Japan International Cooperation Agency

Technical Cooperation Project for promotion of the Program for Japan-India Cooperative Actions towards Sustainable Development Goals (SDGs) in India

Final Report

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IC Net Limited

Abbreviations and acronyms

AD	Aspirational District
ADP	Aspirational District program
ANC	Antenatal care
ANM	Auxiliary nurse midwife
APART	Assam Agribusiness and Rural Transformation Project
APY	Atal Pension Yojana (Atal Pension Scheme)
ASHA	Accredited Social Health Activist
AWC	Anganwadi centre (Rural Child Care Centre)
CO_2	Carbon Dioxide
CSC	Common Service Centres
CSO	Civil Society Organization
CSR	Corporate Social Responsibility
CWMI	Composite Water Management Index
DAO	District Agriculture Officer
DC	District Collector
DEGC	Digital Education Guarantee Card
DIKSHA	Digital infrastructure for knowledge sharing
DoA	Department of Agriculture
DoAH	Department of Animal Husbandry
EAIF	Emerging Africa Infrastructure Fund
EHR	Electronic health record
e-NAM	electronic-National Agriculture Market
EWS	Economically Weaker Section
FHTC	Functional Household Tap Connection
FLN	Foundation Literacy Numeracy
FPC	Farmers Producer Company
FPO	Farmers Producer Organization
FRUs	First Referral Units
GDP	Gross Domestic Product
GoI	The Government of India
GP	Gram Panchayat (basic village-governing institute)
HLPF	High-Level Political Forum
HMNEH	Horticulture Mission for Northeast and Himalayan States
ICDS	Integrated Child Development services
IECT	Information Electronics and Communication Technology
IFC	International Finance Corporation
IMR	Infant Mortality Ratio
JICA	Japan International Cooperation Agency
JJM	Jal Jeevan Mission (Mission for Functional Household Tap Connection to every rural household)
KCC	Kisaan Credit Card (Farmer Credit Card)

KCR Kit	Maternity benefit kit
KPI	Key Performance Indicators
LaQshya	Quality improvement in labour room and maternity operating theatre
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MCPC	Mother and Child protection card
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MMR	Maternal Mortality Rate
MoRD	Ministry of Rural Development
MoWCD	Ministry of Women and Child Development
MSDE	Ministry of Skill Development and Entrepreneurship
NAS	National Assessment Survey
NCERT	National council for educational research and training
NEP	National Education Policy
NFSM	National Food Security Mission
NGO	Non-government organization (not for profit organization)
NHM	National Horticulture Mission
NITI Aayog	National Institution for Transforming India
NMFI	National Mission for Financial Inclusion
NQAS	National Quality Assurance Standards
NSDC	National Skill Development Corporation
NULM	National Urban Livelihood Mission
O&M	Operation and Maintenance
ODA	Official development assistance
ODF	Open-defecation-free
OECD	Organization for Economic Cooperation and Development
OVOP	One Village One Product
PHCs	Primary Health Centers
PMC	Project Management Committee
PMEGP	Pradhan Mantri Employment Generation Program
PMFBY	Pradhan Mantri Fasal Bima Yojana (Prime Minister's Crop Insurance Scheme)
PMGKY	Pradhan Mantri Garib Kalyan Yojana (Prime Minister's Poor Welfare Scheme)
PMGSY	Pradhan Mantri Gram Sadak Yojana (Prime Minister's Rural Road Scheme)
PMJDY	Pradhan Mantri Jan Dhan Yojana (National Financial Inclusion Scheme)
PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana (Prime Minister's Life Insurance Scheme)
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana (Prime Minister's Agriculture Irrigation Scheme)
PMKVY	Pradhan Mantri Kaushal Vikas Yojna (Prime Minister's Skill Development Scheme)

PMMY	Pradhan Mantri MUDRA Yojana (Prime Minister's Loan Financing Scheme)
PMSBY	Pradhan Mantri Suraksha Bima Yojana (Prime Minister's Protection Insurance Scheme)
PNC	Postnatal Care
PoA	Plan of Action
PPP	Public Private Partnership:
PRI	Panchayathi Raj Institution (a system of rural local self-government)
PTM	Parent-teacher meeting
Q&A	Question and Answer
RCT	Randomized Control Trial
RPL	Recognition of Prior Learning
RTE	Right to Education Act
SAARC	South Asian Association of Regional Cooperation
SARS	Severely Acute Respiratory Syndrome
SBM	Swachh Bharat Mission (Clean India Mission)
SC	Scheduled Caste
SDGs	Sustainable Development Goals
SHEP	Smallholder Horticulture Empowerment and Promotion
SHG	Self Help Group
SKS	Samagra Kutumba survey (Comprehensive Household survey)
SMC	School Management Committee
SPV	Special Purpose Vehicle
SSA	Sub Service Areas
SSCs	Sector Skill Councils
ST	Scheduled Tribe
SWAYAM	Study Webs of Active learning for Young Aspiring Minds
TCP	Technical Cooperation Project
TSS	Taisei Soil System
UEE	Universalization of elementary education
UN	United Nations
UNDP	United Nations Development Program
UNICEF	The United Nations Children's Fund
VNR	India Voluntary National Review
WASAC	Water and Sanitation Corporation
WASH	Water Access, Sanitation and Hygiene
WHO	World Health Organization

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Executive Summary

SDGs in India

India has fully adopted the Sustainable Development Goals (SDGs) framework and aligned its national development policies and priorities with the SDGs. With the population of 1.2 billion, the world's sixth-largest economy and third-largest purchasing power parity, India's leadership and commitment to the SDGs hold the key to the success of the Agenda 2030 (UN, 2020).

To implement the SDG agenda, the Government of India (GoI) has launched several national programs. Furthermore, it has been monitoring the progress on the SDGs and achieving the targets with SDG India Index and Dashboard. For SDGs localization, it has created a firm collaborative environment for partnerships among various stakeholders at different levels – NITI Aayog at the national level, planning departments at the sub-national level, and the private sector and civil society organizations (CSOs) levels.

Given the socio-economic diversity in India, the GoI has given priority to those districts that have lagged behind in their development efforts and promoted the transformation of the *Aspirational District Program* (ADP) with five thematic sectors: a) health and nutrition, b) education, c) agriculture and water resources, d) financial inclusion and skills development, and e) basic infrastructure. In addition, the GoI has ranked the districts based on their development performance and updated the rankings periodically to make them compete. Their performance is monitored by NITI Aayog with the support of the IDinsight (funded by the Bill & Melinda Gates Foundation[1]) and the Tata Trusts of India. Moreover, Challenge Funds have been provided by NITI Aayog to the ADP proposals submitted by the States.

While the United Nations (UN)'s *Voluntary National Review 2020* reported satisfactory accomplishments in India, the COVID-19 pandemic has created several new development challenges. They must be addressed at the earliest in order not to lose the momentum on the SDGs and regain the progress on them made prior to the pandemic.

Progress of the ADP

The ADP aims to accelerate the efforts to achieve the SDGs and reduce inequalities in the 112 poorest districts of India that affect the lives of approximately 20% of the country's population. Launched in 2018, the ADP has made tremendous progress by pulling India's most underdeveloped districts out of stagnation and facilitating the process of bringing them to the mainstream.

Between April 2018 and February 2021, the composite score indicating the performance of the ADs varied significantly from 5 to 53. However, it is promising that 83 districts (74%) have progressed with a score ranging from 15 to 30 and 16 districts between 30 and 45 (14%) during the period. Varying degrees of achievements are observed in the five thematic sectors covered under the ADP. Around 100 districts are on a faster growth trajectory. As in the case of the SDGs, the COVID-19 pandemic has affected the ADP quite negatively. The pandemic's adverse impacts on education, health, and the digital divide are worth noting.

JICA Project Activities

To complement the efforts of the ADP, JICA and the GoI signed an ODA Loan agreement on the "Program for Japan-India Cooperative Actions towards Sustainable Development Goals in India" (hereinafter the "Program") in January 2019. Subsequently, in December 2019, the "Technical

[1] The Bill & Melinda Gates Foundation (BMGF) provides funding to IDinsight to conduct third party surveys in 25 ADs for validating the data entered by districts in the Champions of Change portal. Similarly, Microseven (through BMGF) placed teams in these Districts for supporting Financial Inclusion. NITI Aayog has also partnered with BMGF and the Centre for Social and Behaviour Change (CSBC) at Ashoka University to help set up the Behavioural Insights Unit (BIU). The objective of the BIU is to improve indicators on the ground using behavioral insights. One of the first knowledge products developed by the BIU is the publication – *Stories of Change from India's Districts: Use of Behavioural Insights 2020*. It is a collection of 30 practices from across the aspirational districts that are behaviorally informed and have been effective in bringing about change.

Cooperation Project (TCP) for Promotion of the Program for Japan-India Cooperative Actions towards Sustainable Development Goals (SDGs) in India" (hereinafter the "Project") began. The Project aimed to promote technical cooperation and action-oriented policies based on Japan's knowledge and experience, and produce concrete results.

During the course of the Project, the Project Team had conducted document reviews, three online surveys of ADs, and helped the ADs prepare a Plan of Action (PoA) to use Challenge Funds awarded to them. For the AD surveys, the Project Team designed the survey framework to understand the status and functions of the ADP, confirm the ADP's progress in thematic sectors, and identify the issues and challenges faced as well as the best practices in the selected ADs, namely Chitrakoot in Uttar Pradesh state, Goalpara in Assam state, and Nandurbar in Maharashtra state.

In preparing PoAs, the Project Team has worked with Malkangiri in Odisha state and Baksa in Assam state. From Malkangiri, two proposals on early grade literacy and the establishment of a sports school were originally submitted. Because the sports school concept did not clearly fit into the Challenge Funds objective, the proposal was ultimately changed to one on a one-stop center of self-help groups (SHGs) to create sustainable livelihoods and career counselling with coaching. From Baksa, several proposals were submitted, and the Project Team is still working with the district on the proposals. The PoA preparation process has been time-consuming. Working with the district teams has revealed that their capacities in conceptualizing and developing PoAs need major improvement. Moreover, the district teams in sectoral levels do not understand Challenge Funds proposals and the funds' goals and vision properly. In this report, the Project Team submits a few recommendations based on the observations above.

On November 5, 2020, the Project Team held the 2nd Japan-India SDGs Forum on Health and Nutrition, 3rd Japan-India SDGs Seminar on Education on August 4, 2021, , then 4th Japan-India SDGs Forum on Agriculture on October 21, 2021, in which the team presented several best practices and innovations that have potential for replicating elsewhere and future scale-ups in ADs in India. They include not only best practices in India but also those of Japan and elsewhere that are appropriate to India's economic, social, and cultural contexts and challenges. A presentation on health and nutrition titled "Achieving Zero Undernutrition Among Children – Bringing Japanese Experience to India" focused on Japan's holistic approach to maternal and child health (MCH). In addition, an education session shed light on issues highlighted in India's National Education Policy 2020. The seminar titled "Enabling Access to Quality Education for All Children in India" focused on out-of-school children and improving learning outcomes. Japan's undertakings on school sanitation were also presented in the hope of improving the school environment in India. The following were introduced at the agriculture forum: "Smallholder Horticulture Empowerment and Promotion (SHEP)" for promoting an agriculture extension approach to realize market-oriented agriculture and "One Village One Product (OVOP)" for revitalizing local economic and social development through development of local products and services.

The good practices and innovations above have great potential to help promote the SDGs in the ADP. To increase the replicability of the good practices and innovations, the ADP should keep providing more opportunities for knowledge and information sharing among the ADs and implement a more systematic advocacy and communication strategy among a wider range of stakeholders.

