eliminating the gender gap in basic access and increasing usage among all customers, by making financial services more digital, flexible and relevant to both men and women's lives.

If we look at APY as of 30 April 2020, the number of subscribers reached 2.24 crore, which shows that only 5 percent of the eligible population has been covered under the scheme so far. Recognising the social importance of this scheme, there is a humongous task of increasing the pension coverage for which continuously undertaking proactive initiatives for achieving exponential growth and addressing unexpected scenarios, is required.

The ground reality shows that low premium life cover scheme, Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), has become a "white elephant" for insurers. The losses under the scheme are understood to have gone up over 20 percent for many in-

urers in the financial year 2019 impacting their profitability. So the industry has requested the government for enhancement of premium from present ₹ 330 to around ₹ 440 or so. Since its inception in 2015, the subscriber base has gone up from 2.96 crore to 4.53 crore and claim amount paid, rose by over three times in the same period. Thus, it is the premium which is the main problem with an otherwise good scheme.

As far as the progress of PMSBY is concerned, the data from the government speaks. 17.03 crore enrolments have been done under the PMSBY while total number of 12,176 claims amounting to Rs. 645.52 were settled by the insurers. Thus the insurers have incurred losses of more than 350 percent as on December 6, 2019. The following chart is self-explanatory:

For this also, the insurers have requested the government to increase premium so that the claims ratio comes down.

One may use SSY to invest a portion of funds earmarked for the girl child's needs and not entirely depend on it. Estimate how much inflated-adjusted funds would be needed for the education and marriage of the girl child. SSY, in fact, is a debt investment, hence, for a long-term need, relying more on equities may help. However, looking at the flip side, the populism prevalent in the implementation of these schemes, needs to be bridged in view of their long-term impact on the banking system. Neither the overdraft of PMJDY nor loans are being repaid fully, raising concerns. regularities have been unearthed in their implementation as well. It is time that the schemes were given a reboot to make them both people and economy-friendly.

Cumulative enrolment and claims under PMSBY

	Total number of persons enrolled (in cr)	Total number of claims disbursed
2016-17	7.93	9,403
2017-18	13.48	16,430
2018-19	15.47	32,176
2019-20*	17.03	36,152

* As on 6 December 2019 Source: pressnote website

Source: jeevanjyoti.gov.in



Last but not the least, let us discuss various measures taken by the Government during these unprecedented times of COVID-19 driven economic shutdown, with a view to safeguard the interest of the poor and the oppressed, particularly, the beneficiaries of social security schemes. The PFRA has halted auto debit of monthly contributions of APT subscribers' contribution thus allowing them deferment till 30 June 2020. APT subscribers can pay the deferred monthly contributions from July 1 to September 30, 2020, without any penal interest. Ordinarily, each default attracts a penalty of 1 percent which is collected by the subscriber's bank. Similarly, on April 11, 2020, the Finance Ministry extended the deadline for mandatory minimum deposit in Sukanya Samridhi Account for 2019–20 by three months up to June 30, 2020. The relief package announced by the Central Government also includes ex-gratia 1500 (Rs. 500 over the next 3 months) to 20 crore Jan Dhan account holding women. For the organised sector workers, Government of India will pay the Employees' Provident Fund (EPF) contributions of both sides for 30 lakh employees of small companies who earn up to Rs. 15,000 a month. This package of 1.70 lakh crore, will also surely help the 800 million poor, landless workers, small and marginal farmers in rural areas, the aged, poor women and construction workers to mitigate their hardships caused by the COVID-19 lockdown. As a part of the comprehensive package, the Union Government has announced an insurance cover of Rs. 50 lakh to healthcare workers and support staff engaged in treatment of COVID-19 patients across the country. Safaikaruncharis, ward-boys, nurses, paramedics, technicians will benefit from it along with the doctors and health specialists.

No doubt, the waivers and relaxations in deadlines are welcome but in view of the fact that unlike developed countries, India does not have automatic economic stabilizers such as universal health coverage and unemployment insurance, the most desirable would be for the Government and RBI to work closely, bring about financial stability and mitigate the crisis. Today, almost everyone from the unorganised sectors has been sighing, "if the virus does not get me, hunger will". Truly speaking, it's the gig workers and migrants, most of whom work in India's

informal sector, who decided to leave for their homes on getting the first chance during the lockdown kicked in on March 25, a scene reminiscent of the days immediately after India's independence in 1947.

To sum up, well-defined social security programmes need to be welfare-oriented, inclusive, wider-based and better implemented. Making schemes targeted and contributory could negatively affect these features. Considering that government is already spending nearly 3 percent of GDP on pensions, it is thus argued that a universal pension and gratuity schemes are possible within a limited expenditure, without placing any significantly large additional stress on the fiscal. In order to meaningfully implement the proposed universal schemes, collaborative exercise with post offices in addition to banks can be considered. Thus, people having accounts in post offices can also be offered these schemes. Further, even if people have bank accounts in cooperative banks, they can also be offered the schemes to ensure wider coverage. Another dimension of universal pension scheme can be that preference for a male child as a support in old age could come down though this area needs further research to empirically establish a causal relationship. This could improve the sex ratio in the country, something that the governments have been trying since the last few decades. It goes without doubt that adequate social security enhances economic growth and thus reduces the burden of tax financed schemes through generation of additional revenue. Unlike present set of social security schemes, a non-contributory universal scheme is probably the need of the country that has remained ignored till date. It would be advantageous to have universal schemes at least for the next few decades, until India achieves a better per capita income and has achieved total eradication of poverty.

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Agriculture and Social Security

While agriculture, in the rural ecosystem, has been the prime source of social security, the agriculturists were often left out from the social security net. It is noteworthy, the Government, of recent times, has taken several initiatives that have emboldened the very face of social security in agriculture. The initiatives of PM-Kisan Samman Nidhi (PM-KISAN) and Kisan Maandhan Yojana are the two very significant initiatives for the income support and old-age pension support for those who are the most vulnerable and require financial assistance the most.



India's economic indicators do suggest that the contribution of agriculture has been declining since independence, the other side of the coin is a very strong in-built social security net that the sector provides to all classes and walks of people in India without the distinction of rich or poor, literate or illiterate and irrespective of caste, creed and religion. Social security is in-built and intrinsic to agriculture through income augmentation and the mammoth population and rural workforce it absorbs. Social security is also contextualised in terms of food and nutritional security, bringing resilience in the masses to absorb shocks and stresses, of both, the natural and man-made extremes, augmenting income and employment to narrow the social and economic exclusion. Agriculture and allied activities being man-animal-machine-material intensive in India, have co-existed since the beginning and their relationship has further cemented over time. The famous proverb of great poet Gugh is the best testimony of agriculture's social security since centuries "Uttam Achihi, Madhyam Ban, Nishch Chakri, Shikh Nidhi" (farming is the best occupation followed by business, services are inferior and begging is the worst). The agriculture, however, due to several challenges, became less remunerative and attractive over time which has to be transformed for reversing the trend. While agriculture, in the rural ecosystem, has been the prime source of social security, the agriculturists were often left out from the social security net. It is noteworthy, the Government, of recent times, has taken several initiatives that have emboldened the very face of social security for agriculturists. The initiatives of PM-Kisan Samman Nidhi (PM-KISAN) and Kisan Maandhan Yojana are the two very significant initiatives for the income support and old-age pension support for those who

are the most vulnerable and require financial assistance the most.

Employment and Poverty: The Key Determinants for Social Security

The poverty estimates based on the state-level poverty line estimated by the Tendulkar methodology for 2011–12 (Government of India, 2014) and the employment based on Consumer Expenditure Survey data 2011–12 indicated about 54.3 percent households of rural India get employment in agriculture either as self-employed or as casual labourers. The incidence poverty in these households are 19 percent and 40 percent of headcounts, respectively (see Figure 1 on page 17). This is a huge number given that rural India constitute over 65 percent of the India's population. The social security net for this large population is the prime necessity. While providing alternate source

Gov

Home Income Support to Farmer Families

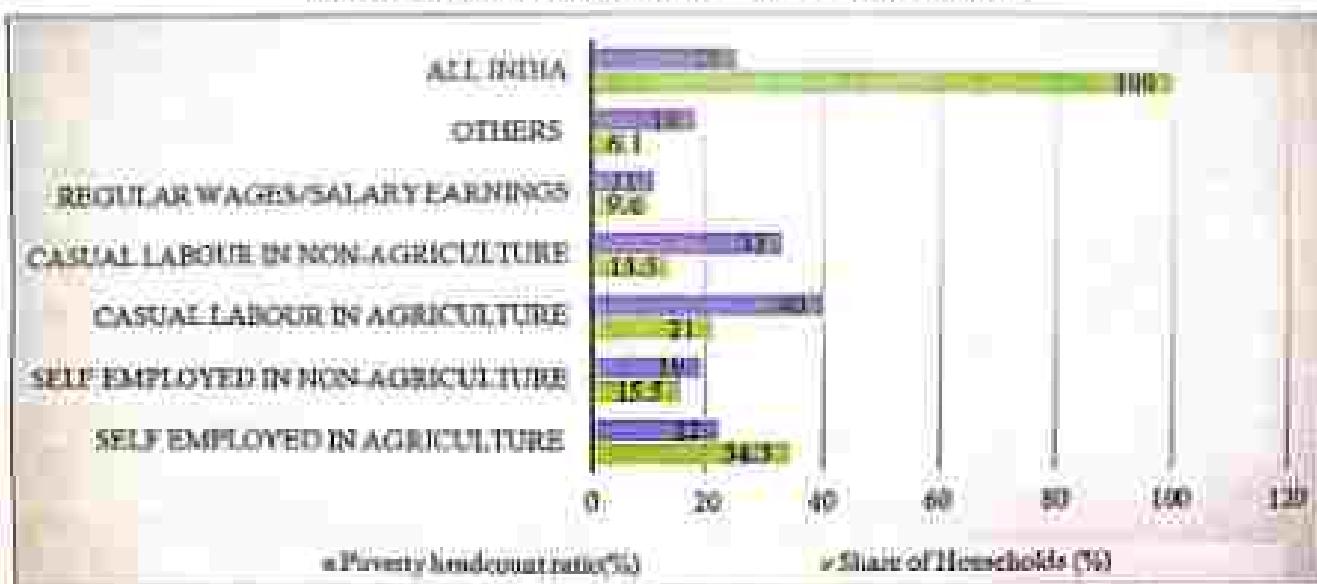
Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Scheme

- Income support of ₹ 6000/- per hectare of ownership entitlement of 2000ha + 10% eligible beneficiary family members
- Providing farmers from setting up the agricultural entrepreneurs, including self-employed in the farming activities
- ₹ 3.6 crore beneficiaries as per estimated figures of Agriculture Census, 2011-12
- ₹ 1120.622 cr were released to 8.25 cr families
- ₹ 40799.3823 crore released in 2019-20 & ₹ 101,704.7849 crore released during 2020-21 to far-

Home Income Support to Farmer Families



Figure 1: Employment and Incidence of Poverty in Rural India



of employment is one way for those earning as wage labourers in agriculture and non-agriculture activities, enhancing income of those who are self-employed in agriculture is also important for sustainable development of the rural-agri space. A major transformation in agriculture planning and development is required to realize the vision of the Prime Minister for Azamnirbhav Bharat. This is more important and needed because the population of agricultural workers as percentage of rural population has gone down from about 69 percent in 1951 to about 55 percent in 2014-15 but in absolute terms, due to increase in overall population, the number of agricultural workers available in rural areas increased from 131 million in 1950-51 to 263 million in 2010-11. It is estimated that number of agricultural workers will increase to about 336 million in 2032-33 (NITI Aayog, 2018). To absorb such a huge workforce with a meaningful employment and income, we need to reorient our strategy and policies for rural India.

Food and Nutrition for Social Security

No civilisation can even dream of being azamnirbhav without being food and nutrition secure. India's population is 1.35 billion+ at present. The erstwhile Planning Commission put consumption demand of food grains at 277 million tonnes by 2020-21. The Third Advance Estimates of food grain production was released recently by Department of Agriculture, Cooperation & Farmers' Welfare and estimated the food

grain production at 295.67 million tonnes. This implies that the country is well secure for food, the first basic pillar for social security. The NITI Aayog's working group on demand and supply of agricultural commodities and inputs, in its report submitted to government in 2018, estimated the demand for food grains during 2032-33 at 334-350 million tonnes based on static approach and 326-340 million tonnes as per the behavioristic approach. The estimates on supply of food grains based on all India and States trends has been put at 378-415 million tonnes in the year 2032-33.

↗ **More Social Security to Small & Marginal Farmers**

Pradhan Mantri Kisan Maandhan Yojna (PM-KM-Y)

The scheme was initiated by the Hon'ble Prime Minister on 02/01/2019.

- Assured monthly pension of ₹600/- to eligible marginal farmers after 65 years of age.
- Only crop between 10 to 40 acres with cultivable land up to 2 hectares.
- Government contribution an amount equivalent to the premium paid by the farmer.
- Over 20.17 lakh farmers registered under the scheme as on 01/01/2020.

[More Social Security to Small & Marginal Farmers](#)

Thus, the demand-supply balance sheet again affirmed the much secure future in terms of food security. To bring sufficiency in edible oils and pulses, the Government has already moved for National Mission on Edible Oils and augmenting pulses production through production and price incentives under NFSM and PM-Anandata Aay Surakshan Abhiyan (PM-AASA). The support prices have been escalated to minimum of 150 percent of the cost of production of respective commodities. The Government has also focused on promotion of nutri-cereals and bio-fortified crops along with Public Distribution System (PDS) to bring in nutritional securities as well as achieving the second and third pillar of food security i.e., access and affordability of food. To complement the Government efforts, the Indian Council of Agricultural Research, ICAR has developed 53 bio-fortified varieties and production protocols of nutri-cereals for higher productivity. The National Food Security Act (NFS) induced targeted distribution among the most vulnerable and needy classes of the society would have fizzled out had the agriculturists not toiled hard to produce plenty of food grains. The country is poised to move towards nothing less than second Yellow Revolution through technological breakthrough and productivity gains along with utilization of additional area for production to accomplish the near sufficiency in edible oils.