Conclusion and Way Forward

It is important to strengthen the framework of SDGs localization, within which the GoI has promoted the ADP. The ADP has been implemented under the strong leadership of the District Collectors (DCs) with close monitoring at the State and national levels. SDGs localization requires a process of nationwide sensitization and awareness development of all stakeholders. It also requires an effective coordination process to design and implement appropriate policies by engaging multiple stakeholders. NITI Aayog, in partnership with JICA and other knowledge partners such as the UN, Asian Development Bank (ADB), and national and international philanthropies, has been striving to sensitize and raise

awareness of a wide range stakeholders at the State and district levels. This undertaking has proven the leadership, creativity, and innovations by States and Union Territories. NITI Aayog has vigorously pursued advocacy with the States and Union Territories to intensity the efforts toward the SDGs.

It is also important for the ADP to gain more publicity and provide incentives to more people through training and learning programs. The ADP is a key government program to accelerate the achievement of the SDGs in India, and its momentum must be sustained. The best practices of the ADP must also be systematically gathered and shared among the ADs so that they can be effectively replicated in other districts.

The ADP has had a highly positive impact on the districts where it was implemented (UNDP, 2021a). India has reiterated its commitment to the principles of sustainable development and the goals set under the SDG framework. The COVID-19 pandemic disrupted the country's plans and timelines set earlier in this regard. The COVID-19 pandemic is far from over, and India will face additional challenges for attaining the SDGs. However, India will do its utmost to achieve the Agenda 2030, improve equity in its society, and protect the environment. At an early stage, the GoI identified key development challenges to attain the SDGs fully, and planned the way forward to address the challenges.

The Project Team recommends the GoI to take the following actions to further promote the SDGs in India and strengthen the ADP. They are not only at the policy level (e.g., making the financial system and laws more inclusive, establishing better data and statistics, and developing a more effective communication and advocacy strategy) but also at the operational level (e.g., building capacity of institutions and human resources, strengthening result-based management, and monitoring and evaluation (M&E), creating improved synergy and integration, and promoting good practices and innovation).

For promoting the SDGs in India:

a) Revising and updating the SDGs India Index: The current SDGs India Index covers 13 out of the 17 SDGs. It is critical for India to flexibly revise or update goals for addressing new and emerging challenges for the SDGs such as SDG 12, 13, and 14 to fully meet Agenda 2030.
b) Strengthening SDGs financing: It is critical for India to set a SDGs financing mechanism to generate sufficient financial resources to support the ADP and achieve the SDGs.
c) Capacity building of all stakeholders: Although effective policy and institutional frameworks have been established for the SDGs, there have been gaps among key stakeholders in such aspects as financing, skills, knowledge, innovation, and communications. It is critical to close those gaps.
d) Creating higher awareness and visibility on SDGs: Although India has been making steady progress towards achieving the SDGs, many of its people do not understand the concept of the SDGs well. A much more effective advocacy and communication strategy is needed.
e) Strengthening the pandemic and emergency diseases surveillance system: The COVID-19 pandemic is far from over. As one of the most severely COVID-19-affected and natural-disaster-prone countries in the world, India must make itself a more resilient nation.

For strengthening the ADP:

a) Project design and integration/synergy between national and subnational programs: The ADs must understand the best use of the ADP Challenge Funds regarding integration and coordination with other programs at the district, subnational, and national levels.
b) Implementation arrangements: Several ADs still suffer from manpower shortage and lack of inter-departmental coordination. The ADs must strengthen networking and cooperation among them to share knowledge, best practices, and innovations.
c) Capacity development: Effective orientations and capacity building are still needed at the AD level to strengthen their basic understanding and skills in program development including designing, formulation, implementation, and M&E. It is also important to raise awareness of

the ADP and the SDGs in the AD communities.

d) Monitoring: Although ADP monitoring and indicators are part of measuring the attainment of the SDGs, their accuracy needs improvement. It is necessary to refine and expand the scope of the ADP indicators and monitoring. It is equally important to ensure more comprehensive tracking on the ADP including disaggregated data, tangible outcomes, and details on budgets and expenditures.

e) Others: The ADP must create more convergence and synergy with national and subnational programs and schemes.

1 Introduction

1.1 Global scenario on SDGs

Since the beginning of 2020, the COVID-19 pandemic has been an unprecedented global crisis, killing over 4 million people and directly impacting the health and livelihoods of 185 million globally, besides causing a huge economic depression. (WHO, 2021 and UNDP, 2020a). The crisis has also affected many constitutive elements of human development: income, health, and education. Although it has not yet been fully documented, the pandemic has also caused tensions between people and technology, among people themselves, and between the planet and the "haves" and "have-nots." These tensions are already shaping a new generation of inequalities (UNDP, 2019).

The *Sustainable Development Goals Report 2021* was prepared by the UN Department of Economic and Social Affairs using the data and estimates of the Global SDG Indicators Database—the database contains global, regional, and country data and metadata on the official SDG indicators. The number of these indicators has been raised from 115 in 2016 to 211 in 2021. The report, however, points out that the pandemic disrupted data collection measures such as population census worldwide, and a survey shows that approximately 42% of the national statistical offices globally had to postpone their censuses scheduled for 2020 or 2021 for about a year.

Source: United Nations

Under the pandemic, key SGD-related findings highlighted in the report presented at the High-level Political Forum (HLPF) on Sustainable Development in 2021 are as follows:

- SDG 1: The global poverty rate is projected to be 7% in 2030. Thus, the target of eradicating poverty will be missed;
- SDG 2: On child malnutrition, 22% of children aged below 5 are stunted, 6.7% suffer from wasting, and 5.7% are overweight;
- SDG 3: The pandemic has halted, or reversed progress related to health and shortened life

expectancy;
- SDG 4: In 2020, 9% of children in grades 1–8 fell below the minimum reading proficiency level;
- SDG 5: On gender equality, only 25.6% of national parliamentarians and 36.3% of local government representatives are women, while only 28.2% of managerial positions are occupied by women;
- SDG 6: As of 2020, 2 billion and 3.6 billion people lack access to safe drinking water and safe sanitation, respectively;
- SDG 7: As of 2020, 2.6 billion people use dangerous and inefficient cooking systems;
- SDG 8: The pandemic led to the loss of 255 million full-time jobs;
- SDG 9: The manufacture of medium- and high-tech products fueled economic recovery in late 2020;
- SDG 10: In 2020, 311 of every 100,000 persons were refugees;
- SDG 11: Only half of the world's urban population has convenient access to public transport[2];
- SDG 12: The global material footprint increased by 70% between 2000 and 2017;
- SDG 13: In 2020, the global average temperature was 1.2 degrees Centigrade above the preindustrial baseline;
- SDG 14: Dead zones (areas in waterbodies lacking sufficient oxygen to support marine life) have risen from 400 in 2008 to 700 in 2019;
- SDG 15: The world has lost 100 million hectares of forest between 2000 and 2020;
- SDG 16: Child labor rose to 160 million in 2020 (the first increase in two decades); and
- SDG 17: Nearly half of the global population (3.7 billion people) still do not have Internet connectivity.

At the 2021 HLPF, UN Secretary-General António Guterres highlighted the impacts of COVID-19 on SDG implementation worldwide and proposed a framework for providing an immediate socioeconomic response and aimed at informing and fleshing out both an analysis of the crisis and possible responses. He also stressed the importance of collective action—at the community, country, and global levels. The salient points of his speech include the following:

To look at the response through an equity lens.[3] Countries, communities, and groups already lagging in enhanced capabilities will be more affected, and leaving them further behind will have long-term impacts on human development, thus making it more difficult to recover from this crisis (UNDP, 2021b).

To focus on people's enhanced capabilities. This move could not only reconcile apparent trade-offs between public health and economic activity but would also help build resilience for future shocks.

To follow a coherent multidimensional approach. Since the crisis has multiple interconnected dimensions (health, economic and social aspects, etc.), a systemic approach—rather than a sector-by-sector sequential one—is essential. A recent survey conducted in 14 countries found that 71% of adults globally consider climate change as serious a crisis as COVID-19, with two-thirds supporting government actions to prioritize climate change during the recovery.[4]

The response to the pandemic shows how people worldwide respond collectively. Complete enforcement of social distancing—which in some cases started before formal policies were put in place—was not possible as it ultimately depended on people's cooperation. Moreover, it was done in

[2] Convenient access defined as residing within 500 meters of a bus stop/low-capacity transport system and 1,000 meters of a railway or ferry terminal (2021 Sustainable Development Goals Report, United Nations).
[3] Amartya Sen highlighted the impact of responses to crisis when the approach is informed by equity considerations, which can bring some that were worse off during the crisis to better standards of living during the crisis – and that in the absence of an equity crisis, the cost in human development and even lives can be massive (Sen 2020).
[4] Earth Day 2020: how the world views the climate change, LPSOS, 2020. The survey includes Australia, Brazil, China, Canada, France, Germany, United Kingdom, India, Italy, Japan, Mexico, Russia, Spain, and the USA.

response to a shared global risk that brought to the fore, as a priority, something other than rapid economic growth.

1.2 Indian SDG scenario

1.2.1 India's key role in Agenda 2030

With 1.2 billion people and a fast−growing economy, India's leadership and commitment to the SDGs hold the key to the success of the 2030 Agenda (UN, 2020). Accordingly, the country has assumed a leadership role in accelerating the SDGs globally, mainstreamed them into the national development agenda, and adopted a whole-of-society approach. The Government of India (GoI) is further committed to "Sabka Saath, Sabka Vikas, Sabka Vishwas," in the spirit of the SDG motto of "Leaving No One Behind."

1.2.2 Strategy: Global leadership and coordination

India has played a prominent role in the formulation of the SDGs and adopted a two-pronged strategy of fast-tracking them globally and nationally. As a vaccine manufacturing hub, the country is playing a key role in augmenting the vaccine supply for the global market. The UN has also appreciated India's continued efforts to support and strengthen the COVAX Facility, which is a global initiative for equitable access to COVID-19 vaccines (NDTV, 2021). Under the ambitious vision of Aatma Nirbhar Bharat (self-reliant India), GoI has also operationalized the SAARC (The South Asian Association for Regional Cooperation) COVID-19 Emergency Fund. At the national level, India has mainstreamed the SDGs into its development agenda, developed a comprehensive indicator framework, localized the SDGs at the state and union-territory level, and developed a comprehensive monitoring framework to track SDG progress.

1.2.3 Action plan highlights: Aligning the national development agenda with the SDGs

NITI Aayog, in collaboration with Union ministries and states, is the nodal agency for coordinating and monitoring the SDGs. It prepares India's Voluntary National Review for the HLPF on the SDGs at the UN. The SDG India Index and Dashboard is the official SDG progress monitoring tool at the central and state/union-territory levels. Under SDG localization, GoI is developing and tracking state and district indicator frameworks, institutionalizing review mechanisms, and rolling out programs for capacity building.

At the macro level, India's key development policies and high-impact flagship programs are in alignment with the SDGs. For instance, Ayushman Bharat, which is the largest health protection scheme in the world, closely aligns with SDG 3 (health and well-being) and SDG 10 (reduced inequalities). India's comprehensive climate action agenda and leadership in the International Solar Alliance aim to achieve the same outcomes as SDG 7 (affordable and clean energy). The Aspirational District Program (ADP) aims to accelerate the SDGs and reduce inequalities in the 112 poorest districts of India, thus touching the lives of approximately 20% of the total population. The *SDG National Indicator Framework Progress Report 2021* shows the latest data-based evidence of India's progress toward achieving the SDGs.[5] Key highlights of the SDG action plan are:

i) **End poverty in all its forms:** GoI has launched a multi-pronged strategy to eradicate poverty, implementing several welfare schemes in the areas of nutrition, health, education, housing, drinking water, sanitation, financial inclusion, skill development, social protection, and others. India's sustained economic growth has also been instrumental in reducing poverty significantly over the years.