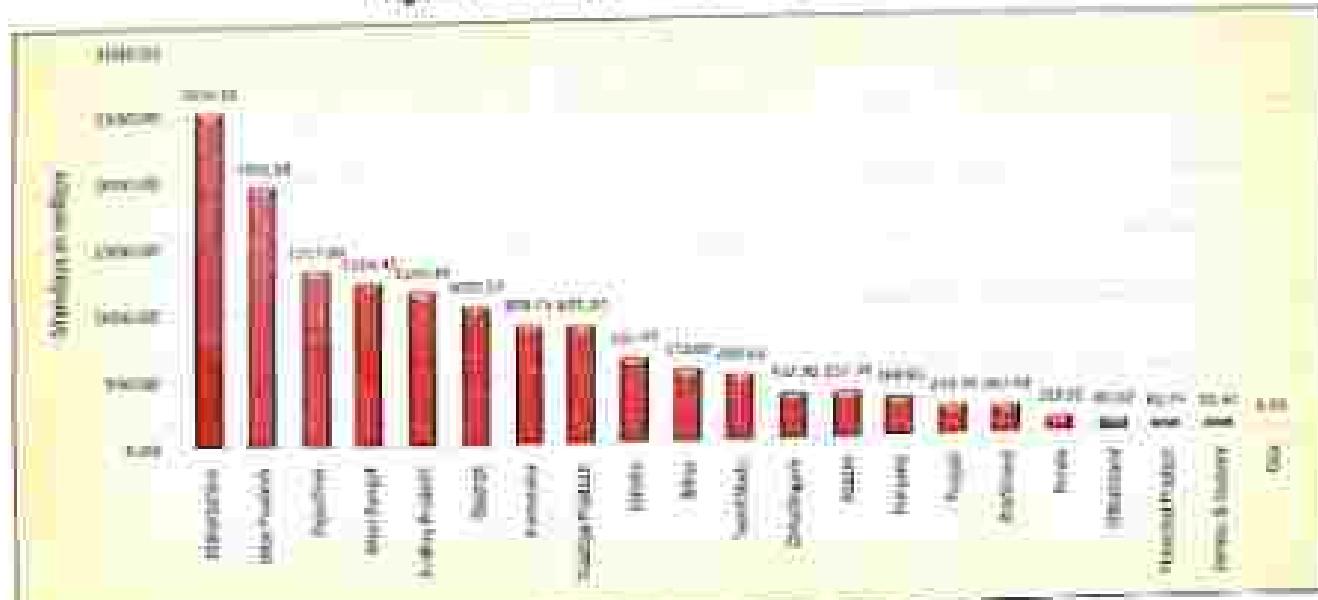
Income Augmenting Opportunities

Income to farmers and others who engage in agriculture is the prime contribution of the agriculture and allied sector in imparting social security. The recent reverse migration while put enormous pressure on the sector for creating more employment and absorb the maximum migrant labour force in the rural areas, it has also established the deep-rooted confidence among the masses about its resilience and sustenance against any odd, no matter how disastrous it is, in providing two square meals to those who need such support the most. It has reaffirmed the very fundamentals of "local" as envisioned by our Prime Minister. Simultaneously, it has challenged our mindset of looking at agriculture as we have been looking so far. It is a necessity rather than choice. The unemployment rate in rural India rose to ~10 percent post COVID-19 outbreak

indicating that while the outbreak started off as an urban phenomenon, the economic impact is also being felt in rural areas. The COVID-19-led national lockdown deteriorated the situation as evidenced in the past few weeks of a mass exodus of labours, particularly in Northern India from urban centres to their rural hometowns. The situation of both the self-employed and casual workers has deteriorated in terms of earning. This calls for a paradigm shift in the most important job provider sector in rural India. The first 30 years after independence our focus was to achieve food security and the next 30 years to sustain the food security. The much needed industrial and remunerative employment orientation in the sector which absorbs close to 50 percent of the workforce and provides raw material to some of the most labour-intensive industries like textiles and food processing, was almost missing. Both policies and programmes have to be redesigned to convert the low paid and underemployment providing agriculture into competitive activity with other sectors of economy. The seasonality in agriculture has to be converted into an opportunity. The cropping in India is one of the biggest employers (see Figure 2 on page 29). Based on the CACP data on average man-days required for one hectare cropping and cropped area of the States, it has been estimated that cropping alone in India generates employment of over 14089 million man-days in a year. However, the low farm holding and limited marketed surpluses with the majority of tillers yield much low wages or income to the people employed in cropping.

In India, the farm endowments are diverse and so is their orientation towards commercial farming. The big farmers (> 10 ha of holding) used to sell 45–73 percent of their output (DPI, Government of India, 2005). These households hold promise for lenders and can take risks to increase their incomes. However, this set of farmers comprises only 0.7 percent farm families occupying about 11 percent of the land (see Table-3 on Page 19). The medium farmers (4 to 10 ha land) sell about 38 to 63 percent of output but constitute 4 percent of farm families and 21.7 percent of area. These commanding 2 to 4 ha farmland (semi-medium farmers) account 11 percent of rural families but occupy 24 percent of the total farming area. The rest

Figure 2: Man-days (million) in cropping per year



(Source: Author's estimates based on CACP data on average man-days required for one hectare sown up is shown)

two categories are small (1 to 2 ha) and marginal (i.e. 1 ha farmers who together comprise nearly 44.5 percent of the area but sell only 17 to 33 percent of the output. The incomes of these (small and marginal) are difficult to increase exclusively through increased productivity in cropping, hence the high value commodities (vegetables, dairying, poultry, piggery) can make them prosperous but with great risk as they have to put essentially all their land into vegetables or fodder. Interestingly, this group is often averse of fruit tree plantation for twin reasons. Firstly, part or whole of his land will be diverted to trees leaving little scope for staple food production and secondly, long gestation periods in fruits will drive them out of whatsoever little income he or she is making from arable cropping. The strategy for landless and less than 2 ha holdings are to earn from rural non-farm sector stimulated by income growth of the small commercial farmer. The farmers with half to one hectare of land could

achieve a substantial increase in family income from improved farming practices but compared to the large farmer (those with more than 4 ha land) they are more risk averse, deficit in capital and unable to obtain institutional credit.

Diversify Towards More Income and Employment

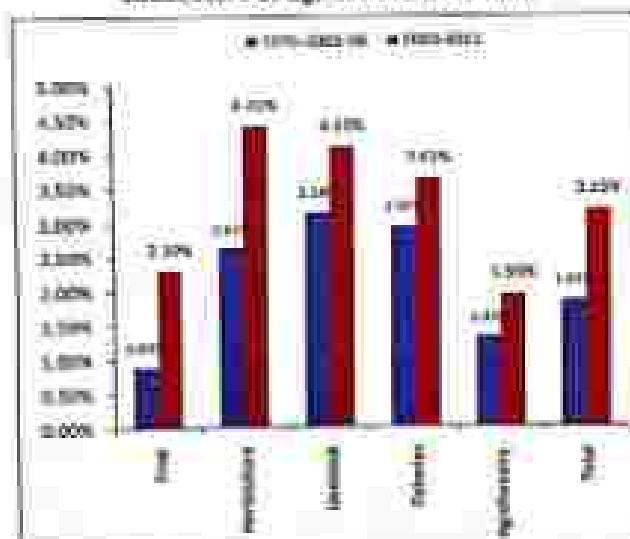
To address the concerns of food insecurity, the acreage under cereals and pulses increased to as high as 60 percent but their share in total value of output from agriculture remains at about 25-30 percent. This indicates a limited opportunity in these commodities. Contrary to this, the contribution of horticulture and livestock together has increased. Hence, diversification has been recognised as a potent tool with a potential to cater the future concerns of food, nutrition and income for social security. The total value of output from agricultural stood at Rs. 2011549.6 crores during 2013-14. The share

Table 1: Farm Level Diversity and Risk Bearing Capacity among Indian Farmers

Size of holding	Percent of total number	Percent of total area	Percent output released to market*	Risk in Diversification towards High Value Commodities (HVCs)
More than 10 ha	0.7	10.4	45.71	Low
4 ha to 10 ha	4.2	23.2	38.42	Low
2 ha to 4 ha	10.9	29.8	NA	Moderate
1 ha to 2 ha	17.9	22.1	17.33	Severe
Less than 1.0 ha	67.3	22.5		Severe

of crops (excluding horticulture) in the total value of output was 45 percent which has marginally declined as compared to value of output in 1999–2000 (47.3 percent). While other sub-sectors were almost on the same scale, the significant shift was noticed in livestock which has moved from 23 to 26.4 percent and the agroforestry which declined from 9.9 to 7.3 percent. The value of output in Livestock sector grew over 3.5 times closely followed by fisheries at 3.25 times, horticulture at 2.95 times. The crop sector VOP increased by 2.8 times and the lowest for agroforestry was 2.2 times. While the composition of the value of output over time did not change much with crop sector dominating over others, the rate of growth in value of output has dramatically tilted towards the high value commodities like horticulture and vegetables, livestock and fisheries. This is evident from changes in the value of output over the time period 1999–2011 which indicated almost 1.5 to 2 times higher growth in livestock and fisheries as compared to crop sector.

Figure 1. Growth in value of output in different subsectors of agriculture over time



The future needs reorientation for product diversification. While green revolution technologies favouring intensification was important in first 30 years of independence, the technologies leading to diversification particularly towards product and process diversification favouring fruits, vegetables, flowers, and high value commodities are crucial catalysts to increase income from declining and depleting land and water. Vertical diversification in these

high value commodities can provide better and quality employment fetching more returns to the small-sized farms. The competitiveness for export promotion would be needed. Added to that, a strong hand holding with small growers is needed for credit and risk management. The absolute employment and share of agriculture in employment generation over time, in general, has shown a definite trend of moving away of the rural workforce from agriculture to non-agriculture sectors. However, Maharashtra was the only state wherein the share of employment in agriculture in 2009–10 increased as compared to 2004–05 (see Figure 4 on page 21). The diversified farming has been attributed as one of the major drivers for attracting more employment in agriculture for social security.

It is an established fact that the states with higher diversification and positive movement towards diversified farming attract more employment in agriculture while shift of rural workforce from agriculture to non-agricultural activities has been a general phenomenon. There has been a regional disparity too. While northern and southern regions together contributed about 50 percent of the value of output initially which gradually declined to 45 percent in 2010–11, the contribution of western arid region increased from close to 10 percent in 1999–2000 to about 14 percent. India is endowed with the largest livestock population in the world. According to latest Livestock Census (2019), about 57.5 percent of the world's buffalo population and 71.5 percent of the cattle population are in India. The country also has about 72 million sheep, 140.5 million goats and about 11.1 million pig. Animal husbandry, dairying and fisheries activities, thus play an important role in the socio-economic development of rural India while contributing to the food basket, nutrition security and household income of the farmers. The sub sector provides gainful employment in the rural areas, particularly among the landless, small and marginal farmers and women. Livestock are the best insurance for farmers against vagaries of nature like drought and other natural calamities.

Government Initiatives in Agriculture for Social Security

Starting with the latest initiatives in the form of Aatmanirbhar Bharat with much needed reforms

Figure 8. Diversification in Agriculture and Employment



Source: Land Use Statistics of DCL, BMCPA and Agriculture at a Glance, different issues.

In agricultural marketing and deciding his price while entering into contract farming with sponsors (private companies) and land tenancy reforms, the Government recently took some policy decisions for imparting social security to millions of farmers and agricultural workers including the animal rearers and fishermen. The PM-Kisan Samman Nidhi Yojana (PM-KISAN) is one of its kind which provides direct income support to the farmers. The latest progress report available on official website of the Government has demonstrated that over 8.25 crore farmers have got income support under the programmes. The risk of crop failure make a farmer and his dependents vulnerable in society. To offset such vulnerability, PM-Fasal Bima Yojana was launched in 2016 and further improved over time. Since, Kharif 2016, the cumulative coverage has been over 9.7 crore farmers. One of the biggest social security net for old age farmers has been introduced in the form of Kisan Maandhan Yojana under which a farmers will get Rs. 3000 per month when he/she attains the age of 60 years. The insurance of fishermen under Fisherman welfare scheme has been operational for social security against any eventuality in the risk prone profession. The agricultural credit and interest subvention is another set of financial inclusion instruments that have been adding to social security to millions of small and marginal farmers and those who work on their farms.

While direct benefit transfer in the form of PM-KISAN is operational with a universal coverage, the much larger inclusion that will impart social security to millions of the landless is providing agricultural credit to lessee cultivators (those who cultivate on leased-in land) and the equivalent credit and interest subvention to animal husbandry and dairy. Such incentives were long pending demands for the benefits of those who contribute significantly for the development of rural India but excluded for the want of some rights of records. Our biggest responsibility is to honour, in letter and spirit, the legal commitments made in Mahatma Gandhi National Rural Employment Guarantee Act, 2005 and National Food Security Act, 2013 for improving the much-needed social security in rural India. The reforms in agriculture has set the tone for price-led prosperity in agriculture and allied activities which is likely to be a game changer in inclusive development of rural India to make the country self-reliant in all spheres of economic and social activities.

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Education-The Backbone of Development

Summary

In India, social security has been a prime focus area across various plans and policies of the Government. Over the last two decades or so, there have been a major slew of measures in sync with the need for greater recognition to social and economic rights. Education is considered as the backbone of development and is recognised as one of the most important instruments to alleviate poverty and reduce inequality. It can guarantee social security with triple effects: direct effect on human dimensions of human development, through its correlation with improvements in health, strengthening the democracy and ensuring good governance.

With rapid economic growth and social development in the last few decades, India has witnessed considerable improvements in health and education as well as falling poverty rates. However, as is true in most parts of the world, the fruits of economic growth tend to accrue disproportionately to a small section of society. Consequently, increasing inequality has been a massive drawback of our growth story. The top one percent of India's population holds three-fourth of the national wealth while the bottom 60 percent owns less than five percent of the country's wealth.¹ Approximately 26 percent of people are illiterate²; over 80 percent of the nation's labor force works in the unorganised informal sector and over one-fifth of India's people live below the poverty line.³

Social Security: The Rationale

The poor tend to be the most vulnerable, facing greater risks and insecurity from health

problems, structural adjustments to the economy, globalisation, climate change and natural calamities. To ensure that the benefits of economic growth trickle down to the poorest sections of society and alleviate poverty, social security programmes are critical. The term 'social security' broadly refers to guarantees that secure protection for the poor and vulnerable, preventing or eliminating exclusion.

In India, social security has been a prime focus area across various plans and policies of the Government. Over the last two decades or so, there have been a major slew of measures in sync with the need for greater recognition to social and economic rights. These measures include a plethora of schemes covering both basic services and social benefits like access to public health, education, sanitation, and food security as well as minimum income support. Most of these programmes are aimed at addressing deprivations in capability (low educational attainment, inadequate nutrition, etc.)

rather than providing safety nets to deal with contingency risks such as health shocks or deaths. Such social protection helps with the absorption of shocks, minimising adverse impacts on the vulnerable and making the growth process more equitable.

Social Security and Education

Education is considered as the backbone of development and is recognised as one of the most important instruments to alleviate poverty and reduce inequality. It can guarantee



social security with ripple effects across other critical dimensions of human development, through its correlation with improvements in health, strengthening the democracy and ensuring good governance.

India has made massive strides in improving indicators related to education as evidenced in the Table 1. In the decade between 2008 and 2018, the gross enrolment ratio and transition rate surpassed the 90 percent mark; the drop-out rate almost quartered, and facility-based indicators reached near-universal coverage. The number of schools having electricity almost tripled in the last 10 years.

Table 1: Trends in Elementary Education in India

Indicator	2008-09	2018-19
Enrolment-related indicators		
Gross enrolment ratio	82.5	93.64
Transition rate from primary to upper-primary level	80.7	80.36
Drop-out rate	8.0	3.72
Facility indicators		
percent Schools with drinking water	87.8	99.97
percent Schools with girls' toilet	50.6	95.69
percent Schools having electricity	35.6	96.25

Source: Unified District Information System for Education (UDISE)

The upward trends in the status of Indian education are a result of consistent efforts by the Central and State governments.

Programmes

Efforts of the Government have continuously reflected the key role of the State in providing minimum levels of employment, education and food as basic entitlements for the citizenry. In fact, the Constitution of India, adopted way back in 1950, contains all the ingredients for the States to move towards the realisation of socio-economic rights. This forms the very foundation for the rights-based approach behind the design of India's welfare system, ensuring social security by administering greater power to the underprivileged and building an equitable society.

A lot of the measures taken are complementary in nature and the article distils its focus on the major interventions undertaken till date.

1. Mid-Day Meals

Based on the initial success of school meals in States like Tamil Nadu, the Central Government wanted to expand its coverage through the National Program of Nutritional Support for Primary Education (NPSPE), launched in 1995. Under the programme, dry rations – monthly quotas for wheat/rice, were distributed to students. Responding to a public-interest petition on the Right to Food on November 28, 2001, the Supreme Court directed all State governments to initiate the provision of cooked mid-day meals in primary schools. Over the next three-four years, school meals were in place throughout India. Since then, the quality and menu of the meals has been steadily improving over time.

The objective of the school meals programme is to boost efforts to universalise education by increasing enrolment, retention and attendance while improving nutritional levels among children. Classroom hunger irrefutably impacts learning. A hungry child is less likely to attend school and is more susceptible to illnesses. Simultaneously addressing food security and education, the scheme helps children from disadvantaged communities to collectively combat hunger, poverty and illiteracy.