[5] The Ministry of Statistics and Programme Implementation has developed a monitoring framework for tracking the progress at the national level. India has the latest "Sustainable Development Goals-National Indicator Framework Progress Report, 2021 (version 3.0)," which is based on the baseline "Sustainable Development Goals National Indicator Framework Baseline Report 2015-16."

ii) **Water and sanitation for all:** Under the Swachh Bharat Mission, one of the largest flagship success stories in sanitation globally, the country has achieved near-universal sanitation coverage. Under the National Nutrition Mission, it has achieved significant reductions in the number of stunted children and maternal mortality rates.

iii) **Jal Jeevan Mission (JJM):** An initiative announced by the prime minister in 2019, it aims to provide piped water to every household in India by 2024–25, with an outlay of INR 3.5 trillion. The Jal Sakthi Mission and Atal Bhujal Yojana, for augmenting groundwater, will work in unison to ensure safe, adequate, and affordable drinking water to all by 2024.

iv) **Inclusive and Entrepreneurial India (Samagra Bharat - Saksham Bharat)**: Social inclusion is pursued through a series of measures in nutrition, health, education, social protection, and the development of capabilities for entrepreneurship and employment. Financial inclusion is encouraged through the Jan Dhan-Aadhaar-mobile plan, and near-universal access to bank accounts is facilitated by the Pradhan Mantri Jan Dhan Yojana (PMJDY) (National Financial Inclusion Scheme).

v) **Sustainable India (Satat Bharat - Sanatan Bharat)**: India's climate action strategies call for clean and efficient energy systems, disaster-resilient infrastructure, and planned eco-restoration. Acting on its nationally determined contributions, India has electrified 100% of its villages, cut CO_2 emissions by 38 million tons annually using energy-efficient appliances, provided clean cooking fuel to 80 million poor households, and set a target of installing 450 GW of renewable energy and restoring 26 million hectares of degraded land by 2030.

vi) **Prosperous and Vibrant India (Sampanna Bharat - Samriddh Bharat**): The country has a huge potential to leverage the demographic dividend. With a gross domestic product (GDP) of USD 2.72 trillion in 2018–19, India has pursued an inclusive and sustainable growth trajectory by stimulating manufacturing, building infrastructure, spurring investments, fostering technological innovation, and boosting entrepreneurship.

vii) **The COVID-19 response and Pradhan Mantri Garib Kalyan Yojana:** Following the WHO declaration of a global pandemic on March 11, 2020, GoI declared a COVID-19 emergency on March 14, 2020. Recognizing that the national lockdown would severely impact the poor and vulnerable, it launched a massive social protection initiative called the Pradhan Mantri Garib Kalyan Yojana (PMGKY) on March 26, 2020. The PMGKY is an integrated package scaling up cash and food assistance through preexisting programs that have large outreach and strong delivery mechanisms. The PMGKY package costs GoI approximately USD 23 billion. This step is in addition to a series of measures for social protection, food security, and livelihood support launched by the central and state/ union territory governments. As the SDGs are dominantly under the state's list of subjects in a federal India, states and union territories are spending equally in SDG-related areas; GoI influences this spending through national polices, flagship programs, and fiscal devolution.

1.2.4 India SDGs: Good progress yet challenges remaining

According to official data, the country's overall SDG score improved by six points, from 60 in 2019 to 66 in 2020–21 — this jump is largely driven by exemplary countrywide performance in SDG 6 (clean water and sanitation) and SDG 7 (affordable and clean energy), with the composite goal scores being 83 and 92, respectively (NITI Aayog, 2021a). India's goal-wise results for 2019–20 and 2020–21 are presented in the figure below.

Source: NITI Aayog (2021a)

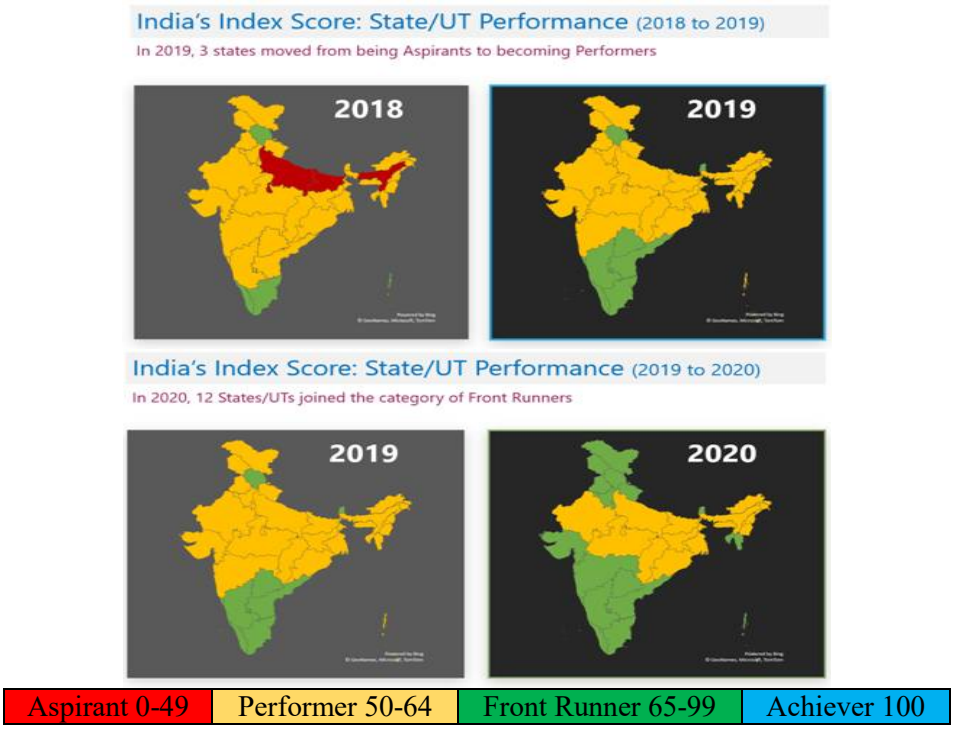
Figure 1-1 SDG Goal-wise Results in India

Despite this progress, however, India needs to significantly improve its performance under SDG 1 (no poverty), SDG 5 (gender equality), and SDG 13 (climate action) among others. The detailed state-wise SDG score for 2020–21 is given in Annex 1-1. It can be seen that Kerala continues to top the list with a score of 75 against the national average of 66, followed by Himachal Pradesh and Tamil Nadu (74); Andhra Pradesh, Goa, Karnataka, and Uttarakhand (72); Sikkim (71); and Maharashtra (70). The bottom performers are Bihar (52); Jharkhand (56); Assam (57); Arunachal Pradesh, Meghalaya, Rajasthan, and Uttar Pradesh (60); and Chhattisgarh, Nagaland, and Odisha (61).

Figure 1-2 shows the SDG momentum and progress across the states in India in the period 2018–20. The most significant achievement is that 12 more states have joined the front runners' club, taking the total to 22. Furthermore, there is significant dynamism and vibrancy among the backward states historically lagging in economic development. The achievements are the combined outcome of GoI's economic initiatives at all levels. However, according to the State of India's Environment Report 2021, India's rank on the 17 SDGs based on the combined SDG score has slipped from 115 in 2020 to 117 in 2021, primarily due to the challenges in reducing hunger and achieving food security (SDG 1 and 2), gender equality (SDG 5), building resilient infrastructure, and fostering innovation. According to the UN Sustainable Development Report 2021, in terms of the overall global score, which measures a country's total progress toward achieving all 17 SDGs,[6] India is ranked 120 with a score of 60.07, and its neighbors Bangladesh and Sri Lanka are at 109 with a score of 63.45 and 87 with a score of 68.10, respectively (NITI Aayog, 2021; CSE, 2021; UN, 2021).

The pandemic has proved to be a setback for sustainable development everywhere. For the first time since the adoption of the SDGs in 2015, the global average SDG Index score for 2020 has decreased from the previous year—a decline driven to a large extent by increased poverty rates and unemployment following the outbreak (UN, 2021).

[6] Countries are ranked by their overall score. The overall score measures a country's total progress towards achieving all 17 SDGs. The score can be interpreted as a percentage of SDG achievement. A score of 100 indicates that all SDGs have been achieved

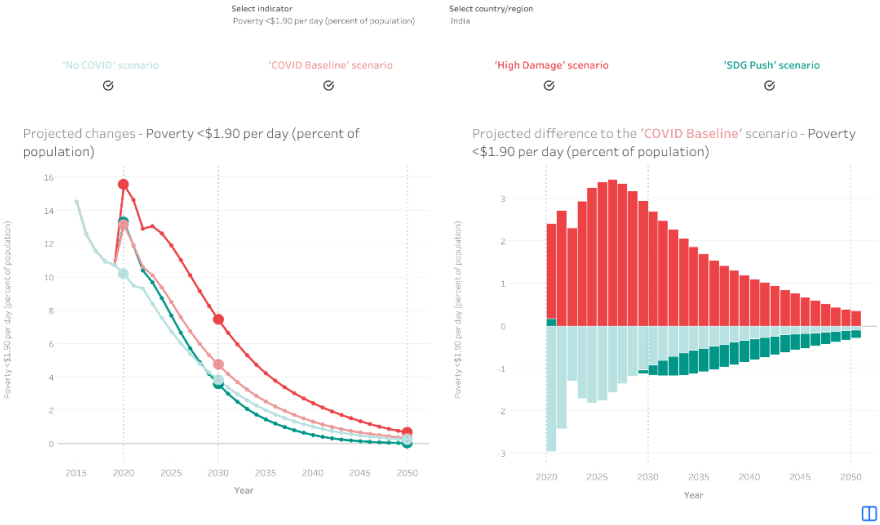


Source: NITI Aayog (2021b)

Figure 1-2 India's Index Score: State/Union Territory Performance 2018-2020

1.2.5 COVID-19 Response and India's Progress in SDGs

Despite significant achievements over the years, the pandemic has upset the progress, with a catastrophic impact on economic growth (The Economic Times, 2020a). Moreover, its impact has not been uniform, with women and the poor being the groups most affected. The lockdowns have resulted in large outmigration of labor force, livelihood loss, and hunger, and have adversely impacted the progress in key sectors, such as education and health. Regarding macroeconomic variables, the economy has slowed down significantly, magnifying the preexisting risks to India's economic outlook. However, with effective management and a response mechanism, there could be a speedy rebound, recovery, and poverty reduction. The recent UNDP study has, inter alia, corroborated the positive poverty predictions under different scenarios for India, as shown below (UNDP, 2021c).



Source: UNDP, Pardee Canter for International Futures at the University of Denver (2021c)

Figure 1-3 Positive Poverty Predictions in India under Different Scenarios

India has implemented strategic initiatives to accelerate economic recovery, manage transition, and ensure social protection. To overcome the pandemic, it has responded with an initial economic stimulus package, comprehensive health coverage for frontline workers, and direct cash and food transfers for the most vulnerable. GoI has also announced a mega combined stimulus package of INR 20,970 billion to resuscitate the lockdown-battered economy and is focusing on tax breaks for small businesses as well as incentives for domestic manufacturing. The combined package works out to roughly 10% of the GDP, thus making it among the most substantial in the world (The Economic Times, 2020b). It will cater to various sections, including the cottage industry; micro, small, and medium enterprises; laborers; the middle class; and industries (The Economic Times, 2020b).

1.3 India's SDGs policy and Aspirational District Program

1.3.1 Policy Context of SDGs

As a signatory of the 2030 Agenda, India's core development strategy is SDG-centric and addresses deprivation and poverty through accelerated growth and sustainable development. As the world's largest democracy, the broad contours of the country's strategy are also based on the key pillars of human rights, equity, inclusion, gender equality, improved service delivery, stakeholder participation, decentralization, and empowerment. India's policies on health, education, housing, basic infrastructure, water and food security, agriculture, climate resilience, industry, labor welfare, financial inclusion, decentralization, digitization, and good governance are all configured into the SDGs. The spirit of federalism and collaboration among the central and state/union-territory governments, fiscal and Union Finance Commission transfers, deepening decentralization by empowering Panchayati Raj structures of local governance, Mission Antyodaya, a program for converging various central and state/union-territory government sectoral schemes, and the targeted ADPs are all part of the building blocks of the SDG Action Framework.