The largest feeding programme in the world, the Mid-Day Meal scheme impacts around 10 crore children in India by contributing to better nutrition, enhancing school participation, improving learning outcomes and increasing social equity. For some children from the most vulnerable groups, these meals are often the only source of food during the day. The scheme, while achieving its objectives also has significant gender-related benefits. By employing over 25 lakh cook-cum-helpers, it creates job opportunities for local women and reduces the economic burden on poor households. The scheme is perhaps one of India's most successful and cost-effective measures, and is hugely credited for the improved status of education. For the fiscal year (FY) 2020-21, the scheme has been provided a budgetary allocation



of Rs. 11,000 crores, amounting to about 20 percent of the total budget for centrally-sponsored schemes in school education.

2. The Integrated Child Development Services

The Integrated Child Development Services (ICDS) scheme, one of the flagship programmes of the Government of India, is the largest programme for promotion of maternal and child health, and nutrition in India. It was launched in 1975 in pursuance of the National Policy for Children. It provides nutrition, health and pre-school education to children under the age of six through child care centres or anganwadis staffed by local women workers or helpers. These centres offer food, games and regular health check-ups. For younger children, weekly or monthly Take Home Rations (THR) are provided along with health services like immunisation. The Scheme also provides nutrition and health services to pregnant women, lactating mothers and adolescent girls.

The ICDS was first started in 1955 and in 2006, a Supreme Court declaration came into force establishing that all children under six years of age are entitled to ICDS services as a matter of right. The subsequent expansion of ICDS has led to an accelerated improvement in anthropometric indicators of child nutrition as well as child vaccination and institutional deliveries.

With a target coverage of 15.8 crore children between the ages 0-6, the scheme represents the largest unique early childhood care and education programme in the world, currently offered through over 14 lakh anganwadi centres. Given that the highest economic returns accrue at the earliest stages of education, the scheme significantly contributes towards ensuring strong foundations of learning. In the fiscal year 2020-21, the Umbrella ICDS scheme got a whopping allocation of INR 20,557 crores, which is over 95 percent of the budgetary allocation to centrally-sponsored schemes of the Ministry of Women and Child Development.

3. Sarva Shiksha Abhiyan

Since the 1990s, the Government focused on the universalisation of education through centrally-sponsored schemes like the Operation Blackboard and State-initiatives such as the District Primary Education Program (DPEP). These

paved the way for the launch of the Sarva Shiksha Abhiyan (SSA) in 2001 with clearly defined targets for achieving elementary school enrolments and retention. The programme supported the setting up of new schools in habitations that did not have schooling facilities and the provision of additional classrooms, toilets, drinking water, maintenance and school improvement grants. It also focused on strengthening teaching resources through extensive training, grants for developing teaching-learning materials and ensuring academic support at the district, block and even cluster level. It sought to provide quality elementary education including life skills with a special focus on education of girls and Children With Special Needs (CWSN). The core focus areas include access and retention; infrastructure development; equality and providing quality education.

In 2005, the program guidelines were subsequently revised to support the norms, standards and free entitlements mandated by the Right to Education Act. As of 2017, the scheme was serving 19.2 crore children across more than 30 lakh habitations.

In 2018-19, the Union Budget proposed an integrated approach to school education. Aiming to treat the school education space from pre-nursery to Class 12 holistically as a continuum, the Government subsumed the SSA for elementary education, the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) for secondary education, and the scheme for Teacher Education into the Samagra Shiksha scheme, catering to all 23 crore school students. The major objectives of the Scheme include enhancing learning outcomes of students; bridging social and gender gaps as well as ensuring equity and inclusion at all levels of school education; insuring minimum standards in schooling provision; promoting vocationalisation of education; supporting States in the implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009; and the strengthening and up-gradation of nodal agencies for teacher training. The budgetary allocation to the scheme for FY 2020-21 is almost INR 40,000 crores.

4. The Right to Education

Initially recognised as a fundamental right by the Supreme Court in *Mohini Jain vs. Union*

of India (1992) 3 SCC 666, the Right to Education (RTE) was enshrined as a law in the following years. The Right to Education is directly linked to the Right to Life under the Indian Constitution. As the parliament passed the 86th Amendment to the Constitution in 2002, Article 21A was instituted in the Fundamental Rights section declaring free and compulsory education to all children between the ages of 6–14 years. Following a detailed process of comments and deliberation on several drafts of the education bill, the Union Cabinet stamped its seal of approval in 2008. Subsequently, the Right to Education Act was passed in Parliament on August 4, 2009, coming into force from April 1, 2010. This was a landmark moment in Indian history as the country joined the pool of around 140 countries that declared education as a fundamental right.

In addition to free and compulsory education, The RTE also requires a pupil-teacher ratio of 30:1 for every primary school and 35:1 for every upper-primary school. While providing for infrastructure improvements, it also ensures that parents or guardians do not bear any direct costs for uniforms, textbooks, meals, transport, etc. Education is completely free till a child completes elementary stages of schooling.

5. Draft National Education Policy

Laying the foundations for the future of education, the draft National Education Policy (NEP) 2020, is due to be released shortly. The policy envisions an India-centric education system, which contributes to equitable and sustainable transformation by providing high quality education for all. The NEP aims to provide early childhood care and education for all children aged 3-6 by 2025; ensure universal access and retention across all levels of school education and 100 percent youth and adult literacy by 2050. Further, it calls for placing the students and teachers at the centre of all reforms, improving school governance, expanding the Mid-Day Meal programme and strengthening the Right to Education. Its effective implementation is imperative to strengthen the extant social security measures.

6. Aatmanirbhar Bharat Abhiyan

The COVID-19 pandemic forced the closure of over 15 lakh schools and 40,000 higher education institutions, serving as a credible threat to social security, disrupting the learning

process. While unprecedented, the pandemic has disproportionate consequences on the social fabric with the most adverse effects on the poor. As the creamier layers of society have shifted to online modes of learning, the digital divide is exposing threats to equitable access to education. The coronavirus establishes a case for furthering social security measures, exposing greater vulnerabilities among people and within the system. To ensure minimal disruptions to learning, the central government has identified critical interventions, formulating a relief package.

As part of the *Aatmanirbhar Bharat Abhiyan*, the Prime Minister announced a special economic and comprehensive package, signaling a clarion call for a self-reliant India. Education has been identified as one of the core sectors with the main post-COVID theme of ‘technology-driven education with equity’.

PM E-Vidya, a programme for multi-mode access to online education will be launched shortly to include facilities to support school education in States/UTs under the Digital Infrastructure for Knowledge Sharing, DIKSHA (one nation, one digital platform) programme. Extensive use of radio and podcasts is being envisioned along with the use of Television. Towards this end, 'one channel per class' is being considered through the SWAYAM

 **TIP** [Tech Tip](#)

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Prabha direct-to-home television platform. For CWSN, e-content is being designed for the visually and hearing-impaired. Over 200 textbooks have been added to the digital repository, *Upashikha*.

The Ministry of Human Resource Development (MHRD) is also working on Manodarpan, an initiative to provide psychosocial support to students and families for mental health and well-being. The National Council for Educational Research and Training (NCERT) is developing a new curricular framework for schools and teachers with a specialised focus on early childhood, and by December 2020, a National Foundational Literacy and Numeracy Mission will be launched so that every child attains pre-defined learning outcomes in Grade 5 by 2025.

Expanding Horizons of Digital Education

- Education for All:** A toolkit for government programme managers for students, teachers & families for mental health & emotional well-being.
- Free Online Education for All:** An initiative to start online courses.
- Online assessment of Secondary Education & OOC:** An endeavour to be used from grade 9-12 to help in making assessments for nearly 3.2 crore students.
- New National Curriculum & Pedagogical Frameworks:** For school education, teacher education & life orientation along the same.

Expanding Horizons of Digital Education

In addition to these major programmes, the Government also has scholarships and other dedicated schemes for girls, select communities, minorities and CWSN students. In fact, in an effort to ensure the fruits of growth reach the 117 most backward regions of the country, the Aspirational Districts Programme was launched in January 2018, to promote convergence of schemes, collaboration across levels of the government and drive competition among the districts. Home to about 14 percent of India's population, the Aspirational Districts programme

focuses closely on improving people's ability to participate fully in the burgeoning economy, facilitating inclusive growth for all. "Sabka Saath Sabka Vikas" Education is a core programmematic focus area in addition to health and nutrition, agriculture and water resources, financial inclusion and skill development, and basic infrastructure.

Challenges

Through the development trajectory in education has been positive, there is still a long way to go. The National Sample Survey Office (NSSO), 2014 estimated that 3.2 crore children up to the age of 13 have never attended any school. The drop-out rate worsens with grade-progression and at the secondary level it is almost 10 percent. Further, quality of education remains a major concern. The Annual Status of Education Report (ASER), 2018, reveals that nearly 50 percent and 27 percent of students in Grade V and Grade VIII, respectively, cannot read a Grade II level textbook. Even the Government's competency-based National Achievement Survey (NAS) conducted by the NCERT in 2017 cautions grade-level competencies to be as low as 40-50 percent across subjects.

Extrapolations from a cross-country comparison across diverse countries on human-development parameters related to education also highlights India's relatively lower status of education. The Gross enrolment ratio at the pre-primary stages in China is over six times that of India; the expected and mean years of schooling is lower than other countries with starker differences for females; the share of government expenditure on education is also lesser. Norway, with the highest score in the United Nations Education Index, spends twice as much as India in terms of the percentage allocation of its Gross Domestic Product (GDP).

Way Forward

While the record of social security measures in education varies between states, there is a large pool of evidence suggestive of its important contribution to human welfare. There remains ample scope to extend these efforts and create strong policies, driven by evidence and drawn from international experiences. It is hoped that

Table 2: A Cross-Country Comparison in School Education

Indicators		India	Norway	USA	China
Overall Performance on Human Development Index (HDI)	Education index score	0.358	0.919	0.879	0.689
	HDI score	0.647	0.951	0.879	0.218
	HDI Rank	129	1	25	65
	Relative performance (by ranking)	Low	Highest	High	Medium
Access	Gross enrollment ratio:				
	Pre-primary	54	95	72	81
	Primary	115	100	101	102
	Secondary	75	217	99	55
	Primary school drop-out rate	12.9	0.8	NA	NA
	Pupil-teacher ratio (primary)	35	9	14	37
Equity	Survival rate to the last grade of lower secondary general education	94	97	NA	92
	Expected years of schooling	Male	11.9	18.8	15.7
		Female	12.8	17.4	14.1
	Mean years of schooling	Male	8.2	12.5	12.4
		Female	4.7	12.6	13.5
Infrastructure	percentage of secondary schools with access to internet	NA	100	100	NA
Governance	Primary school teachers trained to teach	73	NA	NA	NA
	Government expenditure on education (as a percent of GDP)	3.8	7.6	3.0	NA

Note: NA= Not Available

Source: Human Development Report 2016; United Nations Development Program

extant debates on enhancing social security such as universalisation vs. targeting continue to contribute to efforts to augment the foundations of social protection in India.

Addressing challenges to social security through education requires action on three fronts. First is the need to address the fiscal challenge. Mobilising additional resources by increasing the tax to GDP ratio is critical to ensuring a stronger education system. Second, the design and dimensions of various schemes need to be carefully re-examined and evaluated, along with a scoping exercise detailing necessary course corrections. Third, there is significant potential to increase implementation efficacy through enhanced accountability and pro-active measures to reach the most vulnerable sections of society.

Quality education is critical to sustainable development. With a decade left to achieve Goal number 4 of Sustainable Development, and estimates suggesting India will be home to the largest working age population, it is imperative to strengthen the social security net by addressing some of the current issues now. This is essential to catapult India's development journey.

Footnotes

1. Oxfam Report "Public Good or Private Wealth?", 2015
2. Census Survey, 2001
3. The World Bank

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A Step Towards Health Security

Dr. Anupam Banerjee and Dr. S. K. Bhattacharya

It is imperative to understand that health security and human security are directly linked to each other; an unhealthy individual or society is likely to make the community weaker which in turn would impinge upon the national security. Thus, all national governments need to prioritise and address the health security risks at the earliest. Health security capacity in every country should be closely monitored and the surveillance results should be published at least once in every two years. There is a need to reveal political and socio-economic risk factors that can impede the effectiveness related to the management of outbreaks including the conflict zone.

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948).



Healthy, happy and well-nourished citizenry is the prerequisite for a healthy nation. All over the world, we have been/we are and it is very likely that we will continue to face massive outbreaks that most of the countries in the past could not, now they are not able to and in the future they may not be in a position to handle properly. In addition to climate change and urbanization, international/national level travel, mass-migration or displacement - now happening in nearly every corner of the globe, create conditions favouring the emergence and spread of various pathogens. In addition, there is an increased potential threat of accidental or deliberate release of deadly engineered pathogens, which could cause even greater harm than the naturally occurring pandemics. The irony is that the same scientific advances which help to fight epidemic diseases sometimes allow certain pathogens to be engineered or recreated in the laboratories causing deadly diseases.

The World Health Organization or WHO has defined global public health security as "the activities required, both proactive and reactive, to minimize the danger and impact of acute public health events that endanger people's health across geographical regions and international boundaries". Health Security does not exist in isolation—it is dependent on food and nutrition security, economic/financial security as well as the societal support and many other factors. It requires safe and healthy environments, good infrastructure for physical activity and an all-round security (including psychological aspects) for the individuals to lead a healthy, happy and contented life.

National health security is fundamentally a weak link all around the world. None of the nations is fully prepared to handle epidemics or pandemics; every country has many of its major gaps to be addressed for amicably handling the adverse situations arising out of such incidents. Disparities in the nation's capacities and a lack of attention by the leaders exacerbate the preparedness gaps towards the biological threats.

India's National Health Policy framed in 1983 was re-formulated by the Ministry of Health and Family Welfare in 2017, to address the current emerging challenges necessitated by the changing socio-economic and epidemiological conditions. It focuses on preventive and promotive health care and the primary healthcare which is comprehensive and universal. It promotes patient centric approach providing quality care, inter-sectoral convergence as well as easy access, affordability with appropriate use of technology as its salient features.

In India and in other countries too, the COVID-19 pandemic has dredged up the issue of health security which denotes the protection of national populations from global pandemic threats. Hence, COVID-19 prevention and management mandated India to prioritise health security at the cost of economic security. The Government has wisely formulated the policies to serve the urgent human needs without compromising economic security beyond a temporary phase while limiting the adverse impact of COVID-19. In the absence of suitable vaccines or treatment, a densely populated country like India had to and needs to prevent the spread of this disease at any cost.

Hence, the Prime Minister outlined the four major pillars of healthcare which need to be focused:

- Preventive Healthcare
- Affordable Healthcare
- Improvements in the supply of equipment and medicines
- Mission mode interventions.

Realising that country's health care system will not be in a position to handle the explosion of cases, the Government took a globally acclaimed early decision to prioritise health security during the first phase of COVID-19 war. Inspired by the three Ps -precaution, prevention and protection, restrictive measures were taken (Jan-Feb 2020) even before WHO declaring it a global pandemic. Along with strict social distancing norms, a complete lockdown (23rd March-3rd May) was imposed in the country to prevent the catastrophic stage-3 of the pandemic - the community spread. Simultaneously, arrangements were made for up-scaling of rapid testing, citizens' empowerment, contact tracing (through Aarogya Setu app), quarantining, dedicated hospital facilities and Ayushman Bharat coverage. India joined global efforts in pursuing the development of vaccine and therapeutics on war footing.

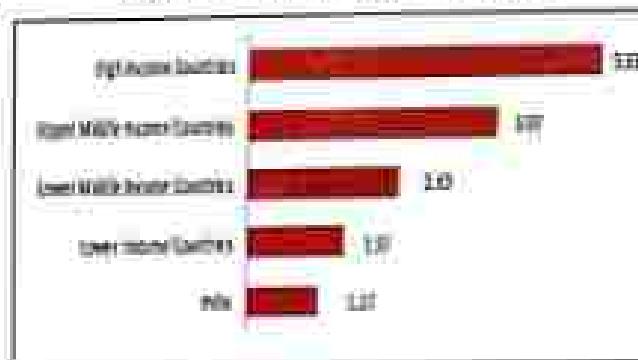
Under the AatmaNirbhar Bharat package, Government of India decided to provide free of cost food grains @ 5 Kg/person/month for two months (May-June 2020), to nearly 8 Crore migrant labourers who are not covered under NFSA or the PDS scheme. Under this package, the all India allocation of food grains - nearly 8 Lakh MT at an estimated total cost of about Rs. 3500 Crore is fully to be borne by the Government of India.

It is imperative to understand that health security and human security are directly linked to each other; an unhealthy individual or society is likely to make the community insecure which in turn would impinge upon the national security. Thus, all national governments need to prioritise and address the health security risks at the earliest. Health security capacity in every country should be closely monitored and the surveillance results should be published at least once in every two years. There is a need to curtail political and socioeconomics risk factors that can impede the actions/activities related to the management of outbreak including the conflict zones.

India's Global Health Security Index score is 46.5, and out of 195 nations, the country ranks 57th (Global Health Security Index Report, 2019).

In India, the cost of treatment has been accelerating which has led to inequities in access to health care services. The nation spends only 1.28 percent of its GDP (2017-18) as public expenditure on health; per capita public expenditure has gone up from Rs. 621 (2009-10) to Rs. 1657 (2017-18). The Centre: State share in total public expenditure on health was 37.63 in 2017-18.

Figure 1: Public Health Expenditure (as percent GDP) across World Bank Income Groups – 2016 (Global Health Expenditure Database, WHO)



As per the India State-Level Disease Burden Initiative (2017), the disease burden due to communicable, maternal, neonatal and nutritional diseases - as measured by Disability-adjusted life years (DALYs), dropped from 61 percent (1990) to 33 percent (2016). On the other hand, disease burden due to NCDs increased from 30 percent (1990) to 55 percent (2016). The epidemiological transition, however, varies widely among Indian states: 48-75 percent for NCDs, 14-43 percent for infectious and associated diseases and 9-14 percent for injuries.

For augmenting Healthcare in India, the government had recently announced an emergency healthcare package of Rs. 15,000 Crore for strengthening the personal protection equipment (PPEs) for medical/healthcare professionals, increasing the number of isolation wards and ICU beds, and the training of medical/paramedical manpower. In addition, it was proposed to increase the number of testing laboratories (~300), manufacture of PPEs, Face-masks (2/3 ply surgical masks; N95 masks) and hand sanitizers as well as the creation of over 800

dedicated COVID hospitals. Further, the import of ventilators, PPE kits, face/surgical masks, Covid-19 test kits have been exempted from Basic Customs Duty and Health cess.

A public charitable trust – 'Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund' (PM CARES Fund)* has been created to address the issues relating to emergency/distress situations and calamities – be these manmade or natural.

- **Ayushman Bharat** – Government of India's flagship scheme recommended by the National Health Policy (NHP-2017) was launched to achieve the vision of Universal Health Coverage (UHC). It has been designed to meet the Sustainable Development Goals (SDGs) and its underlining commitment – 'leave no one behind'. It attempts to move from sectoral/segmented approach to a comprehensive need-based health care service delivery. further, it aims to undertake path-breaking interventions to holistically address the healthcare system (covering prevention, promotion and ambulatory care) at the primary, secondary and tertiary levels; it adopts a continuum-care approach, comprising of two inter-related components:
 - Health and Wellness Centres (HWCs) to deliver Comprehensive Primary Health Care (CPHC) bringing healthcare closer to the residence of masses. These centres cover both – maternal and child health services as well as non-communicable diseases; and provide free essential drugs/diagnostic services.
 - Pradhan Mantri Jan Arogya Yojana (PM-JAY) is the world's largest health insurance/assurance scheme fully financed by the government. It provides coverage of 5 lakh INR/family/year for secondary and tertiary care hospitalization across public and private empanelled hospitals in the country. Within a period of two years, this initiative has impacted the lives of more than one Crore people. To date, more than 20,700 HWCs have become operational and are providing services across the country.
 - Pradhan Mantri Garib Kalyan Yojana-a relief



package of Rs 1.70 Lakh Crore was declared on 20th March, 2020 for the poor to help them fight against Corona Virus. Under this package:

- Women Jan Dhan account holders (~20 crore) to get Rs. 500 per month for the next three months.
- Nearly 10 crore poor people to get 5 kg wheat or rice and 1 kg of pulses and other food items (free of cost) every month for the next three months.
- 8 crore poor families to be provided free of cost LPG cylinders for 3 months w.e.f 1st April 2020.
- increase in MGNREGA wages from Rs. 182/day to 202/day benefitting nearly 13.62 crore families.
- insurance cover of Rs 50 Lakh per health worker fighting COVID-19 to be provided under the Insurance Scheme.
- Pradhan Mantri Ujjwala Yojana promotes the use of LPG keeping in view its health benefits (particularly women/children), environmental safety and enhanced economic productivity of women. By May 2020, nearly 804 Lakh LPG connections (clean cooking fuel) have already been given to the poor households.
- POSHAN Abhiyan/National Nutrition Mission (NNM): It is the Prime Minister's over-arching scheme for holistic nutrition, to improve nutritional outcomes of the children, pregnant women and nursing mothers.
 - Under the Abhiyan's Home Based Young Child Care programmes, ASHA workers are to make 5 additional visits to the homes of children aged up to 15 months, to specially counsel on nutrition and Early Childhood Development. For this initiative, Rs. 217 Crore has been sanctioned to the States/UTs.
 - Similarly, for the Anaemia Mukt Bharat programmes (under POSHAN Abhiyan), Rs. 425 Crore has been allocated by Government of India to all States/UTs for implementing the tests, treatment and counselling of anaemic patients so as to achieve a 3 percent reduction in anaemia.



- **Pradhan Mantri Matru Vandana Yojana:** This scheme provides cash incentives to pregnant women and nursing mothers to improve health outcomes of the mother and the new-born.
- **Pradhan Mantri Surakshit Matritis Abhiyan** is conducted on the 9th of every month (like Pulse Polio Programmes); and within 3 months, nearly 9.64 lakh Ante-Natal Check-Ups have been conducted. To ensure dignified motherhood, 337 labour room/operation theatres have been certified to provide quality services under LaQSHYA (Labour Room Quality Improvement Initiative).
- **Maternity Benefit Amendment Act-** Government's new maternity policy raises the duration of paid maternity leave for women employees to 26 weeks so as to promote breast-feeding and infant care.
- **Mental Healthcare Act (2017)** adopts a rights-based statutory framework for mental health in India and strengthens equality and equity in providing mental healthcare services to protect the rights of people having mental health problems. Further, it ensures that they receive optimal care and are able to live with respect and dignity.
- **National AIDS Control Programme:** In India, HIV/AIDS was first reported in 1986. Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (Prevention and Control) Act, 2017 aims to end this epidemic by 2030. It also emphasises that the people living with AIDS are not given under treatment at the employment/educational establishments or in providing healthcare and insurance services. In June 2016, the MHRW reiterated India's commitment at the UN High-Level Meeting on AIDS towards the goal of 'ending the AIDS epidemic as a public health threat by 2030', as per the Joint UN Programmes on HIV/AIDS (UNAIDS) Fast Track targets for 2030 and the SDGs for 2030. This approach has been articulated in the NHP and its implementation framework (adopted in 2017) to be implemented by NACO (National AIDS Control Organization) through a seven-year National Strategic Plan on HIV/AIDS and STI (Sexually Transmitted Infection), 2017-24. NSP will herald the country to the midpoint

of the 2030 goals. The next seven years are, therefore, critical and investments made now will result in substantive gains towards 'Ending of AIDS'.

NACO's vision is "Paving the way for an AIDS free India" through 'attaining universal coverage of HIV prevention, treatment and care through continuum of services that are effective, inclusive, equitable and adapted to needs'. The goals remain the 'Three Zeros' - zero new infections, zero AIDS-related deaths and zero discrimination - forming the basis of this strategic plan.

- **Revised National Tuberculosis Control Programme:** India has been engaged in Tuberculosis control activities for more than 50 years yet it continues to be India's greatest health crisis; nearly 4,80,000 Indians die of TB every year.
- **National Strategic Plan for tuberculosis elimination (2017-2025)** proposes bold strategies with commensurate resources to rapidly curb TB in the country by 2030 in line with the global 'End TB targets' and SDGs to attain TB-free India. The four strategic pillars of TB elimination include "Detect – Treat – Prevent – Build" (DTPB). NIKSHAY – the web based TB reporting has enabled to capture/transfer individual patient data from remotest health centres in the country.
- **Elimination of Communicable diseases - Action plans to eliminate Leprosy by 2018; Measles by 2020 and Tuberculosis by 2025** are being implemented.
- **E-Health:** Under the Digital India campaign, E-Health initiative was launched in July 2015 with the broad aim to provide effective, economical and timely healthcare services to all individuals; especially the ones with little access to healthcare services.
- **Affordable and Quality Health-Care for All (Availability of cheaper medicines):** Nearly 1054 essential medicines, including life-saving drugs has been brought under the Price Control regime after May 2014. The AMRIT (Affordable Medicines and Reliable implants for Treatment) pharmacies provide drugs for cancer and cardiovascular diseases along with cardiac implants at a 60-90 percent discount.



- Employees' State Insurance Scheme (ESIS) was launched under the Employees' State Insurance Act (1948) to protect health interests of the workers and their immediate dependents. It is a contributory scheme on the patterns of social health insurance. The existing wage limit for coverage under the Act is Rs. 21,000/- per month (w.e.f. 01/01/2017).
- Rashtriya Swasthya Bima Yojana (RSBY) was launched in October 2007 by the Ministry of Labour and Employment to provide health insurance coverage for BPL families.
- Under Health Minister's Discretionary Grant, financial assistance up to Rs. 1,25,000 is available under this scheme for poor indigent patients to defray a part of the expenditure on hospitalization/treatment in Government hospitals where free medical facilities are not available.
- Rashtriya Arogya Nidhi was set up in 1997 for providing financial assistance to patients from BPL families suffering from major life threatening diseases receiving medical treatment in Government Hospitals.
- National Organ Transplant Programme: After level National Organ & Tissue Transplant Organisation (NOTTO) has been set-up for establishing country-wide network of transplant and retrieval hospitals and tissue banks. Five Regional Organ and Tissue Transplant Organizations (ROTO) have been established in Tamil Nadu, Maharashtra, Assam, West Bengal and Chandigarh.
- Drug Regulation efforts provide risk-based classification, licensing and regulation of medical devices.
- National Tobacco Control Programme (NTCP): From April 2016, specified health warnings on tobacco products made more prominent covering nearly 85 percent of the principal display area of the packs. Further, quit-line number has been included in new specified health warnings w.e.f. September 2018. Inclusion of Bidis in Tax Net: Bidis has been kept along with all tobacco products and, thus, fetches 28 percent Goods and Service Tax (GST). As per the Global Adult Tobacco Survey

(2016-17), tobacco usage has gone down from 34.6 percent (2009-10) to 28.6 percent (2016-17).

- National Vector Borne Disease Control Programmes is one of the most comprehensive and multi-faceted public health programmes in the country, and deals with the prevention and control of vector borne diseases namely Malaria, Dengue, Chikungunya, Japanese Encephalitis (JE), Acute Encephalitis Syndrome (AES), Kala-azar and Filariasis.

Ministry of Jal Shakti under the Jai Jeevan Mission aims to provide tap water to every household by 2024.

Safe, accessible, high quality, people-centred and integrated health service delivery systems are critical for attaining universal health coverage. Health service delivery systems are responsible for not only taking care of the patients but also the individuals, families, communities and the populations in general. While the patient-centred care focuses on the individual's seeking care (the patient), people-centred care addresses the health of masses/communities and plays a crucial role in shaping the health policies and health services.

Health service delivery systems should cover the entire spectrum of care from prevention/promotion to diagnostic, rehabilitation and palliative care as well as all other levels of care including self-care, home-care, community-care, primary-care, long-term care and hospital-care so as to provide integrated health services throughout the life cycle. In this regard, WHO is supporting the nations in moving towards universal health coverage by improving the efficiency and effectiveness of their health service delivery systems.

Balanced Diet comprises a variety of foods so as to provide all the essential nutrients/non-nutrient components in adequate amounts & appropriate proportions as per the individual's needs.

Nutritionally adequate and well-balanced diet not only protects the individual against all forms of malnutrition but lays a sound foundation for good health and development. It also helps to prevent non-communicable diseases (including

Table-1: Data Regarding some Vector borne Diseases—Number of Cases & Deaths

Year	Cases	Deaths	Year	Cases	Deaths
2018	1087285	331	2020	29540	2
2019	99911	220	2019	154472	153
Japanese Encephalitis (JE)	2018	1661	2020	311	0
Akute Encephalitis Syndrome (AES)	2014	10867	2020	1054	10
Kala-azar (KA)	2018	9241	2020	700	0

diabetes, cardiovascular diseases, certain cancers and other conditions linked to obesity. There is ample evidence which highlight the benefits of diet high in fruit, vegetables, legumes, nuts and grains; but low in salt, sugar and fat, particularly the saturated and trans fats. Inculcating healthy eating habits begin early in life starting with breast feeding. Educational initiatives for young children and parents further help in establishing healthy dietary patterns which in the long run result in better educational outcomes, greater productivity and lifelong health benefits.

Healthy eating habits, appropriate physical activity and sound lifestyle practices should be an integral part of our day-to-day life so that we can reap the benefits of GOOD HEALTH!!

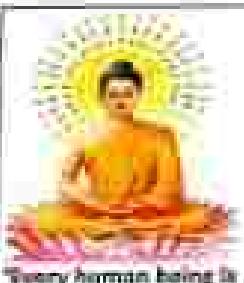
Contrarily, unhealthy diets coupled with lack of physical activity and substance abuse (alcohol, tobacco and drugs) are some of the leading causes of global health risks. However, there are many situations when healthy diet may become inaccessible, particularly in low- and middle-income countries as well as in conditions of food & nutrition insecurity. Globally, an estimated 2 billion people lack access to safe, nutritious and sufficient food. Rapid unplanned urbanisation, changing lifestyles and proliferation of highly processed foods have diverted more people towards unhealthy diets high in energy, fats, simple sugars (empty calories) and salt. Though, the basic principles of healthy eating remain the same for everyone; however, their diet may differ depending on nutritional needs of the individual, locally available/seasonal foods, dietary customs, cultural norms and other factors.

In broader terms, there should be a balance between dietary energy intake and energy expenditure; and the diet should be adequate in proteins, health-promoting fats (omega-3 and omega-6 fatty acids with minimal trans fats),

and important vitamins, minerals, dietary fibre, antioxidants and phytochemicals. There should be enough emphasis on the inclusion of fresh fruit and vegetables in the diet. WHO recommends limiting sodium intake to <2 g/day (equivalent to 5 g salt), reducing sugar to less than 10E percent (ideally 5E percent).

To support the 2030 Agenda for Sustainable Development and the 2016–2025 UN Decade of Action on Nutrition, WHO works with Member States and partners towards the goal of a world free from malnutrition. The SDGs provide a bold and ambitious agenda for the coming future. WHO's core mission is to promote health.

In addition to keeping the world safe and serving the vulnerable, it works to ensure healthy lives and promote well-being for all at all ages, leaving none behind. It targets one billion more people to enjoy better health and well-being by 2030.