A concomitant plank of the national development policy is to reduce inequalities and regional disparities. As a diverse and large country, India is highly heterogeneous in terms of development stages, with lagging states and underdeveloped areas. To address this disparity and bring all communities on par with the national progress, GoI has launched the ADP (on January 5, 2018) for inclusive and rapid SDG achievements in the country's 112 underdeveloped districts. The SDG localization model reinforces cooperative and competitive federalism.

1.3.2 COVID-19 Pandemic Policy Responses and SDGs

A recent UNDP study shows that a combination of bold policy choices and investments made domestically and by the international community would help countries achieve human development gains sooner and reach the SDG targets they otherwise would have missed because of the pandemic (Hughes et al., 2021). Coming on the heels of the massive COVID-19 revival package announced by GoI, the Reserve Bank of India has declared supporting quantitative easing strategies to augment credit, and trigger and sustain economic recovery.

The IMF Policy Tracker summarizes governments' key economic responses to limit the pandemic's human and economic impact (IMF, 2021). Thus, the tracker highlights GoI's comprehensive policy stance and intervention measures, encompassing the series of "unlock guidelines," fiscal stimulus package accompanied by monetary and macro-financial measures, liberalized foreign exchange, and foreign direct investment and foreign portfolio investment regimes. Consequently, from the sharply contracted GDP in 2020 Q2 (-24.4% year-on-year) due to the unprecedented lockdowns, the growth returned to the positive territory in 2020 Q4 and 2021 Q1, at 0.5% and 1.6%, respectively. The national statistical office has revised the FY2020/21 GDP growth to -7.3% in the latest provisional estimate.

The ADP is also in alignment and has supported GoI's pandemic response strategy by focusing on the key pro-poor development goals, which include poverty reduction, health and nutrition, social protection,

and last-mile rural connectivity. It has also proved successful in mitigating the hardships of COVID-19 through the use of the infrastructure created under it as quarantine and vaccination centers and for delivery of welfare packages, and supported growth momentum at the district level (GoI, 2021).

1.3.3 Aspirational District Program (ADP)

With States as the main drivers, this program focuses on the strength of each district, identify room for immediate improvement, measure progress, and rank districts. Moreover, as part of the selection of aspirational districts, 112 districts were identified from 28 states, at least one from each state, in a transparent manner by a committee of Senior Officers to the Government of India. The selection of the 112 districts was done in consultation with State Officials using a composite index of key data sets that included the following: deprivation enumerated under the Socio-Economic Caste Census; key health and education indicators; performance in the agriculture, skills, and financial inclusion sectors; and the state of basic infrastructure.

The ADP was launched by the Prime Minister in August 2017, aiming to expeditiously improve the socioeconomic status of India's most backward districts. Its three core principles are: convergence (of central and state schemes), collaboration (among citizens and functionaries of central and state governments, including district teams), and competition (among districts). Driven primarily by the states, the program focuses on leveraging the strengths of each district and prioritizing attainable outcomes for rapid improvement.

There are 112 "Aspirational Districts" (ADs), selected based on poverty, poor health, education level, and basic infrastructure deficit. Under the program, data points are tracked regularly through a dashboard on the website(http://championsofchange.gov.in.) (More details in section 1.3.7).

1.3.4 The program's thematic focus

Unlike the SDGs, the ADP focuses on five areas critical to improve the human quality of life and basic service delivery:

a) **Health & Nutrition (30% weightage):** There are 31 data points focusing on antenatal care, postnatal care, gender parity, health of newborns, growth of children, contagious diseases, and health infrastructure.
b) **Education (30% weightage):** There are 14 data points covering learning outcomes, infrastructure facilities (toilets for girls, drinking water, and power supply), and institutional indicators.
c) **Agriculture & Water Resources (20% weightage**): There are 12 data points on outputs (yield, price realization, etc.), inputs (quality seed distribution and soil health cards), and institutional support (crop insurance, electronic markets, artificial insemination, animal vaccination, etc.).
d) **Financial Inclusion & Skill Development (10% weightage**): There are six data points to measure the progress of relevant flagship programs (Atal Pension Yojana, Pradhan Mantri Jeevan Jyoti Bima Yojana, etc.). Ten data points have been identified in skill development to track the progress in improving the skills of youths, particularly the vulnerable and marginalized ones, and employment under the Pradhan Mantri Kaushal Vikas Yojana.
e) **Basic Infrastructure (10% weightage**): Eight data points cover drinking water, electricity, road connectivity, individual household latrines, Internet-connected gram panchayats, and panchayats with Common Service Centers.

1.3.5 Implementation Strategy

Strategically, the program envisages the following: (i) states playing a key role in driving the program; (ii) leveraging each district's basic strength; (iii) making development a mass movement in the districts; (iv) measuring progress and ranking the districts to infuse a sense of competition; and (v) having the districts aspire to become their state's best and then the nation's best. To infuse the spirit of competition

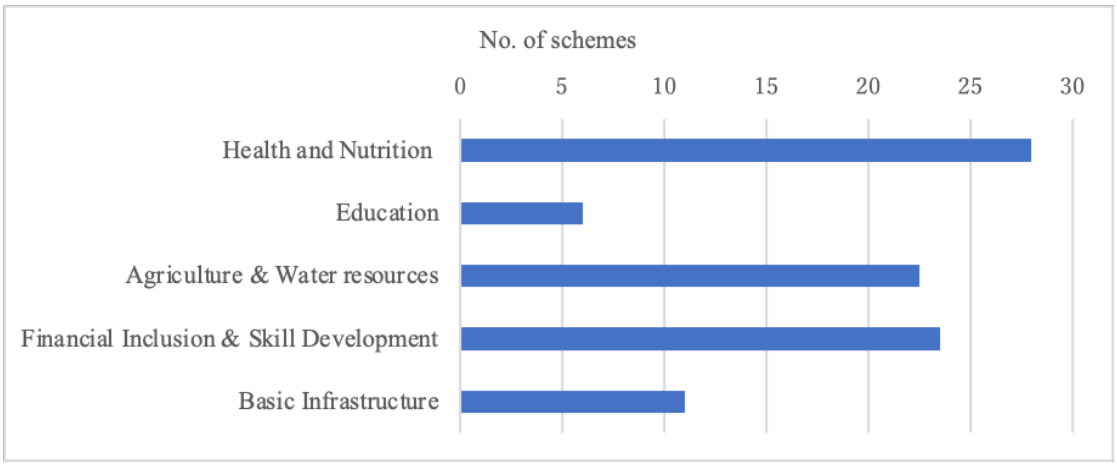
and encourage optimum performance, the program also provides a set of incentives and challenge funds.

In 2019, GoI launched the Externally Aided Programme on Sustainable Development Goals (EAP-SDG) for rapid socio-economic transformation of ADs. The program is funded by the official development assistance (ODA) from the Japan International Cooperation Agency (JICA) for JPY 15 billion. The additional allocation under the challenge method is allocated to districts on the basis of ranks declared every month on the Champions of Change Dashboard. The districts that rank first and second in the overall ranking receive INR 100 million and INR 50 million respectively and districts ranking first in sectoral ranking obtain INR 30 million each (NITI Aayog, 2019b). Organizations such as JICA, UNDP, and ADB provide technical support to districts in formulating proposals for this scheme and thereby facilitating access to these funds. By November 2020, proposals from approximately 65 districts have been approved under this scheme. This has proved to be a successful strategy in incentivizing districts to compete and score better in the Key Performance Indicators.

Once the award is declared, NITI Aayog will issue an official communication to the districts concerned with the project preparation format. This will also be shared with the technical support team to facilitate project preparation. The team will work with the districts in identifying and prioritizing proposals following the broad principles of convergence, collaboration, innovation, and impact. The proposals will then be submitted to the NITI Aayog that forms the Empowered Committee for approval.

Once approved, the funds will be transferred to the bank account maintained by the DC and implemented following the due process of procurement, contract management, and quality assurance by the respective departments with oversight by the District Special Purpose Vehicle (SPV), specially constituted for ADP monitoring, under the chairmanship of the DC.

As part of the ADP framework, NITI Aayog anchors the program with support from Central Ministries and the State Governments. While the Ministry of Home Affairs is steering the initiative in 35 left wing extremism-affected districts, NITI Aayog focuses on 30 districts, and various central ministries oversee 50 districts. Officers at the level of Additional/Joint Secretary have been nominated to become the Central Prabhari Officer of each district. States have appointed state-nodal and Prabhari officers. The Empowered Committee under NITI Aayog facilitates the convergence of various government schemes and streamlining of efforts. Altogether, 90 GoI programs have been mapped under various themes as indicated in Figure 1-4. The district planning process and preparation of action plans are essentially on convergence mode, leveraging ongoing programs and funding streams.



Source: Ministry of Home Affairs (2019)

Figure 1-4 Number of Flagship Programs Mapped under Themes

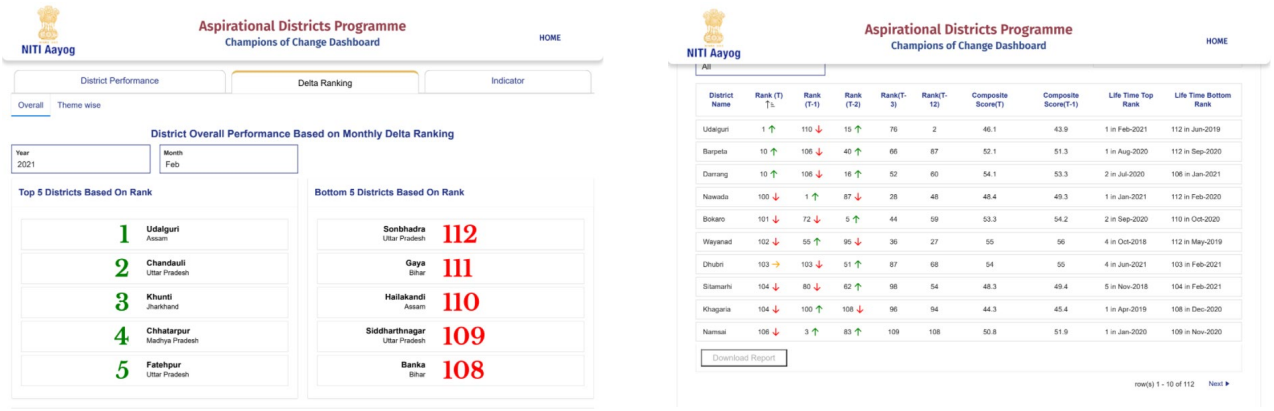
1.3.6 Financing of the Program

The ADP is financed largely through internal budgetary resources of both GoI and the states. The process of convergence is envisaged both at the policy (poverty alleviation, health and sanitation, education, etc.) and program (national, states, districts, etc.) levels, and all available funding streams of state-central-financial institutions, multilaterals, other lenders, and the private sector, including corporate social responsibility (CSR) are dovetailed to achieve the targets.

The NITI Aayog website indicates that a budget of USD 3.462 million (INR 260 million) was allocated for the quarter between April and June 2020, out of which USD 3.46 million (INR 259.9 million) was spent. The website also shows that over 99% of the budget for "Aspirational Districts Assistance Programme from JICA for Sustainable Development Goals" was disbursed (NITI Aayog, 2020c).

1.3.7 Real-time monitoring and delta ranking

Across the five areas, 49 key performance indicators (KPIs) and 81 data points have been identified in consultation with the ministries concerned. The ranking of districts is dynamic and reflect the incremental (delta) improvement made month to month. Some of the important data points are validated by third-party agencies. To that end, NITI Aayog is partnering with two survey agencies, namely Tata Trusts and IDinsight, in 76 and 25 districts, respectively. Program monitoring has also been institutionalized at the national, state, and district levels with oversight mechanisms. Senior GoI officials are facilitating the program as guardians (Prabhari officers), and the Empowered Committee is headed by the chief secretary at State level to monitor, review, and guide the ADP. A unique feature of the ADP is in its quantification of progress in real time at regular intervals, and the delta ranking devised by NITI Aayog is another—it shifts the focus from absolute numbers to percentage change in improvement, which ensures a level playing field for relatively backward districts. An example of monthly ranking results are shown below.



Source: NITI Aayog (2021c)

Figure 1-5 Dashboard Snapshot on Delta Ranking

2 Progress and Achievement of ADP in India

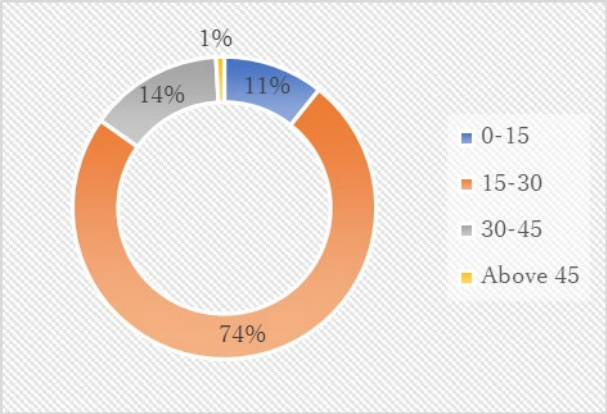
2.1 Overall progress and achievements of ADP

(1) ADPs and rapid rural transformation

The ADP has added new momentum to pull India's most backward and challenging districts out of stagnation and facilitated the process of bringing them to the mainstream. The program has institutionalized the transformative process, disrupting historical stagnancy, providing a clear framework for development action, and integrating real-time progress monitoring. Although there is wide variation in performance across districts, effective monitoring, institutionalizing accountability, and incentivizing a spirit of competition under the program have all made a difference. The recent UNDP evaluation has found ADP as a considerably successful model of local area development. It is aligned to the principle of "leave no one behind"—the vital core of the SDGs. Political commitment at the highest level has resulted in the rapid success of the program. It should serve as a best practice for several other countries where regional disparities in development status persist for many reasons (UNDP, 2020b).

(2) Performance analysis: success in rapid transformation

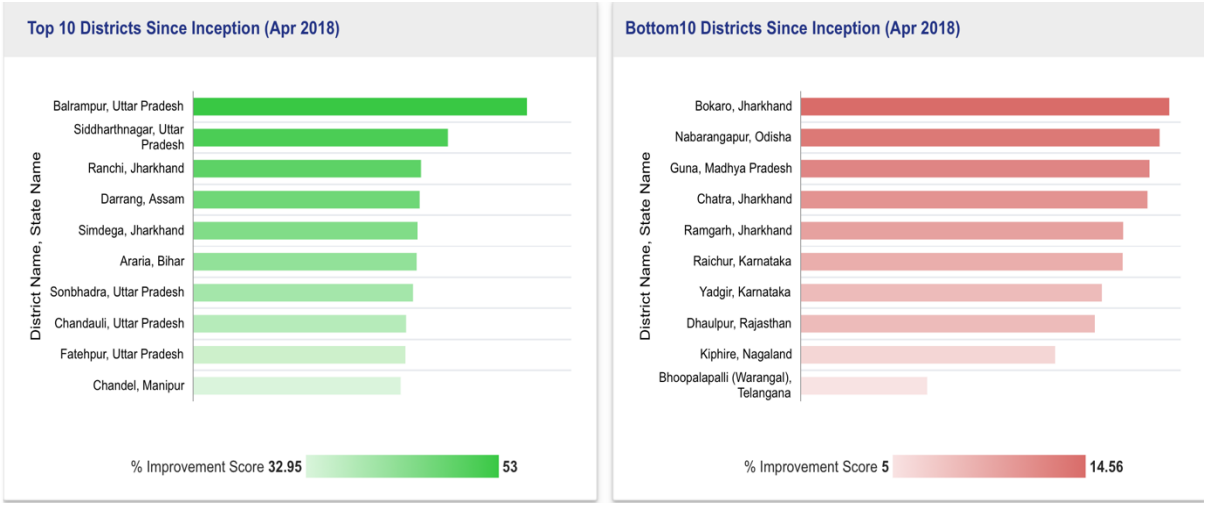
ADs are highly heterogeneous despite being unadvanced. The performance of the 112 districts in percentage composite score between April 2018 and February 2021 varies significantly from 5 to 53. Promisingly, 83 districts (74%) have progressed with a score ranging from 15–30 during the period, 16 districts between 30–45 (14%), and Balrampur, Uttar Pradesh (UP), topping the list with a score of 53, as shown in Figure 2-1. Overall, around 100 districts are on a faster growth trajectory. These variations could be partially due to the historical baseline, geography, and special challenges like extremism. However, they highlight the urgent need to design a more focused and intense development approach concentrating on institutional and leadership strengthening, a process-driven scheme cycle, and enhanced program design and delivery capacity. The poorly performing districts need contextual identification of barriers and targeted special packages to strengthen their capacity in governance, coordination and convergence, planning, implementation, monitoring, and absorptive capacity. They also need embedded management skills and professionalized backstopping arrangements.



Source: NITI Aayog (2021c)

Figure 2-1 AD Performance Since Inception: Percentage Improvement Score between April 2018 and February 2021

Figure 2-2 shows the top ten and bottom ten districts from the launch of the program in April 2018 to February 2021. The performance score of the poorest ten districts ranges between 5–14.56 as against the top 53% improvement score.



Source: NITI Aayog (2021c)

Figure 2-2 Overall District Performance Since Inception (April 2018- February 2021)

(3) Key challenges

The ADs are also home to numerous out-migrant workers. The COVID-19 pandemic has had serious consequences in reversing the gains of ADP/SDGs, at least in the medium term, in the way of hunger, displacement, and suffering. The stimulus package with social protection and safety nets announced by the governments have ameliorated the woes of the poor. However, the adverse impacts on education, health, and the digital divide may have a medium impact on the ADs, thus necessitating focused stimulus and social protection.

These districts may require a different scheme cycle and implementation approach, including possible extensions. The focus on inclusion needs more effort to reach the unreached and the "last mile first" in prioritizing investments and allocation. Greater ownership of the State, leadership commitments, a creative approach in convergence, coordination, collaboration, partnership, and leveraging resources are critical.

2.2 Sector-wise progress and achievements of ADP

2.2.1 Health and Nutrition

Under the ADP, 31 indicators are tracked, of which 25 concern health and six nutritional developments. After the ADP was launched in April 2018, most of the 112 districts showed significant progress in health and nutrition. However, there are serious inter-district and intra-district disparities regarding achievements.

(1) Achievements

The following are some of the key achievements that emerged from the analysis of the progress data, as displayed on the Champions of Change dashboard of NITI Aayog (NITI Aayog, 2021c).

- In terms of performance of the districts in the health and nutrition sector, based on the percentage increase in composite scores in February 2021, since inception (April 2018), Ranchi, Jharkhand (61.54), Sukuma, Chattisgarh (49.99), Balrampur, Uttar Pradesh (47.60), Siddharthanagar, Uttar Pradesh (42.72), and Chandauli, Uttar Pradesh (35.35) were at the top. Nabarangapur, Odisha (5.00), Malkangiri, Odisha (5.16), Kiphire, Nagaland (6.46), Purbi Singhbhum, Jharkhand (6.69), and Bokaro, Jharkhand (6.89) were the bottom five performing districts. In February 2021, the overall increase in composite score since inception (April 2018) in the top ten districts ranged from 32.22% to 62.06%, while the changes ranged from 5% to 8.12% for the bottom ten districts.

- In terms of the monthly delta ranking (February 2021) of health and nutrition indicators, Udalguri, Assam (rank 1; score 65.1), Chhatarpur, Madhya Pradesh (rank 2; score 64.6), Khunti, Jharkhand (rank 3; score 68.4), Chandauli, Uttar Pradesh (rank 1; score 80.2), and Sahibganj, Jharkhand (rank 1; score 59.3) topped the list. Sonbadra, Uttar Pradesh (rank 112; score 57.8), Gaya, Bihar (rank 111; score 47.9), Firozpur, Punjab (rank 110; score 59.6), Banka, Bihar (rank 109; score 49.2), and Wayanad, Kerala (rank 108; score 70.9) were at the bottom of the list.
- Districts in the top five delta rankings (June 2018) included West District, Sikkim (score: 69.6; February 2021 rank: 97; score: 80.3), Dohad, Gujarat (score: 66.8; February 2021 rank: 42; score: 82.5), Vizainagaram, Andhra Pradesh (score: 66.8 February 2021 rank: 12; score: 86.9), Raichur, Karnataka (score: 65.2; February 2021 rank: 19; score: 83.8), and Narmada, Gujarat (score: 59.0; February 2021 rank: 20; score: 76.6). The low performing districts of June 2018 were Sukma, Chhattisgarh (score: 33.8; February 2021 rank: 20; score: 74.2), Udalguri, Assam (score: 35.2; February 2021 rank: 01; score: 65.1), Jamui, Bihar (score: 35.8; February 2021 rank: 58; score: 50.1), Nuapada, Odisha (score: 36.5; February 2021 rank: 84; score: 75.3), and Barwani, Madhya Pradesh (score: 36.8; February 2021 rank: 82; score: 66.6).

Table 2-1 Key Indicators and the Top- and Bottom-Ranked Districts (February 2021)

Key Indicator	Top-Ranked Districts	Bottom-Ranked Districts
Percentage of pregnant women registered for antenatal care (ANC) within 1st trimester	Asifabad, Telangana (100.0), Yadgir, Karnataka (100.0), Dohad, Gujarat (100.0), Vishakhapatnam, Andhra Pradesh (100.0), and Virudunagar, Tamil Nadu (99.75)	Araria, Bihar (52.3), Ribhoi, Meghalaya (54.5), Chatra, Jharkhand (60.3), Pakur, Jharkhand (62.2), and Sahibganj, Bihar (63.8)
Percentage of institutional deliveries	Asifabad, Telangana (100), Barpeta, Assam (100), Damoh, Madhya Pradesh (100), Dohad, Gujarat (100) and Guna, Madhya Pradesh (100)	Jamui, Bihar (35.1), Aurangabad, Bihar (36.8), Mamit, Mizoram (38.9), Sitamarhi, Bihar (42.8) and Gaya, Bihar (45.19)
Percentage of fully immunized children (9-11 months)	Araria, Bihar (100), Asifabad, Telangana (100), Baharaich, Uttar Pradesh (100), Baksa, Assam (100), and Balrampur Uttar Pradesh (100)	Sonbadra, Uttar Pradesh (63.0) Firozpur, Punjab (65.9), Mewat, Haryana (66.4), Banka, Bihar (72.4) and Baran, Rajasthan (78.4)
Percentage of children aged 6 or younger with severely acute malnutrition	Bolangir, Odisha (0.01), Chandauli, Uttar Pradesh (0.01), Gajapathi, Odisha (0.01), Kalahandi, Odisha (0.01) and Karauli, Rajasthan (0.01),	Jamui, Bihar (18.0), Godda, Jharkhand (9.4), Gaya, Bihar (8.8), Sukma, Chattisgarh (6.8) and Araria, Bihar (6.5)
Percentage of low-birth-weight infants	Chandel, Manipur (0.0), Kupwara, Jammu and Kashimir (0.17), Pakur, Jharkhand (1.26), Vishakhapatnam, Andhra Pradesh (1.35) and Mamit, Mizoram (2.0)	Nabarangapur, Odisha (27.1), Khandmahal, Odisha (26.3), Dakshin Bastar Dantewada, Chattisgarh (23.6), Gadchiroli, Maharashtra (22.8), and Rayagada, Odisha (22.7)
Percentage of underweight children aged 6 or younger	Namsai, Arunachal Pradesh (0.0), Mamit, Mizoram (0.08), Ribhoi, Meghalaya (0.15) Bhoopalapalli, Telangana (0.27) and Baramulla, Jammu and Kashimir (0.29).	Nabarangapur, Odisha (82.2), Barwani, Madhya Pradesh (38.2), Araria, Bihar (36.0), Jamui, Bihar (35.6) and Baharaich, Uttar Pradesh (35.5)

Source: NITI Aayog (2021c)

(2) Challenges

Some of the main challenges and concerns faced by districts under the health and nutrition program activities include the following: high poverty, caste and ethnic barriers, extremely low health spending

capacity, poor use of health and nutrition services due to lack of awareness, preference for traditional practices, poor health-seeking behavior, poor knowledge and misconceptions, a poor rate of early registration of pregnancies and hospitalized deliveries, and extremely low nutritional practices (NITI Aayog, 2020a; NITI Aayog 2020b). Further, there exists poor quality health infrastructure and equipment in many places, an inadequate number of health professionals, and poor internet connectivity, which restricts access to telemedicine services. The COVID-19 pandemic has also adversely affected routine activities undertaken by the ADs' health and nutrition teams. The pandemic has severely strained already weak health system capacities and can reverse many health indicator gains achieved over the period, notwithstanding that the ADs are relatively less affected.