'Every human being is the author of his own health or disease'
-Lord Buddha

All the above legislations/acts, policies and programmes implemented in India help in strengthening Health Security of our masses.

The SDGs as well as the recommendations by WHO and other UN bodies provide the needed guidance and support to achieve.....

India's target of a healthy, Happy and Empowered Nation

"Save Shavakku Sukhaan, Save Sanu Kisaney"

(Dr. Santosh Jain Poddar Public Health Nutrition Consultant and Former Director, Institute of Home Economics (University of Delhi), Email: spoddar@gmail.com, Aurobindo Jain is Assistant Professor (Food and Nutrition), Bhagwan Nivedita College (University of Delhi), Email: jain.aurobindo74@gmail.com)

Empowering Rural Communities

10-19-2023

The empowerment of rural communities depends largely upon ameliorating the economic lot of farmers, rural women, unprivileged section of the society and above all the rural youth. In order to make growth truly inclusive, it is imperative to provide formal financial services to all sections of the society (particularly to the rural poor) at sustainable rates, insure them against income shocks during emergencies and above all mobilize their small savings.

Development of rural areas occupies a special significance in the overall socio-economic development of a country like India where nearly 68.84 percent of total population and 72.4 percent of workforce reside in rural areas. The major economic problems faced by the rural people are poverty, unemployment and inequality. The solution of these economic problems is of utmost importance for achieving growth with justice and empowering the rural communities. The thrust of government's economic policies enunciated during the planned era of development has been to bring about an overall socio-economic development coupled with a balanced regional development of the economy with special emphasis on rural areas.

Rural Urban Divide

The rural-urban divide in India is so prominent that per capita income in rural areas is even less than the half of that in urban areas. Per capita net value added in the rural areas is merely Rs. 40,925 as against Rs. 88,435 in urban areas.¹ There is a huge gap between the proportion of population living below poverty line in rural and urban areas. As per the Economic Survey 2019-20, the poverty head count ratio stood at 25.7 percent in rural areas as compared to 18.7 percent in urban areas in 2011-12. The average urban worker earns around 3.3 times more than average agricultural labour. There is large gap between income of farm and non-farm workers also. An average non-farm worker earns nearly 2.8 times more than a farm worker.² Not only this, the rural average Monthly Per Capita Expenditure (MPCE) stood at Rs. 1430 as against Rs. 2630 in urban areas during the same year.³ If the current trends in rural economy particularly agriculture sector are not changed, there will

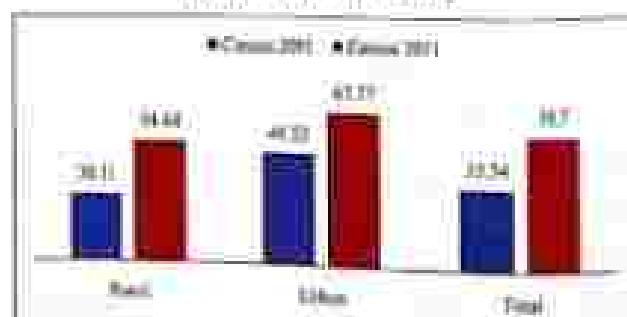


hardly be any improvement in the lot of rural community.

Extent of Rural Financial Inclusion

A large proportion of population in rural areas has an inadequate access to financial services at affordable prices, which is the major factor behind their economic backwardness. As per population census 2011, of the total 16.76 crore rural households, only 54.44 percent have access to formal banking facilities in India (Fig.1). Not only this, according to NABARD All India Rural Financial Inclusion Survey (NAFIS) 2016-17, 30 percent of agricultural households still avail credit from non-institutional sources at

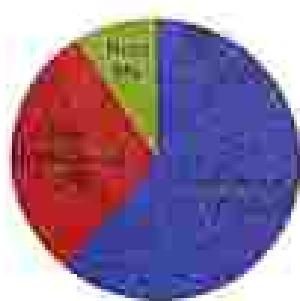
**Figure 1: Outreach of Formal Banking in India
(Households percent)**



Source: Department of Financial Services, Ministry of Finance, GOI.

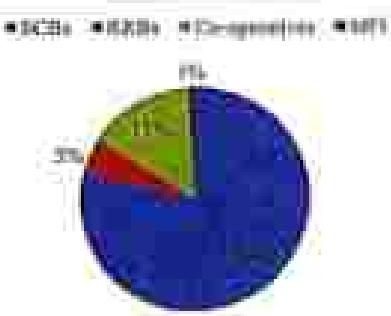
exorbitant rates of interest putting themselves into the clutches of money-lenders and ultimately fall into debt trap (Fig. 2). Among the institutional sources of agriculture credit, a lion's share (79 percent) is contributed by scheduled commercial banks followed by 15 percent disbursed by cooperatives (Fig.3).

Figure 2: Sources of Agriculture Credit in India (2015)



Source: NABARD, All India Rural Financial Institution Survey 2015-17

Figure 3: Sources of Institutional Agriculture Credit in India (2015)



Source: RBI, Report to the Working Group on Review of Agricultural Credit, Deptt. 2018.

Initiatives to Bridge Rural-Urban Divide

Realising the need to boost the income of rural households, particularly those involved in farming sector, the government in the Union budget 2016–17 had announced its resolution to double the farmers' income by the year 2022, when the nation will celebrate 75th year of independence. In order to achieve this gigantic goal within the stipulated time period, impetus is being given to farm as well as non-farm activities. In addition to boosting income from crop cultivation, the focus of attention is on promoting allied and non-farm activities in rural areas so that farmers can get gainful employment in these activities during the slack season. In this context financial inclusion

and digitisation can play a crucial role to provide basic banking facilities to the poor and excluded sections of the society.

In order to make growth truly inclusive, it is imperative to provide formal financial services to all sections of the society (particularly to the rural poor) at reasonable rates, insure them against income shocks during emergencies and above all mobilise their small savings. It further calls for a sound and progressive banking system to broaden and deepen the reach of banking services at the door steps of financially excluded sections in the hinterland.

Financial Inclusion in India

India began the journey of its financial inclusion as early as in 1955, with the nationalisation of Imperial Bank of India and renaming it as State Bank of India. Subsequently, 14 private sector banks in July 1969 and 6 banks in April 1980 were also nationalised. The main objective of nationalisation of banks was to enjoin banking activities in those sectors and areas which previously remained neglected. Thus, the steps taken by the Government towards financial inclusion are traced long back to the mid-fifties. But this concept became popular and gained momentum only after the year 2004 when the Reserve Bank of India set up a commission (Ohan Commission) to make recommendations for greater financial inclusion. To commensurate their banking policies and practices in accordance with the recommendations of the commission, commercial banks started offering the zero balance accounts, popularly known as 'no frill' accounts and issuance of General Credit Cards to their clientele either with nil or very low balances. In 2011, the government launched Swadhar scheme mandating banks to open an outlet in every village with a population of over 2,000 by March 2012. Later on, the scheme was extended to cover villages with population of at least 1,000. Under this scheme, financial institutions appointed commission agents to provide financial services at the door steps of the public in remote rural areas where they were unable to open branches.

Schemes for Financial Inclusion

Many schemes and programmes have been launched by the Government with special impetus to bring the financially excluded persons to the mainstream and create financial awareness among

them, in order to provide access to basic financial services to the weaker sections and low income groups, Pradhan Mantri Jan Dhan Yojana (PMJDY) was launched on August 26, 2014. The plan envisages universal access to banking facilities for every household with at least one basic bank account, easy access to credit, insurance & pension, remittance facility and financial literacy. The beneficiary account holders get RaPay debit card with built-in accident insurance cover of Rs. 1 lakh. All Government financial benefits are channelised through the PMJDY account of the beneficiaries. Of late, the focus of PMJDY has been shifting from opening of accounts for every household to every unbanked adult. As on June 3, 2020, total number of account holders under PMJDY were to the tune of 39.04 crore. Its inclusive aspect is evident from the fact that 24.62 crore i.e. more than 63 percent account holders were rural/semi-urban and 21.39 crore (nearly 55 percent) were women. In addition, 1.26 lakh Bank Mitras have been delivering branchless banking services."

Jan-Dhan-Aadhaar-Mobile (JAM) trinity provides a unique opportunity to transfer all benefits and subsidies of various social welfare schemes in the form of Direct Benefit Transfer (DBT) to the account of beneficiaries. It is the initiative by Government of India to link Jan-Dhan accounts with Aadhar and Mobile numbers of account holders to directly transfer subsidies and other financial benefits to the accounts of intended beneficiaries and eliminate all the intermediate leakages. In fact JAM trinity can act as a driving force to empower the rural communities by providing social security to them. In this direction identification of eligible individuals has become easy through the Aadhaar data base. After identifying eligible beneficiaries, the process of transferring of money has been significantly eased by opening zero balance accounts under the Pradhan Mantri Jan Dhan Yojana. The digital payment mechanism supported by mobile payment technology is of greater use to get money into people's hands instantly and securely with easy and convenient service delivery. With the launch of JAM services, there has been a significant improvement in terms of targeted and accurate payments without any delay, duplication and leakage.

Digital India is another flagship programme of Government of India to empower rural

communities. It was launched on July 1, 2015, with a vision to transform India into a digitally empowered society and knowledge economy. It focuses on the three vision areas (i) development of secure and stable digital infrastructure (ii) electronically deliver integrated Government services across departments by improved internet infrastructure and connectivity and (iii) universal digital empowerment of citizens through digital literacy. The overall goal is to bring transformation in the country by making every household digitally literate to make India the global knowledge hub with information technology being a major driving force. In this context, National Optical Fibre Network, renamed as Bharat Net is also an ambitious initiative to trigger high speed broadband network in rural India. It aims to connect all the 2.5 lakh Gram Panchayats spread over 6600 blocks through high speed broadband optical fibre by March 2020. The rural areas are expected to witness a revolution in the services like e-governance, e-health, e-education, e-banking, e-commerce, etc., through BharatNet.

In order to impart digital literacy in the rural areas of the country, on October 7, 2017, Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) was launched with the aim to empower at least one person per rural household with crucial digital literacy skills. Under this Abhiyan, rural people between the age group of 14 to 60 years are trained without any fees to operate computers, tablets, smart phones, etc., to access government e-services, undertake digital payment, send & receive e-mails through the use of internet. The scheme aims at bridging the rural-urban digital divide, with special emphasis on marginalised sections of society, SC/ST, minorities, OPI, women and differently abled persons. The objective of the scheme is to empower the rural people by making them information technology savvy and actively participate in the process of nation building. Pradhan Mantri Gramin Digital Saksharta Abhiyan is expected to make nearly six crore rural persons digitally literate, reaching to around 40 percent rural households by covering one member from every eligible household in the country by March 2020. Due to widespread digital literacy, there has been a significant growth in digital transactions in the country still there remain the issues relating to poor connectivity of financial institutions, dormant accounts, etc.

In order to widen financial inclusion in hinterland, Small Finance Banks (SFBs) have been

set up in India. The objective of setting up of these banks is to promote financial inclusion in those areas where extending banking services to the un-served and under-served sections of the population is a challenge to the commercial banks. The SFBs are providing banking facilities to small and marginal farmers, small business enterprises, rural artisans, micro and small industries and other unorganised sectors through their modern technology-low cost banking operations.

In fact, financial inclusion should be coupled with financial literacy and education. Whereas, financial inclusion works from the supply side of providing financial services, financial education on the other hand, works from the demand side by promoting awareness among the masses regarding the available financial products, choose the right product and understand the mechanism for availing the services. In order to promote financial literacy and awareness among the populace in the country, RBI has issued guidelines to the banks to create Centres for Financial Literacy (CFL) and make use of various tools for dissemination of financial awareness. The Financial Literacy Centres of banks have been advised to organise target-specific financial literacy camps involving local community and SHGs. It has also been decided to observe one week in a year as Financial Literacy Week starting from the year 2017.

Schemes for Social Security

The empowerment of rural communities depends largely upon ameliorating the economic lot of farmers, rural women, unprivileged section of the society and above all the rural youth. In order to provide an assured income support to small and marginal farmers, a cash transfer scheme sponsored by Government of India, namely, Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is effective from December 1, 2018. Under this scheme an income support of Rs. 6,000 per year is provided to all eligible farmer families irrespective of the size of land holdings. As per the statement of agriculture ministry, the Government has transferred an amount of Rs. 19,100.77 crore to the bank accounts of 8.65 crore farmers under the PM-KISAN up to May 20, 2020, as the first installment of current financial year.²

Under Pradhan Mantri Suraksha Sama Yojana (PMSBY), renewable one year risk coverage of

Rs. 2 lakh for accidental death or full disability and Rs. 1 lakh for partial disability is given to the to the subscribing bank account holders in the age group of 18 to 70 years for a small premium of Rs. 12 per annum. Another insurance product with risk cover of Rs. 2 lakh under Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) is made available to all subscribing bank account holders in the age group of 18 to 50 years, with a premium of Rs. 330 per annum. Both these schemes are being offered by General Insurance Companies with necessary approvals and tie up with banks for this purpose.

Showing concern for the old age income security and financial needs of the working poor, a pension product named Atal Pension Yojana (APY) guaranteed by the Government of India has also been made available to the workers in unorganised sector. The APY is available for those workers (in the age group of 18 to 40 year) who are not covered by any statutory social security scheme and are not income tax payers. Under the scheme, the workers are encouraged to voluntarily save and contribute for their retirement. The government of India co-contributes 50 percent of the subscriber's contribution of Rs. 1000 per annum, whichever is lower. The subscribers, after completing 50 years of age, will receive fixed monthly pension ranging from Rs. 1000 to Rs. 5000 depending on the contributions made.

The Pradhan Mantri Vaya Vandana Yojana is a pension scheme launched with effect from May 4, 2017 by the Government of India, exclusively for the senior citizens aged 60 years and above. Its main objective is to provide social security and to safeguard elderly persons against future fall in their interest income due to the uncertain market conditions. The scheme is implemented through the Life Insurance Corporation of India (LIC) and provides an assured return of 7.40 percent per annum for 10 years. The pensioner has an option to choose either the amount of pension or the purchased price. The scheme was earlier open for subscription up to March 31, 2020, but now has been extended till March 31, 2022. The maximum pension admissible under the scheme is now Rs. 10,000/- per month.

With a move towards attaining universal social security, on May 31, 2019, the Government approved a new scheme that offers pension coverage to the trading community. All

shopkeepers, retail traders and self-employed persons with GST turnover below Rs 1.5 crore and aged between 18-40 years, are eligible to enrol for the scheme. Under this scheme they are assured a minimum monthly pension of Rs. 3,000 per month after attaining the age of 60 years.

Conclusion

In a nutshell, a large number of schemes and programmes have been initiated by the Government to empower rural communities especially the marginalised sections of society. These programmes provide an excellent opportunity to the excluded sections to come forward at the forefront and actively participate in the process of inclusive growth and socio-economic development of the country. While a lot has been achieved in the field of financial inclusion, still there is scope to take further steps to ensure adequate access to financial services and usage of these services by various un-served and underserved segments of population particularly in rural areas.

The rural-urban digital divide needs immediate attention of the policy makers. In the process of rural empowerment there are some obstacles like low education, digital and financial illiteracy, poor access to technology, fewer livelihoods opportunities outside agriculture due to low growth of allied sector, lack of skills, etc., which can be easily overcome if Government programmes and policies are implemented in true spirit.

It is imperative to strengthen rural financial institutions to give impetus to some of the under performed areas through extended outreach of banking, particularly in the hinterland of the country. In fact, the conventional practice of opening new branches, to take banking to the doorsteps of customers are becoming redundant day by day. The opening of more branches particularly in rural areas is neither feasible nor viable due to lower clientele per branch. With the present network of their branches, commercial banks should give more impetus to deliver IT-based quality services. The information technology-based financial inclusion should take place of the traditional network-based inclusion. The dream of taking banking to the doorsteps of poor and under-privileged customers in remote areas can be realised by adopting information technology enabled solutions facilitating remote banking.