2.2.2 Education

With a 30% of weightage in overall ADP indicators, eight indicators and 14 data points are tracked under the education sector. The main indicators tracked on the NITI Aayog website are the transition rate from primary to upper primary and subsequently to secondary schooling, toilet access for girls, drinking water, and the electricity supply.

(1) Achievements

With a remarkable improvement in the number of schools, enrolment, and retention of children in primary and secondary education (especially girls) in schools in India, the focus has shifted to improving the educational outcomes and foundational literacy and numeracy in primary schools. Under the ADP, districts have taken steps to attain the universalization of elementary education (UEE) in terms of literacy, access, participation, and gender. In the last three years, the ADP has contributed significantly toward the goals of UEE and overall progress in education achievement. Data also indicate that districts have brought all children into the system and taken action to retain them and help them learn. During the lockdown phase of the COVID-19 pandemic, districts adopted various models of ICT to continue education. Below are some of the key achievements that emerged from the analysis of the progress data displayed on the Champions of Change dashboard of NITI Aayog (NITI Aayog,2021c).

- In terms of the districts' performance in the education sector, based on the percentage increase in composite scores in February 2021, since inception (April 2018), Balrampur, Uttar Pradesh (97.13), Rayagada, Odisha (57.74), Siddharthanagar, Uttar Pradesh (55.64), Bhadradri-Kothagudem, Telangana (54.66), and Mewat, Haryana (53.09) were at the top. Bhoopalapalli, Telangana (5.0), Yadgir, Karnataka (9.86), Nabarangapur, Odisha (13.76), Raichur, Karnataka (14.67), and Muzaffarpur, Bihar (18.05) were the bottom five performing districts. In February 2021, the overall increase in composite score since inception (April 2018) in the top ten districts ranged from 50.79% to 97.13%, while the changes for the bottom ten districts ranged from 5% to 24.44%.
- In terms of the monthly delta ranking (February 2021) of education indicators, Khunti, Jharkhand (rank 1; score 58.0), Sahibganj, Jharkhand (rank 2; score 54.6), Guna, Madhya Pradesh (rank 3; score 54.4), Ribhoi, Meghalaya (rank 4; score 45.9), and Nandurbar, Maharashtra (rank 5; score 75.2) topped the list. Jamui, Bihar (rank 112; score 44.2), Muzaffarpur, Bihar (rank 111; score 49.6), Sitamarhi, Bihar (rank 110; score 63.8), Kiphire, Nagaland (rank 109; score 54.4), and Chandel, Manipur (rank 108; score 53.2) were at the bottom of the list.
- Districts in the top five delta rankings (June 2018) included Virudunagar, Tamil Nadu (score: 87.0; February 2021 rank: 15; score: 68.1), Asifabad (Adilabad), Telangana (score: 67.8; February 2021 rank: 15; score: 59.6), Uttar Bastar Kanker, Chattisgarh (score: 71.2; February 2021 rank: 15; score: 61.6), Namsai, Arunachal Pradesh (score: 62.8; February 2021 rank: 103; score: 62.0), and Vizainagaram, Andhra Pradesh (score: 83.2 February 2021 rank: 15; score: 65.4). The low performing districts of June 2018 were Yadgir, Karnataka (score: 49.7; February 2021 rank: 15; score: 42.7), Sukma, Chhattisgarh (score: 36.2; February 2021 rank: 15; score: 56.7), Malkangiri, Odisha (score: 34.6; February 2021 rank: 15; score: 53.4), and Hailakandi, Assam (score: 41.8; February 2021 rank: 15; score: 57.6).

Table 2-2 provides the top and bottom list of ADs based on the performance in key indicators—access to girls' toilet, access to drinking water supply, access to electricity in secondary schools, and proportion of schools in the districts fulfilling pupil–teacher's ratio as per the right to education (RTE) norms. In February 2021, 100% of the schools in 71 districts had access to functional girl's toilet, 100% of the schools in 72 districts had access to drinking water supply, 100% of the secondary schools in 91 districts had access to electricity, and 100% of the schools in 31 districts had the specified pupil–teacher ratio.

Table 2-2 Key Indicators and the Top- and Bottom-Ranked Districts in Education Sector (February 2021)

Key Indicator	Top-Ranked Districts	Bottom-Ranked Districts
Toilet access: percentage schools with functional girls' toilets	100% of the schools in 71 districts have access to functional girls' toilet	Narayanpur, Chattisgarh (66.1), Kiphire, Nagaland (66.2), Bhoopalapalli, Telangana (67.3), Namsai, Arunachal Pradesh (68.6), Dhalai, Tripura (74.9), Ribhoi, Meghalaya (75.3), Raichur, Karnataka (87.3) Uttar Bastar Kanker, Chattisgarh (88.0)
Percentage of schools with functional drinking water facility	100% of the schools in 72 districts have access to drinking water supply.	Ribhoi, Meghalaya (39.1), Kiphire, Nagaland (46.2), Bhoopalapalli, Telangana (68.6), Chandel, Manipur (71.7), Namsai, Arunachal Pradesh (81.9)
Percentage of schools with functional electricity facility at secondary level	100% of the schools in 91 districts have access to electricity.	Ribhoi, Meghalaya (59.4), Rayagada, Odisha (69.8), Nuapada, Odisha (89.3), Khandmahal, Odisha (90.4) Chandel, Manipur (90.9)
Percentage of elementary schools complying with RTE specified Pupil Teacher Ratio	100% of the schools in 31 districts have reached a specified pupil–teacher ratio.	Aurangabad, Bihar (16.9), Khagaria, Bihar (21.0) Sheikpura, Bihar (21.8), Palamu, Jharkhand (24.5) Banka, Bihar (27.2)

Source: NITI Aayog (2021c)

The education domain covers indicators such as transition rate from primary to upper primary and subsequently to secondary schooling. Table 2-3 presents the fastest moving district in terms of transition rate from primary to upper primary and primary to secondary. This is an important indicator of SDG 4 of universal access to elementary education. The table shows that Hailakandi, Bhadradri-Kothagudem, Bijapur, Darrang, and Barwani were the top five districts that achieved the fastest progress for higher transition rate of primary to upper primary. Further, Rajgarh, Bijapur, Korba, Garhwa, and Nawada were the top five districts that achieved a higher transition rate from the upper primary to secondary level. Most of the top districts achieved the top ranks for these indicators in one year, while three districts achieved it in two years.

Table 2-3 Fastest-Moving Districts by Student Performance Indicators

State	District	Base Score	Indicator Value	Months Taken
1.1 Transition rate from primary to upper primary				
Assam	Baksa	67.19	99.11	12
Bihar	Katihar	75.03	92.96	12
Bihar	Jamui	75.54	88.71	24
Odisha	Rayagada	79.6	85.94	12
Chhattisgarh	Sukma	82.11	94.8	12
Madhya Pradesh	Barwani	83.62	94.15	12
Assam	Darrang	85.18	95.9	12
Chhattisgarh	Bijapur	86.18	98.23	12
Telangana	Bhadradri-Kothagudem	89.08	98.23	12
Assam	Hailakandi	90.55	98.36	12
1.2 Transition rate from upper primary to secondary level				
Odisha	Malkangiri	71.6	88.4	12
Bihar	Muzaffarpur	76.8	95.5	12
Assam	Hailakandi	77.6	90.1	12
Gujarat	Narmada	78.8	94.5	24
Chattisgarh	Mahasamund	79.2	86.3	12
Bihar	Nawada	84.5	100	24
Jharkhand	Garhwa	85.4	93.8	12
Chattisgarh	Korba	88.8	98.8	12
Chattisgarh	Bijapur	89.5	97.9	12
Madhya Pradesh	Rajgarh	91.2	99.7	12

Source: NITI Aayog (2021c)

(2) Challenges

Despite good progress in the districts, there are a few challenges in implementing the program, including targeting poor operation and maintenance of school buildings, ensuring functionality and timely asset management, and the absence of appropriate guidelines. Civil society's intervention is not integrated and does not work in collaboration with the other schools and stakeholders at the district and village levels. The stakeholder consultative processes at district levels on education matters are either nonexistent or weak. Even a structured process of identifying gaps and hurdles in education exists at the block, cluster, and village levels. The regular structured meetings to address cross-departmental issues on ADP progress are also weak or nonexistent.

In many locations, there is a lack of periodic student assessments and regular updating on the NITI Aayog dashboard. A guideline for reasonable uniformity in student assessment, especially relating to language and numeracy, is also absent. While most ADs focus on routine operations, district-level discussions, and initiatives for convergence of innovations, peer-to-peer learning, and scale-up good practices within and outside districts are weak. A major gap also exists in data collection of learning outcomes based on students' assessment. Out of 14, six data points are related to the subject learnings of students. Although the National Assessment Survey (NAS) considers uniformity of assessment, this is not done regularly.

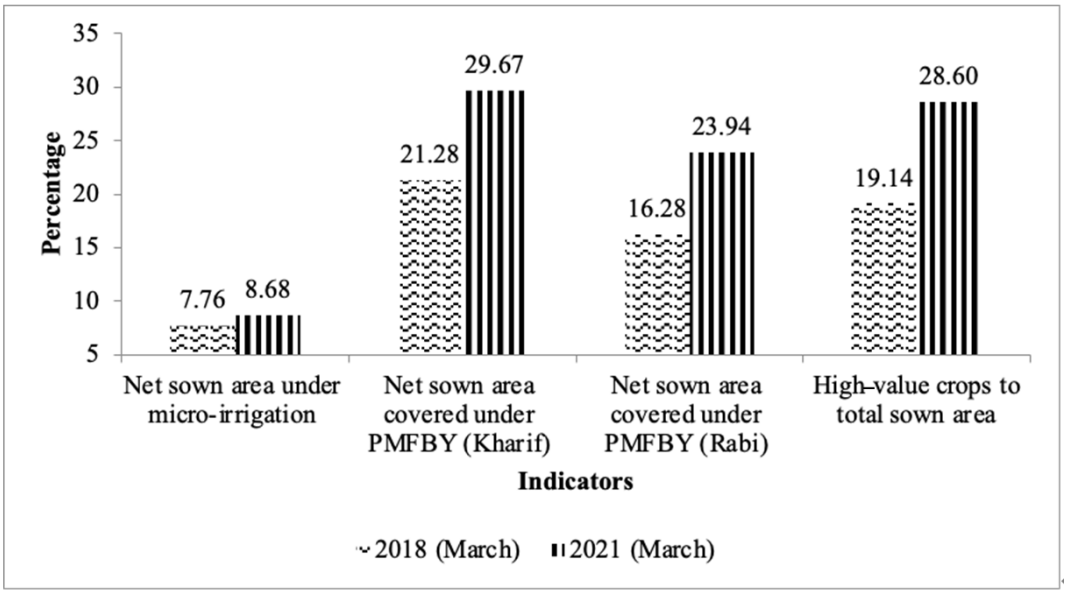
The COVID-19 pandemic lockdown and measures forced the schools to be closed. Although India has, over the years, progressed in information technology and internet-based teaching and training, most parts of ADP districts were devoid of internet connectivity; consequently, students' access to online education since March 2020 was limited or non-existent.