People should be encouraged to make extensive use of net banking and link their accounts to mobile and other hand-held connectivity devices.

The banks may carry out a survey in their area of operation to find out the migrant labourers excluded from bank network and can relax the KYC norms to such labourers. The overdraft facility with some limits in 'no frills accounts' can also be extend to people of lower income group. There is also enough scope for more players in the financial inclusion sphere. A federation of SHGs as an autonomous body, having no political affiliation should be formed for encouraging people to participate in the process of inclusive growth through financial inclusion. Last but not least, a joint effort on the part of Government, commercial banks, regional rural banks, cooperative banks, small finance banks, non-banking financial companies and NGOs supported by general public can play a very important role in providing banking services to the excluded segment of the society and ultimately empower the rural communities.

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Combating COVID-19

National Curriculum

People are now practicing social or physical distancing measures with an aim to slow the spread of COVID-19 by stopping its chain of transmission. Coronavirus can easily and usually be transmitted through hand-to-mouth transmission from contaminated surfaces such as currency notes, door handles, light switches and other household items. As per the few recent researches, the length of time the virus will persist on a surface varies, with the virus surviving for few hours on hard, non-porous surfaces such as plastic or metal, for about fifteen minutes on dry paper tissues, and only five minutes on skin.

Today, to avoid COVID-19 (Coronavirus disease 2019), careful adherence to social or physical distancing, use of masks, washing hands with soap is mandatory. But many questions related to social distancing, use of masks and hand wash come to the mind, in which it is necessary to have proper knowledge about it and its safer implementation or use. Our health workers, bankers, journalists, office staff and shopkeepers are in direct contact with people for long hours who need extra care in this direction. Today, many necessary scientific experiments related to masks and sanitizers are being conducted in laboratories.

The SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) is transmissible from human to human via droplets when breathing, coughing and sneezing on somebody else in close contact, within a range of about 3 to 6 feet from that infected person for a prolonged period. Older people and individuals with underlying health conditions are considered high risk. They must avoid the actions that put them in direct contact with the general public. Spread happens when an infected person coughs, sneezes, or talks, and droplets from their mouth or nose are launched into the air and land in the mouth or nose of people nearby. The droplets can also be inhaled into the lungs. Recent studies show that people who are infected but do not have symptoms likely also play a role in the spread of COVID-19. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose or eyes. However, this is

not thought to be the main way the virus spreads. COVID-19 can remain active for hours or days on a surface, depending on factors such as sunlight, humidity, and the type of surface (this is under research). Social distancing helps limit opportunities to come in contact with the contaminated surfaces and infected people outside home.

Prime Minister Shri Narendra Modi has also appealed to all the countrymen—दो गज की दूरी बहुत ज़रूरी (distance of two yards is very important). People are now practicing social or physical distancing measures with the aim to slow the spread of disease by stopping the chain of transmission of COVID-19 and preventing new ones from appearing. These measures secure physical distance between people, and reduce contact with contaminated surfaces, while encouraging and sustaining virtual social connection within families and communities. Social distancing is a non-pharmaceutical infection prevention and control intervention implemented to avoid or decrease



contact between those who are infected with the disease-causing pathogen and those who are not, so as to stop or slow down the rate and extent of disease transmission in a community. This eventually leads to decrease in spread, morbidity and mortality due to the disease. Social distancing measures include isolation of infected people, quarantine of their contacts, options for people to work from home, closure of schools and cancellation of large gatherings. Such measures allow our healthcare system to handle the additional burden in a phased manner.

The World Health Organisation (WHO) recommends a minimum distance of at least one meter to be maintained between individuals to prevent the spread of the infection through aerosol (tiny liquid respiratory droplets hung in the air). When infected people cough, sneeze, or speak they spray small liquid droplets from their nose or mouth which may contain virus. If one is too close, he/she can breathe in the droplets, including the COVID-19 virus if the person has the disease. Respiratory droplets or aerosol produced by the infected people through coughing, sneezing and spitting, are small enough for people to inhale. They are 0.5 to 5 micro-meter (μm) in diameter. One micro-meter is one millionth of a metre. A single sneeze releases up to 40,000 droplets. Although most of these droplets are quite large and will quickly settle out of the air, it is possible that inhaling a single droplet would be enough to cause an infection.

Keeping space between each other is the best tool to avoid being exposed to the virus and slowing its spread. Since people can spread the virus before they know they are sick, it is important to stay away from others when possible, even if one has no symptoms. Social distancing is especially important for people who are at higher risk for severe illness from COVID-19.

If one is visiting a healthcare facility, a care home for the elderly, a sick person's home, a morgue, a quarantine zone, a densely packed urban dwelling like slum, vegetable market, inquire in advance about the hygiene measures that are in place. If in any doubt, do not visit. One has to maintain a minimum of at least 1 to 2 metres distance with everybody, being especially careful around those showing any signs or symptoms of respiratory illness, such as coughing and sneezing.

The biggest challenge is protecting oneself from spreading COVID-19

As per the WHO and advisories issued by Government of India, to avoid COVID-19, people must follow the simple precautions regularly:

- Regularly and thoroughly wash hands with soap and water. In case of unavailability of soap and water, clean hands with an alcohol-based hand rub. Washing hands with soap and water or using alcohol-based hand rub deactivates viruses that may be on your hands.
- One has to avoid touching eyes, nose and mouth. Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to eyes, nose or mouth. From there, the virus can enter to body and infect.
- All have to follow good respiratory hygiene. This means covering mouth and nose with bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately and wash the hands. Droplets spread virus.
- Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until one recovers.
- If one has a fever, cough and difficulty breathing, seek medical attention, but call by telephone in advance if possible and follow the directions of local health authority. Calling in advance will allow health care provider to quickly direct one to the right health facility. This will also protect and help prevent spread of viruses and other infections.
- Keep up to date on the latest information from trusted sources, such as WHO, Ministry of Health and Family Welfare, Indian Council of Medical Research.

Now, it is advisable to avoid going to crowded places, where people come together in crowds. We are more likely to come into close contact with someone that has COVID-19 and it is more difficult to maintain physical distance of 1 metre (3 feet). In case of any work assignment at public place, shop, hospital, bank, etc., bankers, journalists, health workers, all staff members, etc., have to

remove all jewellery and watches before reaching the public place, noting that the COVID-19 virus can remain active on many different surface types for varying lengths of time. It is under research that for much time coronaviruses can be active on different surfaces.

Coronavirus can easily and usually be transmitted through hand-to-mouth transmission from contaminated surfaces such as currency notes, door handles, light switches and other household items. As per the few recent researches, the length of time the virus will persist on a surface varies, with the virus surviving for few hours on hard, non-porous surfaces such as plastic or metal, for about fifteen minutes on dry paper tissues, and only five minutes on skin. However, if the virus is present in mucus, this can protect it from dying for longer periods. After lockdown, people are travelling to office and other places. It may be difficult to avoid travelling on public transportation at rush hours, but make sure to use alcohol gel on hands before entering the office, shop or home.

Experts has advised to take regular breaks and be mindful of fatigue and energy levels, taking into account that tired individuals are more likely to make mistakes with their hygiene regime. Always ensure that hands are washed thoroughly with hot water and soap before, during, and after leaving an affected area. Health advisories have recommended self-quarantine to prevent the infection of others. There is no evidence of coronavirus in non-veg food. WHO advised to consume only well-cooked meat and eggs.

In case of health workers, pathology lab workers, Personal Protective Equipment (PPE) such as disposable gloves, face masks, protective aprons, and disposable shoe covers are required for the strict observance of and adherence to best safety practices. If they are working at an affected site such as a health facility or morgue, there is a strict need to wear disposable footwear which should be disposed of in a safe manner before leaving the place. Use of protective gloves has been recommended, if working in or visiting an infected site such as a hospital, pathology lab, etc.

Safe Use of Anti-Bacterial Gel, Alcohol-based Hand Sanitizers, and Priority of Washing Hands with Soap and Water

As per the WHO guidelines regular, proper and thorough hand washing is recommended, for at least 20 seconds at a time using hot water and soap. Ensure hands are dried in the appropriate way. Use of anti-bacterial gel or wipes is recommended, if hot water and soap is not available, but always follow this up with a hand washing as soon as possible. Frequent hand washing with soap and water may significantly reduce the chance of acquiring and transmitting the infection.

As per the advice on the safe use of alcohol-based hand sanitizers, one has to give priority to washing hands with soap and water. It has been advised by the authorities that do not substitute a regular hand washing routine by using hand sanitizer in its place. In case of unavailability of soap and water, use of alcohol-based hand sanitizer is recommended, which must be out of children's reach. Only a coin-sized amount of sanitizer is sufficient on hands. There is no need to use a large amount of the product. Avoid touching eyes, mouth and nose immediately after using an alcohol-based hand sanitizer, as it can cause irritation. Hand sanitizers recommended to protect against COVID-19 are alcohol-based and therefore can be flammable. Do not use before handling fire or cooking. Under no circumstance, drink or let children swallow an alcohol-based hand sanitizer. It can be poisonous. Use of alcohol-based hand sanitizers with greater than 60 percent ethanol or 70 percent isopropanol has been recommended.



Safety with Mask:

One has to always cover mouth and nose with standard surgical masks. A disposable N95 mask covers the nose and mouth and helps protect the wearer from breathing in some hazardous substances. It can lower the chance of viral illness. If one uses it correctly with other common preventative measures, like washing hands frequently, not touching the mouth or nose and avoiding other sick people. As per the advice, if necessary, in case of hospitals or public places, banks, etc., an N95 mask (or FFP2 / FFP3) is recommended over a standard surgical mask. Surgical masks don't offer full protection against airborne viruses. They don't fully seal off the nose and mouth. Surgical masks are highly effective against large airborne droplets. Don't use an N95 mask on children younger than age 17-18. As the N95 mask gets clogged, it becomes more difficult to breathe. When this occurs, throw it out and use a new one. Discard the mask if it is wet or dirty on the inside, if it is deformed, or if the filter is torn. A deformed mask may not fit properly. An N95 mask cannot be cleaned or disinfected. The number 95 in N95 mask refers to the percentage of particles that the mask can filter out. The N95 mask filters out 95 percent of dust and particulates. N95 masks shouldn't be used if oil aerosols are present, as oil damages the filter. The "N" actually stands for "Not resistant to oil".

There are other types of N 95 masks which are known as R N95 mask or P N95 mask. These are required if one is exposed to an oily atmosphere. In cases where one's face is exposed to mineral, animal, vegetable, or synthetic oils, look for an R or P designated N95 mask. The "R" stands for "somewhat oil-resistant," which means it will protect you from oil vapours for a time limit specified on the packaging. The "P" stands for "oil-proof or strongly resistant." These masks also come with number of classifications, such as P100 and R 95. The numbers stand for the percentage of particles they filter out.

Safe Method to Wear the Masks:

There is a safe method to wear the masks and one has to follow that method. Wash hands well with soap and water and dry them well before putting the mask. Place the mask in the palm of hand so that the straps face the floor. Set it over

the nose and mouth with the nosepiece fitting over the bridge of the nose. The bottom should go just under the chin. Try to touch only the outside and under the chin. Try to keep it clean. If the mask edges of the mask to keep it clean. If the mask has two straps, pull the bottom one over the head and secure it around the neck, just under the ears. Continue to hold the mask tightly against the face with the other hand. Then, pull the top strap over and set it above the ears. Set first 2 fingertips on either side of the metal nose clip at the top of your mask. Run fingers down both sides of the strip, moulding it along the bridge of your nose. If mask doesn't have a nosepiece, simply make sure the fit is tight and snug around the nose. Set both hands against the mask and take a breath to make sure that it seals against the face. Then exhale, feeling for any leakages from the nosepiece or around the edges. If one feels air leaking from the nose area, re-mould the nosepiece. If it's coming from the edges of the mask, adjust the placement of the straps on the sides of the head. If mask still isn't completely sealed, try a different size or model. Without touching the front of the mask, pull the bottom strap over the head. Let it hang down over the chest. Then, pull the top strap over.

WHO has advised to avoid touching the mask, only remove it by using the straps and to never touch the front. After removing the mask, always wash hands with soap and hot water, or with an alcohol-based hand sanitizer and replace the mask with a new, clean, dry mask as soon as it becomes damp/humid. Used masks must be disposed of immediately into a sealed bag. Use of a mask is only one part of personal protection, which must be accompanied by regularly washing of hands with hot water and soap and avoiding touching your facial area, including your eyes, mouth, ears, and nose.

Scientific Breakthrough from Indian Laboratories Regarding Sanitizers and Masks

Alcohol-based Herbal Hand Sanitizer

Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow has developed an alcohol-based herbal hand sanitizer in the wake of growing demand for sanitizers amid coronavirus outbreak. The herbal sanitizer gel contains essential oil, which has been found to be effective against broad spectrum of microbes. The technology of the hand

sanitizer has been transferred to the companies associated with large scale production of sanitizer. As per the authorities of CIMA, the herbal hand sanitizer has been clinically tested and found to be highly effective against commonal pathogen. Product has been found to be more effective than the existing similar products in the market, which is because of synergistic effect of the essential oils added in the formulation.

Essential Oil Vapouriser Concentrate Formulation

Central Institute of Medicinal and Aromatic Plants (CIMA) has also launched a scientific knowledge-based essential oil vapouriser concentrate formulation called CIM-RespCool. As per the statement given by CIMA authorities, "It could be helpful in the management of respiratory distress caused by environmental contaminants including viruses." In addition to sanitising a specific area, CIM-RespCool also provides pleasant smell. Essential oils like Mentha, Rosemary, and Basil have been used to develop the formulation. The product is safe and can be used in a diffuser at home, office, hospital, etc. This formulation has the ability to manage not only a broad spectrum of microbes, but also environmental contaminants including viruses. Essential oils-based formulations are commonly used in aromatherapy. They are either inhaled from a vapouriser/humidifier or rubbed on the skin as a liquid. Most of the available microbial management vapouriser products contain synthetic chemicals and may be allergic for some people and, therefore, cannot be used regularly.

Herbal Decongestant Spray for Masks

Wearing a mask for a long time is reportedly causing difficulties in breathing and congestion in the respiratory system. To address this issue, National Botanical Research Institute (NBRI), Lucknow, has developed an herbal decongestant spray. Authorities of NBRI said that the main reasons behind this problem includes the accumulation of carbon dioxide and humidity in the inner cavity of the mask. When a person breathes in, this goes back to the lungs again. Repetition of this process over a period of time causes discomfort in breathing and congestion.

Seven precautionary measures to combat COVID-19

In his address to the nation, Prime Minister made a special request for India's young scientists to come forward and take a lead in creating a vaccine for Coronavirus—for the welfare of the world, for the welfare of the human race—and also asked people to follow seven precautionary measures:

1. Take special care of the elderly in your homes, especially those who have chronic disease. We have to take extra care of them, and keep them safe from Coronavirus.
2. Completely adhere to the 'Lakshman Rekha' of Lockdown and Social Distancing. Please also use homemade face-covers and masks without fail.
3. Follow the instructions issued by AYUSH ministry to enhance your immunity. Regularly consume warm water, 'Kadha'.
4. Download the Arogya Setsu Mobile App to help prevent the spread of coronavirus infection. Inspire others to download the app as well.
5. Take as much care of poor families as you can. Especially try to fulfil their food requirements.
6. Be compassionate towards the people who work with you in your business or industry. Do not deprive them of their livelihood.
7. Pay utmost respect to our nation's Corona Warriors – our doctors and nurses, sanitation workers and police force.

Herbal decongestant spray is a fine blend of four plant-based oils based on the principles of Ayurveda and contains ingredients reported in traditional scriptures. This formulation helps in clearing the windpipe and congestion by removing the mucus or cough leading to ease of breathing. It also reduces stress due to excessive use of mask and decongestion.

Tulsi-based Herbal Sanitizer

National Botanical Research Institute (NBRI), Lucknow has developed alcohol-based herbal sanitizer as well. The product is developed under



Council of Scientific and Industrial Research (CSIR)-Aroma Mantra as per the WHO guidelines. This sanitizer contains Tulsi essential oil as herbal constituent, which is strong natural antimicrobial agent, and 60 percent of isopropyl alcohol for killing germs. The product is validated scientifically for its strong germ-killing activity. This hand sanitizer has been clinically tested and found to be 'highly-effective against surface microbes'. Authorities at NII said, "Its impact lasts for about 25 minutes and it prevents skin from dehydrating." In clinical trials done on the pathogen (*Staphylococcus epidermidis*) harmful to human skin and found on surfaces, the herbal sanitizer has been found to be effective.

Tea-based Hand-Sanitizer

A new hand-sanitizer has been developed by the Institute of Himalayan Bioresource Technology (IHBT), Palampur, Himachal Pradesh. The natural flavours, tea constituents and alcohol content have been used in this hand-sanitizer as per the guidelines of the WHO. One of the special things is that chemicals like paraben, triclosan, synthetic fragrance and phthalates have not been used in this product.

Anti-virus, Anti-bacterial and Anti-fungal membrane-based Face-mask and a Light-Weight Face Shield

Central Salt and Marine Chemicals Research Institute (CSMCRI), Bhavnagar, has been distributing its specially developed masks to the frontline workers. The institute has been working on different verticals related to COVID-19 pandemic and has come up with two Personal Protection Equipment (PPEs) – membrane-based face-mask and a light-weight face shield. This special mask made using membrane technology can give enhanced protection from pathogens, including virus and bacteria. The mask can deactivate the virus and kill bacteria that get attached on the outer surface that is made from a special material called modified polyultrazone. As per the statement issued by CSMCRI, "The outer layer of this mask, made of polysulfone material having a thickness of 150 micro metre, has anti-virus, anti-bacterial and anti-fungal properties. The material can kill any virus having a size of 60 nanometre and above. It is worth noting that the coronavirus has a diameter

of 80-120 nanometre (one nanometre is equal to one billionth of a metre).

Face Mask with Better Filtration Efficiency

National Chemical Laboratory (NCL), Pune, has developed a face mask with better filtration efficiency compared to those available in the market. Scientists at NCL have used institution's patented bacterial nano cellulose technology along with nano coating to develop the new face mask. The cotton cloth coated in a solution of bacterial cellulose and nano material has been found to be effective in preventing the penetration of bacterial growth, indicating promise as a material for face mask filter. A team of scientists prepared the prototype of the face mask using Spun bond polypropylene medical grade cloth to evaluate Bacterial Filtration Efficiency (BFE), Particulate Filter Efficiency (PFE), breathability, flammability, and splash resistance tests.

Coimbatore-based South India Textile Research Association (SITRA), a government-authorized certifying nodal agency for medical textiles, conducted these tests on NCL's sample face masks for confirming the quality. The bacterial filtration efficiency (BFE) of CSIR-NCL mask is 92.9 percent according to the ASTM (formerly known as American Society for Testing and Materials) standard using aerosols of human pathogen *Staphylococcus aureus*, found in the upper respiratory tract and on the skin. The face mask qualified the tests for splash resistance to measure prevention against splashes of blood and body fluids. The pressure differential indicated easy breathability through the facemask as medical grade and is of Class-1 material in flammability test. CSIR-NCL has licensed the biopolymer nano-coated technology to a Pune-based company.

Cup-shaped Comfortable Mask

Centre for Nano and Soft Matter Sciences (CeNS), Bangalore, has developed a cup-shaped design of the mask that helps to create enough space in front of the mouth while speaking. This snug fit mask causes no speech distortion, no fogging on glasses, and indeed, packs well all around, leaving practically no room for leakage while breathing. Another important advantage is its high breathability allowing one to wear it without any discomfort. Further, the researchers have chosen the fabric layers such that there is a

possibility of deactivating pathogens due to the electric charges that may prevail under mild friction due to the triboelectric nature of the fabric. The advanced-level tests are being carried out.

Mobile Indoor Disinfection Sprayer units

Central Mechanical Engineering Research Institute (CMERI), Durgapur developed two mobile indoor Disinfection Sprayer units. These units can be used for cleaning and disinfecting pathogenic micro-organism effectively, especially in hospitals.

Battery Powered Disinfectant Sprayer (BPOS) and Pneumatically Operated Mobile Indoor Disinfection (POMID) units can be used to clean and disinfect frequently touched surfaces such as tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, sinks, and cardboards. Intermittent usage of these disinfecting units can help minimise the risk of transmitting coronavirus to people who inadvertently come in contact with those surfaces. The sprayer systems are designed with two-stage spraying units and separate storage tanks to clean and disinfect the indoor areas by the numbers of fixed and flexible nozzles set in the lower and upper bars. There is also an industrial variant of the Disinfectant Sprayer for heavy usage and to cover a larger area. As per the authorities of CMERI, the sprayed disinfectant can thus cover a greater surface area for the specified volume of liquid. The particle size and the number of particles of disinfectant are two important parameters in determining the effectiveness of the sprayed disinfectant.

Sensor-based Contactless Soap-cum-water Dispensing Unit

Central Mechanical Engineering Research Institute (CMERI), Durgapur has also developed a sensor-based contactless soap-cum-water dispensing unit, which can help to avoid coronavirus infection. The single infrared sensor attached to the dispensing unit gets automatically activated when an object comes close to the unit. Other important design features of this unit include dispensing of both liquid soaps and water from the same outlet 20 seconds apart. The touch-less soap-cum-water dispensing units may find their utility at various locations such as hospitals, shopping malls, banks, stadiums, and sports complexes. Portability is another unique design feature of this dispensing

unit. The water usage is minimal. About 250 ml of liquid soap can be stored as of now; but the storage capacity can be extended up to 1 litre. Authorities of CMERI said that the 20-second timer could be a game-changer, as it ensures that the user is compelled to rub his/her hands for the requisite time span as per Standard Hygiene guidelines. Our technology is evolved based on intensive research and ergonomic demands.

WHO-formulated Hand Sanitizer

Indian Institute of Toxicology Research (IITR), Lucknow has produced 2000 litres of WHO-formulated hand sanitizer and distributed to over 25,000 personnel involved in essential services. Among the beneficiaries are those working in ration shops, public distribution system, LPG bottling plant, Central Government Health Scheme (CGHS), electricity supply administration and electricity substations, State Mission for Clean Ganga (SMCG), Nagar Nigam, police department, CRPF, Helping Hands - Organization helping Cancer Children, district hospital of Raibarely through the district administration and King George's Medical University (KGMU). A start-up at IITR has been engaged in the preparation of hand sanitizer and development of disinfection solutions for wider reach.

Today, people have to save themselves and their families from COVID-19 by changing their lifestyle followed by social distancing, using mask, self-quarantine when required. Today, our scientists are doing their best efforts to combat COVID-19, our people have to understand, connect and appreciate their efforts.

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Empowering 'Divyang' and Senior Citizens

Topic: India

The Rights of Persons with Disabilities Act, 2016 that came into force on April 19, 2017, has empowered India's divyang population in many ways. Applicable all over the country, this Act mandates the appropriate government to take measures to promote education, skill development, social security, health, rehabilitation and recreation for Divyangs. Apart from the Divyangs, senior citizens who are a treasure of knowledge and experience, deserve care and concern as well. Care of senior citizens forms a crucial mandate of the Ministry of Social Justice and Empowerment. Looking after senior citizens who have invested their entire life, giving their children the very best is our traditional, moral and now even legal responsibility.

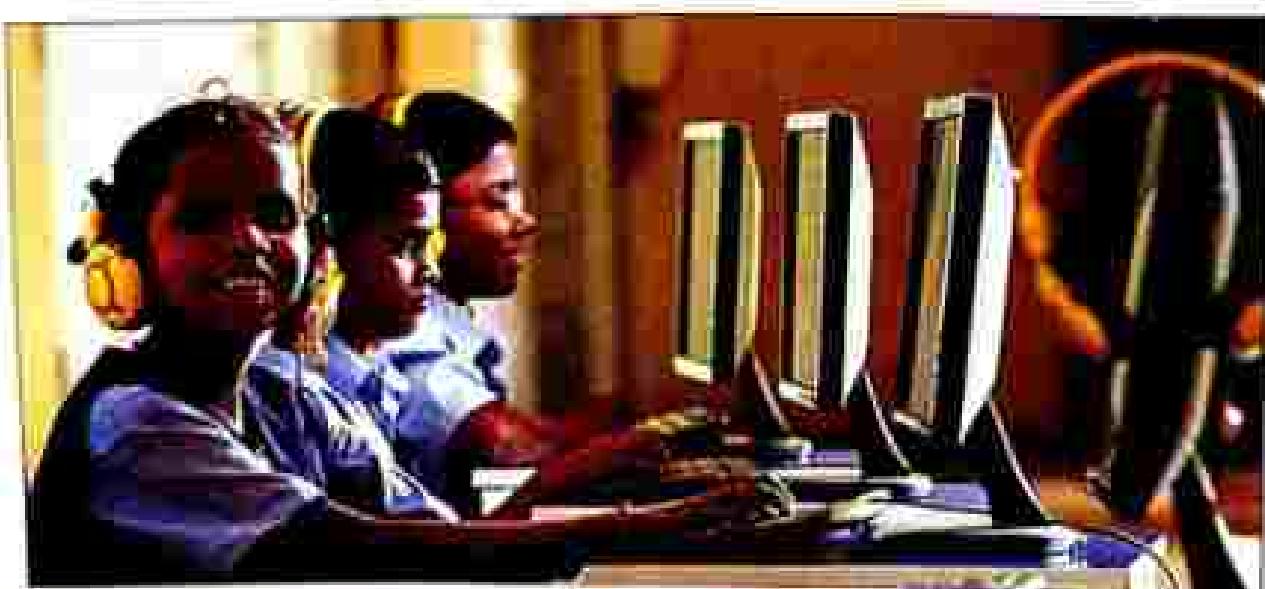
Reservation of seats for senior citizens and divyang in crowded public transport is a common sight in India. Thankfully, there are numerous meaningful government initiatives and interventions that may not be equally visible but have brought about a qualitative difference in the lives of the elderly and the Divyangs.

As per the Census 2011, there are 2,60,14,994 persons with disabilities (Divyangians) in the country. It was none other than Prime Minister Narendra Modi who in his Mann Ki Baat radio address on December 27, 2015 suggested that Persons with Disabilities (PwDs) have a divine ability and therefore Hindi word 'Vidyaang' should be replaced with 'Divyang'. This is how persons with disabilities began to be referred as Divyangians.

The Rights of Persons with Disabilities Act, 2016 that came into force on April 19, 2017, has

empowered India's divyang population in many ways. The Act replaces the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. It fulfills the obligations to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which India ratified in 2007. Applicable all over the country, this Act mandates the appropriate government to take measures to promote education, skill development, social security, health, rehabilitation and recreation for Divyangs.

Through the Rights of Persons with Disabilities Act, 2016, the government increased the percentage of reservation in government jobs from 3 percent to 4 percent and from 3 percent to 5 percent in seats in government/government-aided higher educational institutions for persons with benchmark disabilities. However, the Central Government supplements the efforts of the States Government.



The broad components in the Scheme for Implementation of Right of Persons with Disabilities Act, 2016 (SRPDA) entail:

- (i) Creation of a barrier-free environment for Divyangjans;
- (ii) National Action Plan for Skill Development of Persons with Disabilities (PwDs);
- (iii) Accessible India Campaign;
- (iv) Establishment of district Disability Rehabilitation Centre (DDRC) in the Identified Districts; and
- (v) Unique Disability Identification (UDID) Project.

Before launching the job portal for Persons with Disabilities, the Ministry of Social Justice and Empowerment launched in March 2015 the National Action Plan to equip them with skills. Training for these skills is imparted through a network of empanelled training partners. The skills have given the target beneficiaries the confidence to take on the world and explore employment options at the National Job Portal (www.disabilityjnbs.gov.in). Launched on January 27, 2016, the portal is being maintained by National Handicapped Finance and Development Corporation (NHFDC), a Central Public Sector Enterprise under the administrative control of the Department.

Divyangjans can apply through the portal for jobs, skill trainings, scholarships, education loans and self-employment loans. From the time this portal was launched, 292 Divyangjans have applied for self-employment loans and 20 Divyangjans have applied for education loans using the portal. The total numbers of Divyangjans registered on the portal are 26,233. This information was shared on February 13 this year in reply to a question in the Lok Sabha by the Minister of State for Social Justice and Empowerment, Shri Krishanpal Gurjar. The Minister informed Parliament that 28 State channelizing agencies, 18 regional rural banks and four public sector banks have also been registered with the portal to facilitate Self-Employment and Education Loans for Divyangjans. Apart from these, 89 private companies and 50 training institutes have registered with the portal to facilitate job employment and skill trainings.

The Department of Empowerment of Persons with Disabilities (DOPWD), named the Department of Disability Affairs at the time of its creation in May

2012, was renamed Department of Empowerment of Persons with Disabilities (Viklangan Sashaktikaran Vibhag) vide Cabinet Secretariat's notification dated December 9, 2014. It is this department that implements numerous schemes for empowerment of Divyangjans. These include Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADPA), skill development for Divyangjans, Deen Dayal Disabled Rehabilitation scheme and scholarship for students with disabilities.

The Swastham Health Insurance Scheme for Persons with Disabilities (PwDs) was launched by the Department. The objective of the scheme is to provide affordable health insurance to Persons with Disabilities, i.e., Blindness, Low Vision, Leprosy-cured, Hearing Impairment, Locomotor (Physical) disability, Mental-Retardation and Mental illness and to improve the general health condition and quality of life of divyangjans. Another scheme of the DePaO that has been hailed by the target beneficiaries is the Unique Disability Identification Project. According to the Ministry of Social Justice and Empowerment, implementation of the Unique Disability ID cards project was started in 2015-17.

These unique ID cards actually save Divyangjans the trouble of carrying multiple copies of documents. The UDID card will be the single document of identification, verification of the Divyangjans for availing various benefits in future. All States/Union Territories came on board only in December 2018. Since the State health authorities are responsible for issuing certificate of disability/ Unique Disability ID card, the actual implementation of the project lies with the preparedness of the States concerned.

Any person who has any specified disability mentioned under the Schedule of the Rights of Persons with Disabilities (RPwD) Act, 2016 can apply for the certificate of disability through the UDID portal or otherwise, irrespective of the cause of disability i.e., by birth or by accident. Any person who has a valid certificate of benchmark disability i.e., 40 percent and above is eligible for the UDID card as of now.

No specific benefit has been linked to Unique Disability ID card at this stage. However, some States such as Gujarat and Uttar Pradesh have linked the benefit of concessional travel by State Transport undertaking buses with Unique Disability ID card.

Union Minister of Social Justice and Empowerment recently called upon Divyangjan and their family members to get enrolled for Unique ID Cards for Divyangjan which are valid all over India. Sharing information, he said that till mid-June, 31 lakhs Unique ID Cards have been delivered to Divyangans in our country. As on June 16, 2020, more than 48 lakh UDID Cards have been generated.

The Ministry of Social Justice and Empowerment organised in mid-June a Virtual Camp for free distribution of assistive aids and devices at Block level for Divyangjans under the ADIP scheme in Talwandi Bhai Block of Firozpur District in Punjab.

Under the ADIP scheme, funds are released to various implementing agencies to assist the needy persons with disabilities in procuring durable, sophisticated and scientifically manufactured, modern, standard aids and appliances. This noble endeavour is aimed at promoting their physical, social and psychological rehabilitation by reducing the effects of disabilities and enhance their economic potential throughout the country.