2.2.3 Agriculture and water resources

The agriculture and water resources sector under ADP carries 20% of the weightage in overall district development. There are ten indicators under the agriculture and water resources sector. Each indicator weighs with different values in both the agriculture and water resources index and overall composite index. Indicator 1, the percentage of net sown area under micro-irrigation, holds 17.5% of weightage in agriculture and water resource index. Similarly, the number of water bodies rejuvenated under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) claims 12.5%. Indicator 2, crop Insurance—the percentage of net sown area under Pradhan Mantri Fasal Bima Yojana (PMFBY), holds 15.0%, and Indicator 3, the percentage increase in agricultural credits, carries 10.0%, while certified quality seed distribution claims 7.5%. Further, Indicator 4, the number of district mandis linked to the electronic market, carries 10.0%; Indicator 5, the percentage change in price realization holds 5.0%, and Indicator 6, the percentage share of high-value crops to total sown area in the district, claims 2.5%. Moreover, Indicator 7, the agricultural productivity of two major crops, carries 5.0%, and Indicator 8, the percentage of animals vaccinated, accounts for 7.5%. Finally, Indicator 9, artificial insemination coverage, holds 5.0%, and Indicator 10, the number of soil health cards distributed, claims 2.5%.

(1) Achievements

The progressive work implemented under ADP in the concerned districts led to considerable change in the physical achievements between March 2018 and March 2021. Figure 2-3 shows that the percentage of net sown area under micro-irrigation increased by 11.86%, and the share of the net sown area covered under PMFBY improved by 39.40% for Kharif and 47.07% for Rabi. Simultaneously, the share of high-value crops to the total sown area improved by 49.43% in ADs.



Source: NITI Aayog (2021c)

Figure 2-3 Percentage of Areas Covered under Micro-Irrigation, PMFBY and High−Value Crops in ADP in March 2018 and March 2021

In addition, soil samples were collected and tested to understand the status of macro-nutrients, such as Nitrogen, Phosphorus, Potassium, pH, and micro-nutrients in the soil. Further, nearly 5.12 million soil health cards (45,716 cards per district on an average) were distributed to farmers for further improvement in their respective farm fields. Moreover, considering food security and good production, 11.65 million kg of certified seed were distributed to the farmers to increase the yield, especially in

major food crops, in March 2021. This has increased the productivity of primary major crops[7] in Kharif from 2,620 kg/ha in 2018 to 3,167 kg/ha in 2021. Similarly, the yield of secondary major crops in Kharif also improved from 1,932 kg/ha to 3,882 kg/ha. Additionally, better performance has been noted in Rabi in both major crop[8] 1 and crop 2, with a significant increase in yield from 2,662 kg/ha to 3,024 kg/ha and 2,022 kg/ha to 2,634 kg/ha, respectively. As of March 2021, 207 new markets are linked to the electronic system. This has assisted the farmers in price realization (difference between farm harvest price and minimum support price) to get better market value. Consequently, a positive change of 2.46% was observed in the paddy (Grade A) crop in March 2021.

As livestock is an integral part of the agricultural system, attention has been paid to vaccination to control diseases and artificial insemination to increase the breed in ADP. In the animals' vaccination program, 72.2% of animals were vaccinated in March 2021 compared to 56.10% in 2018, and the coverage under artificial insemination has increased from 34.22% to 67.77%.

(2) Challenges

Owing to the COVID-19 pandemic, some agricultural developmental activities were reduced in both 2020 and 2021. Consequently, fewer water bodies (1,400) were rejuvenated under MGNREGA in 2021 compared to 156,603 in 2018, thus leading to less area coverage under the micro-irrigation scheme. Further, reduced subsidy (~45-55%) under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has made it less affordable for the tribal communities to start micro-irrigation activities. The existing increase in area is largely because of a rise in digging bore wells. Lack of unification of fragmented agricultural markets, inefficiency in maintaining transparency in marketing, and untimely release of payments to growers are making price realization low, particularly during post-harvest seasons. In addition, the pandemic restrictions on the movement of people impacted agricultural production output and income significantly in 2021. Moreover, the lack of micro-planning in the district seed system and inadequate distribution of quality seeds in ADs are fading the target of doubling the farmers' income.

The COVID-19 pandemic has also affected the networking and capacity building activities of farmers, reducing such opportunities and, in turn, causing a decline in growth in 2021. Limited soil testing and lack of actions on crop-wise recommendations are producing average yield; otherwise, farm productivity would have been much higher in ADs.

For livestock, low literacy, lack of awareness about animal vaccination and artificial insemination, strong belief in traditional healing and breeding system, undulating terrain posing a challenge for veterinary staff to deliver timely doorstep services and hybrid animals for grazing, and lack of transportation system are significant challenges to reach the target.

2.2.4 Financial Inclusion and Skill Development

(1) Achievements

GoI has operated for the last two decades under its Five-Year Plans in the areas of skill development, financial inclusion, e-Governance, and other ICT-based services for citizens to bring about an inclusive change in the semi-urban and rural areas of the country. ADP performance indicators cover the number of people trained and provided with sustainable livelihood under skill development schemes such as Pradhan Mantri Kaushal Vikas Yojna (PMKVY). ADP also covers outcomes of Pradhan Mantri Mudra Yojna (PMMY), Pradhan Mantri Suraksha Bima Yojna (PMSBY), Pradhan Mantri Jeevan Jyoti Bima (PMJJBY), and Atal Pension Yojna (APY) under Financial Inclusion indicators.

Data reveal that the top ten performing districts (state – score) on ADP indicators as of 2021 (from 2018) are Goalpara (Assam-70.26), Darrang (Assam–68.44), Baksa (Assam-58.74), Simdega (Jharkhand-47.75), Udalguri (Assam-45.60), Nuapada (Odisha-43.59), Halakandi (Assam-43.03), Baran

[7] Paddy is the major crop in most of the ADs in Khariff.
[8] Wheat is the major crop in most of the ADs in Rabi.

(Rajasthan-43.02), Dahod (Gujrat-39.53), and Siddhathnagar (Uttar Pradesh-38.37). The performance clearly shows the steps taken by the Assam State Government to successfully implement ADP as the top three and other two districts are from Assam state (NITI Aayog, 2021c).

For harnessing the demographic advantage that it enjoys, India needs to build the capacity and infrastructure for skilling/reskilling/up-skilling existing and new entrants to the labor force. A dedicated Ministry of Skill Development and Entrepreneurship (MSDE) was set up in 2014 by GoI to implement the National Skill Development Mission (NSDM), which envisions skilling at scale with speed and standards. MSDE supports ADP to uplift and transform ADs by providing (i) financial assistance for skill initiatives and (ii) technical assistance, including support for institutional strengthening, improving quality, improving access, etc.

Skill Development Mission in ADs is also taken up by other ministries and government departments. National Institute of Electronics and Information Technology (NIELIT) is an autonomous scientific society of the Ministry of Electronics and Information Technology. It is implementing the project "Skill Development of Scheduled Caste (SC)/Scheduled Tribe (ST)/Economically Weaker Section (EWS) youths in Aspirational Districts in area of IECT leading to enhancement in Employability." The purpose was to conduct the skill development training program of 21,600 SC/ST/EWS (Women) youths belonging to 60 ADs in the area of IT and electronics over three years (Ministry of Electronics and Information Technology, 2020).

Financial inclusion is globally considered as one of the important indicators of the development and upliftment of society. It enables the urban and rural population to take benefits offered by various banking and financial sector products, leading to the sustainable economic growth of the nation. The Government initiated the National Mission for Financial Inclusion (NMFI) in 2014 to provide universal banking services for every unbanked household.

To expand the reach of banking services, all villages under ADs are clustered into Sub Service Areas (SSAs), with each SSA typically comprising 1,000 to 1,500 households. Bank Mitras were deployed for branchless banking for SSAs with no bank branch. As per the NMFI, the following has been achieved in ADs (Ministry of Finance, 2021):

- Total ATM installed – 17,545
- Total Business Correspondents – 24,393
- Total Operational Bank Branches – 17,258
- Total Bank Mitra deployed in SSAs – 21,860
- Total SSAs covered through Bank Branches – 4,678

(2) Challenges

The following were some of the challenges in the skill development and financial inclusion sector:

- Capacity and capability of the existing system to ensure equitable access for all
- Maintaining quality and relevance of content and assessment in the effective delivery of skill programs
- Creating effective convergence between school education and the government's skill development efforts
- Creating institutional mechanism for research development
- Quality assurance, examinations and certification, affiliation, and accreditation
- Mobilizing adequate investment for financing skill development
- A large population of alphabetically illiterate population requiring basic financial knowledge
- A large section of the financially excluded population needs to be informed of the benefits of financial inclusion to increase the number of registrations
- A large growing segment of an educated middle class requiring financial education

- A growing capital market with increasing retail participation requiring financial education and consumer protection
- A growing insurance market with the participation of private players needs consumer protection and financial education
- A large section of workers without pensions
- A move from Defined Benefit Pension Schemes to Defined Contribution Pension Schemes
- A large workforce needs to be informed about the riskiness of various investment portfolios

Since the start of the ADP, the bottom ten districts—Guna (Madhya Pradesh-14.54), West District (Sikkim-13.88), Bastar (Chattishgarh-12.85), YSR (Andhra Pradesh-12.75), Firozpur (Uttar Pradesh-11.80), Dhalai (TP-10.28), Sukma (Chattishgarh-9.220), Bijapur (Chattishgarh-5.810), Kiphire (Nagaland-5.320), and Khunti (Jharkhand-5.00)—have not shown growth in indicator values.

(3) Way forward

Integration of skill development and financial inclusion will help ADs achieve targets and meet the deliverables of indicators. Training modules of Skill Development should include Financial Literacy modules to make beneficiaries ready to conduct banking transactions. Similarly, beneficiaries who opt for financial products like Mudra Loan or other loan products should be trained on trades for which loan is being sought. This will set a cross-linkage between indicators, leading to benefits for targeted beneficiaries and growth in ADP indicators simultaneously.