The camp in Ferozepur was the first of its kind where decentralized pattern of distribution and distant addressing through virtual was attempted by the Artificial Limbs Manufacturing Corporation of India (ALIMCO), Kanpur working under the aegis of Department of Empowerment of Person with Disability (DEPwD), Ministry of Social Justice and Empowerment (MoSJ&E), Government of India and the district administration, Firozpur. Aids and appliance distributed in this camp included motorised tricycles, wheel chairs, crutches, walking sticks, smart cane, smart phones, hearing aids, artificial limbs and callipers. By doing so, the government ensured that there is no disruption in the welfare schemes for Divyangjans even while the country is tackling the COVID-19 pandemic.

The Accessible India Campaign launched on December 3, 2015 is a nationwide campaign for achieving universal accessibility. It focuses on enhancing the accessibility of built environment, transport system and information and communication ecosystem for the benefit of Divyangjans.

The Deep Dyal Disabled Rehabilitation Scheme (DDRS), executed by the Department of

Empowerment of Persons with Disabilities provides grant-in-aid to non-government organisations/voluntary organisations for projects aimed at rehabilitation of Divyangans.

The Department implements another Central sector umbrella scheme where scholarships are given across the country to students with disabilities. These scholarships are for Class IX and X students as well as students pursuing studies post matric. The Department also gives Top Class Education Scholarship for graduate and post-graduate degree/diploma in notified institutes of excellence in Education. Students with Disabilities who wish to pursue higher studies abroad can apply for National Overseas Scholarship (For Master's Degree/Ph.D. in foreign universities). The Department also offers National Fellowship for Divyangjans (For M.Phil. and Ph.D. in Indian universities). To enable the target beneficiaries compete better, free coaching is provided for recruitment examinations for Group A and B posts and entrance examinations for admission in technical and professional courses.

Apart from the Divyangjans, senior citizens who are a treasure of knowledge and experience, deserve care and concern as well. Care of senior citizens forms a crucial mandate of the Ministry of Social Justice and Empowerment. According to Census 2011, the population of senior citizens in India is 10.36 crore which was 8.56 percent of the total population of the country. In the noise and din of fast-paced lives that are continuously widening the gap between the young and the elderly, policy makers and law makers are doing their best to ensure that the elderly are not neglected. Looking after senior citizens who have invested their entire lives giving their children the very best is our traditional, moral and now even legal responsibility.

The Annual Report (2018-19) of the Ministry of Social Justice and Empowerment says that in 2011, about 8.57 percent of the total population, 8.20 percent of the total male population and 8.97 percent of the total female population were aged 60 years and above. These figures are projected to go up to 12.4 percent 11.7 percent and 13.1 percent respectively in 2026.

The report points out that the Old Age Dependency Ratio has been steadily rising during the past three decades. This ratio is defined as the

number of persons in the Old Age group 60+ is 10.21 crore per 100 persons in the age group 15-59.

According to the Ministry, there has been a steady rise in the population of senior citizens in India.

The number of elderly persons has increased from 1.58 crore in 1951 to 7.5 crore in 2001. Projections indicate that the number of 60+ people in India will increase to 14.3 crore in 2021 and 27.2 crore in 2036. A senior citizen is a citizen of India who has attained the age of 60 years or above. (Section 2, The Maintenance and Welfare of Parents and Senior Citizens Act, 2007)

The Maintenance and Welfare of Parents and Senior Citizens (MWPSC) Act, 2007 was enacted to ensure need-based maintenance for parents and senior citizens and their welfare. The Act inter alia provides for maintenance of parents/senior citizens by children/relatives obligatory and justiciable through tribunals, revocation of transfer of property by senior citizens in case of neglect by relatives, penal provision for abandonment of senior citizens, establishment of Old Age Homes for Indigent Senior Citizens, adequate medical facilities and protection of life and property of senior citizens. And the execution of provisions of this legislation for the elderly comes with accountability too.

The government seeks annual progress reports on the implementation of the Maintenance and Welfare of Parents and Senior Citizens Act, 2007 from the State Governments and UT Administrations. The Government has introduced 'The Maintenance and Welfare of Parents and Senior Citizens (Amendment) Bill, 2019' in the Parliament which seeks to amend the Maintenance and Welfare of Parents and Senior Citizens Act, 2007. In the Bill, ceiling of Rs. 10,000 as maintenance allowance as given in the existing Act has been removed. Provisions for timely disposal of maintenance petitions of the parents (those below 60 years) and senior citizens have also been incorporated in the Bill and priority in disposal of petitions of parents and senior citizens of 80 years and above have also been made.

The existing National Policy on Older Persons (NPOP) was announced in January 1999 to reaffirm the commitment to assure the well-being of the older persons. The Policy envisaged support to

ensure financial and food security, health care, shelter and other needs of older persons, equitable distribution of care, protection against abuse and exploitation, and availability of services to improve the quality of their lives.

The Ministry of Social Justice and Empowerment has conceptualised and rolled out the National Action Plan for Senior Citizens (NAPSC), which is based on the National Policy for Older Persons 1999 and the Maintenance and Welfare of Parents and Senior Citizens Act 2007. The NAPSC has been formulated after consultations with various stakeholders and outside experts in the field.

The NAPSC highlights all the factors which are needed to create an ecosystem where all the Indians can age gracefully and live a life of dignity. The action plan includes the following 10 components encompassing the needs of senior citizens. These are financial security, health care and nutrition, shelter and welfare, protection of life and property of senior citizens, active and productive ageing with intergenerational bonding and skill development, accessibility, transport and age-friendly environment, awareness generation and capacity building, promoting senior-friendly industrial goods and services in the society, research and study and project management.

According to the Ministry of Social Justice and Empowerment, the NAPSC would operate as an umbrella scheme for senior citizens with the merger of Integrated Programme for Senior Citizens.

Keeping in mind that many senior citizens may not have a roof on their head, the Ministry provides grants-in-aid for maintenance and running old age homes to implementing agencies. The Ministry is implementing a Central Sector Scheme of Integrated Programme for Senior Citizens (IPSC) under which grant is given for running and maintenance of Senior Citizens Homes (old age homes)/Continuous Care Homes, Mobile Medicare Units. The main objective of the scheme is to improve the quality of life of the Senior Citizens by providing basic amenities like shelter, food, medical care and entertainment facilities.

The projects are for Senior Citizens' Homes/ Senior Citizens' Homes for 50 Elderly Women including those under Samad Adarsh Gram Yojana (SAGY) — popularly known as Old Age

Homes, Continuities Care Homes and Homes for senior citizens afflicted with Alzheimer's disease/ Dementia for a minimum of 20 senior citizens who are seriously ill requiring continuous nursing care and to provide medical care to the Senior Citizens living in rural, isolated and backward areas. Grant-in-aid for Physiotherapy Clinics for Senior Citizens is given to agencies that have shown a credible track record in running projects for the welfare of the senior citizens for running of physiotherapy clinic for a minimum of 50 senior citizens per month.

Under the Rashtriya Vayoshri Yojana, aids and assistive living devices are provided to senior citizens belonging to BPL category who suffer from age-related disabilities such as low vision, hearing impairment, loss of teeth and locomotor disabilities. The aids and assistive devices viz. walking sticks, elbow crutches, walkers/crutches, tripods/quadrpoles, hearing aids, wheelchairs, artificial dentures and spectacles are provided to eligible beneficiaries. The scheme Rashtriya Vayoshri Yojana (RVY) was announced by the Finance Minister in the Budget Speech of 2015-16. It is being implemented by ALUMCO a Public Sector Undertaking under the Ministry of Social Justice and Empowerment since April 1, 2017.

The Pradhan Mantri Jan Arogya Yojana was launched in 2016 by the Ministry of Health and Family Welfare for covering up to 10 crore people belonging to poor and vulnerable families. Under this scheme, coverage of up to Rs. 5 lakh per family for secondary and tertiary hospitalisation is provided. This too is bound to benefit the elderly.

Besides the Ministry of Social Justice and Empowerment, other ministries also run schemes for senior citizens. The National Social Assistance Programme (NSAP), for example, is a centrally-sponsored scheme of Ministry of Rural Development. NSAP is a social security/social welfare programme meant for old widows, disabled persons and bereaved families belonging to below poverty line households who have lost their primary bread winner.

Old age pension is provided under Indira Gandhi National Old Age Pension Scheme (IGNOAPS) to the persons belonging to below poverty line (BPL) household.

Department of Food and Public Distribution allocates food grains as per requirements

projected by the Ministry of Rural Development under the Antyodaya Scheme, wherein indigent senior citizens, who are not getting pension under NSAP, are provided 10 kg of food grains per person per month free of cost. The Department also implements Sarvodaya Anna Yojana (SAY), under which rice and wheat at a highly subsidised cost, is provided to households headed by widows/terminally ill/disabled persons/elder citizens, with no assured means of maintenance or support from society.

The Ministry of Health and Family Welfare (MoHFW) has been implementing National Programme for Health Care of the Elderly (NPHCE) from the financial year 2010-11 to provide dedicated healthcare services to the elderly people at various levels of state health care delivery system.

The Varsha Pension Bima Yojana is also worth mentioning here. Launched by the LIC, this scheme provides its beneficiaries a steady 8 percent per annum interest rate for a period of 10 years. Unlike other schemes, one doesn't have to go through any medical check-ups to avail its benefits.

The Ministry of Social Justice and Empowerment has requested the Department of Revenue to consider waiving off Income Tax for Divyangjans who are 80 years or above keeping in view their increased cost of living due to enhanced cost of medication, therapeutic/ rehabilitation services, caregiver support, transportation, etc.

The government can do its best to roll out meaningful schemes but it is for the target beneficiaries to make good use of provisions of progressive legislations and programmes that can transform their lives.

(The information in this article has been sourced from several resource tools of the government including annual report of the Ministry of Social Justice and Empowerment, website of the nodal ministry and Lok Sabha website for answers given by the Minister in Parliament)

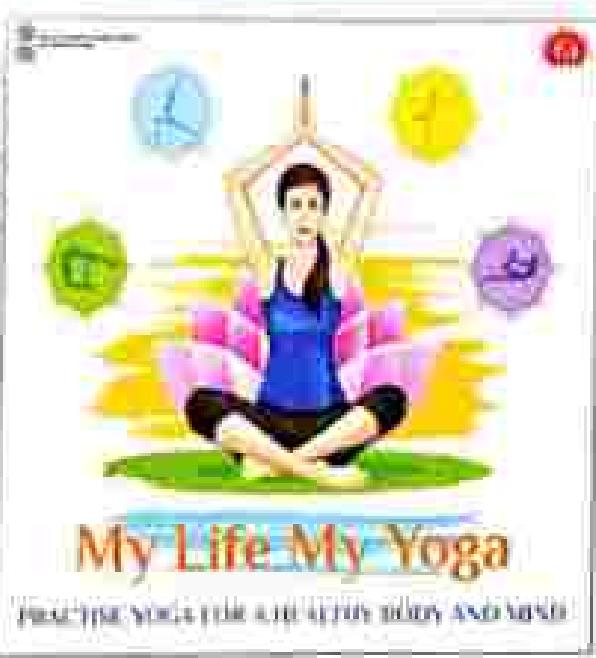
(The author is a Chevening scholar and senior Delhi-based journalist. She has been a health columnist and has reported extensively on women empowerment related issues. Views expressed by the author are her own. Email: triptimothnepal@gmail.com)

6th International Day of Yoga Celebrated

The sixth International Day of Yoga was celebrated with great enthusiasm across the country through classroom and digital media on June 21, 2020. Prime Minister Shri Narendra Modi, addressing the nation on this occasion, underlined the role of Yoga in strengthening the family bondage. He said, "Yoga brings all closer and binds every member of a family including children and elders. This is the reason why 'Yoga with Family' has been made the theme of this year's IDY."

The Prime Minister further said, COVID-19 mainly attacks the pulmonary organs of the human body and Pranayams are helpful in strengthening the respiratory system. He said, "If we can fine tune our chords of health and hope, the day is not far away when the world will witness the success of healthy and happy humanity. Yoga can definitely help us make this happen."

Due to current pandemic of COVID-19, mass gatherings on IDY were not advisable. Keeping this situation in mind, the Government encouraged people to practice Yoga at their homes along with their family members. In this regard, the Ministry of AYUSH maximized the use of social and digital media platforms to facilitate online participation from the people.



My Life My Yoga

For the Yoga Day 2020 video and other news and news

MY LIFE MY YOGA

Physical Health

Skill Improvement

Mental Enthusiasm

Flexibility

Yoga for Children

On this occasion, the Minister of State for AYUSH, Shri Shripad Naik said, International Day of Yoga has turned into the biggest public health movement. "Now every country of the world celebrates IDY and the public has embraced this event and adopting it as a celebration of India's culture and tradition", he stated. The Minister said that this year IDY comes in the middle of a health emergency so the AYUSH Ministry has been fostering and facilitating the trend of practicing Yoga at home through various offline and hybrid-online initiatives since the last three months. The Minister praised "My Life - My Yoga" Video Blogging Contest announced by the Prime Minister Shri Narendra Modi for raising awareness about Yoga.

Shri Naik further said many leading Yoga institutions have joined forces with the Ministry in this effort. Such activities intensified in the last one month, with added focus of training in Common Yoga Protocol (CYP), which is followed by participants of IDY every year for ensuring harmony in the mass demonstrations of Yoga.

While giving the vote of thanks Secretary, Ministry of AYUSH Vaidya Rajesh Kotekar said that in the new scenario, the aim of IDY is to focus on its health-rewards and to do Yoga at home on Yoga Day. The Ministry of AYUSH is supporting this trend by promoting the theme "Yoga at Home, Yoga with Family" in its IDY activities.

Shri Kotekar said that the Ministry of AYUSH streamed various online initiatives including daily morning CYP session on Doordarshan and social media for people to follow and learn the Protocol. The Secretary said that numerous individuals and institutions including educational institutions, government bodies, business firms, industries and cultural organizations have committed themselves to joining IDY for the benefit of their employees, members or other stakeholders, from their homes itself. Through such efforts the Yoga fraternities in different parts of the country are now ready to observe IDY with thousands of families joining the same from their respective homes, the Secretary added. He also informed about Ayush Sanjivani mobile app for generating data of large population with a target of 5 million people.

(Source: Press Information Bureau)

Wetland vegetation was dominated by emergent macrophytes, including Typha angustifolia, Phragmites australis, Carex acutiformis, and Juncus effusus.

APPENDIX B

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General References



第二章 國際化與中國的知識產權
問題與政策



University of Missouri-Rolla **Department of Biology**

NOVEL CORONAVIRUS DISEASE
(COVID-19)



SAY NO TO VIOLENCE

Respect the healthcare service personnel!

They need our support and cooperation

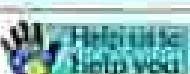
Together we will fight COVID-19

For information related to COVID-19
Call the state helpline numbers or Ministry of Health and Family Welfare (toll-free) 1860 2 466 6345. The phone number



Major and Minor Primary Sources

NOVEL CORONAVIRUS DISEASE
(COVID-19)



Break the stigma surrounding COVID-19.

Be a responsible citizen

Observe the following Do's and Don'ts

10

- Appreciate efforts of people providing essential services & be supportive towards them and their families.
 - Cross-check all information related to COVID-19 from reliable sources before forwarding any messages on social media.
 - Share positive stories of those who have recovered from COVID-19.

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- Spread names, identity or locality of those affected or under quarantine on the social media
 - Spread fear and panic
 - Target healthcare, sanitary workers or police. They are there to help you
 - Label any community or area for the spread of COVID-19
 - Address those under treatment as "COVID-19 victims". Address them as "People recovering from COVID-19"

Prevention and control of COVID-19

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