2.2.5 Basic infrastructure

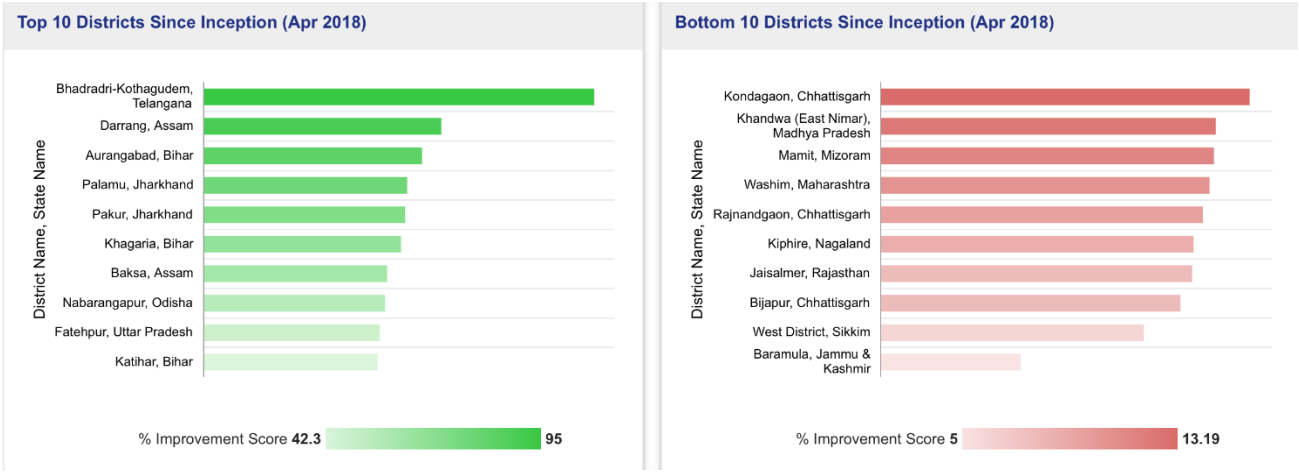
(1) Government of India initiatives

GoI has announced a series of large-impact national flagship programs that are mainstreamed and integrated to SDGs and the ADP. Specifically, SDG 6 - Clean Water and Sanitation, SDG 7 - Affordable and Clean Energy, and SDG 9 - Industry, Innovation, and Infrastructure are directly linked to the basic infrastructure indicators under the ADP. The Swatch Bharath mission for universal household sanitation, the Jal Jeevan Mission for universal Functional Household Tap Connection, and the Jal Sakthi Abhyan for sustainable water conservation are all aimed at SDG 6. The Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saoubhagya - Power for all, Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), and the national program on renewable energy inter alia have a direct impact on SDG7. The Bharatmala program (roads and highways project) aims at the massive development of road infrastructure. In addition, the Atmanirbhar Bharat (self-reliant India), facilitated by comprehensive policy initiatives for ease of doing business, has a clear vision of building a self-reliant India.

(2) District performance – basic infrastructure (April 2018 – February 2021)

The key indicators in basic infrastructure under ADP are the following: household electricity connection; habitations with access to all-weather roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY); individual household toilet coverage; access to adequate potable water (40 lpcd); establishment of Common Service Centers at Gram Panchayats; and pucca houses constructed under Pradhan Mantri Awas Yojana (PMAY).

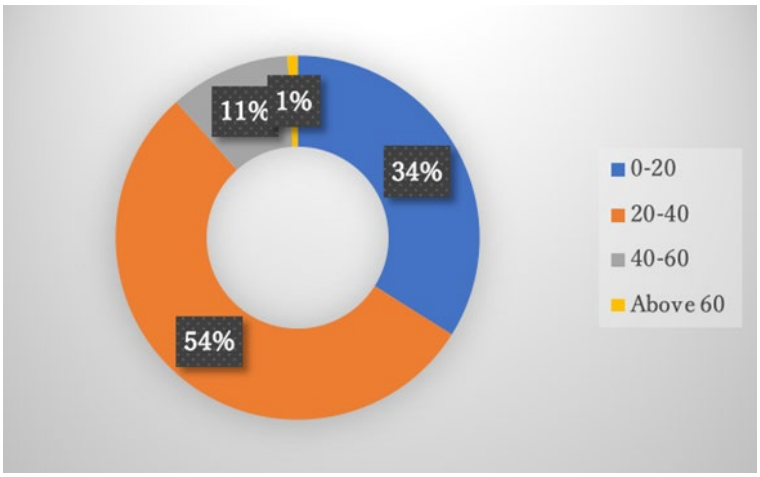
The top ten and bottom ten districts in performance since inception (from April 2018 - February 2021) are given in Figure 2-4. The figures show significant variations in performance among the top percentage improvement score (42.3-95) and bottom 10 with the percentage improvement score between 5 and 13.19.



Source: NITI Aayog (2021c)

Figure 2-4 Overall District Performance Since Inception (April 2018- February 2021)

There are 38 districts with the percentage improvement score ranging from 0-20, 61 districts ranging from 20-40; 12 districts in the range of 40-60, and one district has a score of 95, as shown in Figure 2-5.



Source: NITI Aayog (2021c)

Figure 2-5 ADP Performance of All Districts Basic Infrastructure (April 2018- February 2021)

(3) Achievements

India's march forward under the infrastructure-related SDGs is impressive (NITI Aayog, 2020b). India has created global history by achieving near-universal coverage in household sanitation under the Swatch Bharath Mission, making India open-defecation-free (ODF.) This was achieved by constructing over 109 million household toilets since 2014. The percentage of rural households with toilets increased from 38.7% in 2014 to 100% in 2019 with 97% usage. Among schools, 97.4% have separate toilets for girls. The provision of potable drinking water reached 81.02% of rural habitations, with an additional 15.71% partially covered in 2019. The percentage of population getting safe and adequate drinking water within premises through Pipe Water Supply (PWS) for rural areas increased from 35.76 % to 50.66% and for urban areas from 94.57% to 96.96% between the period 2015-16 to 2019-20 (Ministry of Statistics and Programme Implementation, 2021). The JJM, is further improving the quality of drinking water service delivery by providing universal FHTCs by 2024. JJM's progress in 117 poorest districts (Zia Haq, 2021) outpaces the national average, clocking 8.4 million house connections, an increase from 7% to 31% in 22 months since the JJM was launched in 2019. The Jal Shakti Abhiyan has undertaken over 350,000 water conservation measures in 256 districts. Under SDG 7, the Pradhan Mantri Sahaj

Bijli Har Ghar Yojana - Saubhagya since 2017 has succeeded in the electrification of India's 603,175 villages. The percentage of households electrified in 2019-20 reached 99.7%. India's renewable energy installed capacity has reached 132 GW as on March 31, 2020, from 75 GW on March 31, 2014 - an increase of approximately 75%. With clean cooking fuel reaching over 80 million of the poorest households since 2015, the percentage of households using clean cooking fuel has risen from 63.11 in 2015-16 to 96.22 in 2018-19. Under Bharatmala, the construction of national highways increased from 4,410 km in 2014-15 to 10,855 km in 2018-19. The pace of road construction has grown significantly from 17 km per day in 2015-16 to 29.7 km per day in 2018-19, with total investment in the sector increasing by more than three times between 2014-15 and 2018-19. India's internet user base increased to 665 million in June 2019, as compared to 252 million in 2014. The number of Internet Subscriptions as a percentage of the total population increased from 26.98 in 2015-16 to 54.29 in 2019-20. Total telephone connections in India grew by 18.8%, from 996 million in 2014-15 to 1,183 million in 2018-19. The number of telephone subscriptions as a percentage of the total population is at 88.74%. Despite multiple obstacles, such as the global economic slowdown and the pandemic-induced disruptions, the country has achieved good progress in infrastructure.

(4) Challenges

The budget 2019-20 envisaged investing INR 1,000 trillion in infrastructure over the next five years. However, to realize the vision of a USD 5 trillion economy by 2024-25, at 8% growth per annum, the GoI needs to spend approximately USD 1.4 trillion on infrastructure (Ministry of Finance, 2020). Investments of this magnitude will be a key challenge under the slowdown, the COVID-19 pandemic, and budget constraints. Moreover, under the ADP, investments in small last-mile infrastructure need to be promoted in a big way to ensure last-mile connectivity, access to services, and rapid local development. Despite the overall impressive performance of basic infrastructure indicators in the districts, geographic challenges of remoteness, socio-economic backwardness, ethnic diversity, and intra-district heterogeneity in access to and availability of infrastructure remain. Among the most backward ADs, more intense efforts are needed to improve further access to all-weather roads, potable water, safe housing, functional toilets, education, and health facilities and bridge the digital divide. Continued efforts are also required to maintain and keep the assets functional, avoid slippage, and sustain the quality of services. The districts need to look beyond "budgets and schemes" to develop a holistic big picture - a development master plan that is inclusive, sustainable, and normative. The plan could be prioritized and financed through programmatic and budgetary convergence. The ambitious growth projections and the supportive policy stance of the government will augur well for the ADs and make it an innovative targeted rural development model.

3 Progress of the Japan-India Cooperation Program

In December 2019, JICA approved the "Technical Cooperation Project (TCP) for Promotion of the Program for Japan-India Cooperative Actions towards Sustainable Development Goals (SDGs) in India" ("Project") to promote technical cooperation and action-oriented policy recommendations based on Japan's knowledge and experience and produce concrete results. The Project also aimed to support the Japanese ODA Loan for the "Program for Japan-India Cooperative Actions towards Sustainable Development Goals in India" ("Program"), which was agreed upon between the two countries in January 2019. The Program, aligned with the ADP, aims to promote India's social development by strengthening the framework of policies and implementation platforms for SDGs, and thereby contributing to achieving SDGs by 2030. JICA provided the loan, which was equivalent to about INR 9,740 million and covered the components indicated in Table 3-1.

Table 3-1 Components of the Program

Component	Amount (INR)
1. Funds on challenge methods to 7 districts for 20 months	6,000 million
2. Funds for a special project to be sanctioned by the Empowered Committee of Secretaries	3,500 million
3. Fund of capacity building, PMU, data validation, etc.	240 million
Total	9,740 million

Source: NITI Aayog (2019).

Since December 2019, the Project has focused on the following tasks:

a) To collect and analyze information and data on India's policy and strategy toward achieving the SDGs.
b) To compile important lessons and recommendations drawn from Japan's experience, knowledge and expertise related to SDGs policy formulation and implementation in India.
c) To organize Japan-India SDGs forums/seminars to promote the partnership and accelerate knowledge and technology sharing for SDGs.
d) To provide technical support to districts in formulating project proposals for the funding under the Challenge Fund
e) To support the Project Management Committee (PMC) for policy finding and recommendations and policy actions based on the review and analysis on the periodic report of ADP.

In addition to the ADP's five thematic sectors, the Project has looked into sanitation, particularly the issues associated with toilets. Moreover, the Project has looked into gender as a cross-cutting issue for the thematic sectors of the Program.

Shortly after the inception of the Project, the COVID-19 pandemic started affecting India. It has forced the Project to undertake many planned activities online, cancel them, or postpone them. As a result, with the consent of JICA and NITI Aayog, the Project period has been extended to December 2021. The Project Team undertook the AD online surveys on Chitrakoot (Uttar Pradesh), Goalpara (Assam), and Nandurbar (Maharashtra). Since December 2020, based on an agreement with the NITI Aayog and JICA, the Project Team has completed the AD surveys and has focused on working with ADs in developing Plan of Action (PoA) project proposals for the Challenge Funding. Japan-India SDGs forums/seminars have been also postponed a few times and have not been able to hold all the planned thematic sectors during the project period. The subsequent sections present the results and findings from major activities.

3.1 AD surveys

In March 2020, NITI Aayog selected five ADs for a detailed survey by the Project Team. Among the five, Chitrakoot, Goalpara, and Nandurbar have been surveyed. Using questionnaires and online discussions, the Project Team collected information on the status and functions of the ADP, confirmed the progress in thematic sectors, and identified the issues facing the five ADs as well as the good practices in the ADs.

From the survey of the three ADs, it is clear that commendable progress has been made in the last several years on the ground. Located in different states and having varying natural, geographical, and cultural conditions, each AD faces unique challenges. In addition, each AD has its own way of dealing with the challenges. For instance, Chitrakoot's approach to tacking development issues to meet SDGs is task-oriented, while Goalpara seems to be putting more emphasis on process and participation. The following are observations on the management and progress of the ADP, as well as general challenges that remain with the surveyed ADs.

- Strong leadership and the comparatively long tenure of the current District Collector (DC), along with committed officers overseeing thematic sectors, have been among the advantages of the districts that have improved under the ADP. The DC's leadership and commitment are critical determinants of success.
- District officials are aware of SDGs and ADP goals. However, their understanding is limited on how the ADP is placed within the purview of SDGs. This may be a result of the lack of capacity building focused on SDGs. Furthermore, the districts have focused more on tracking the ADP indicators. It is necessary to map the existing capacity building programs and assess capacity building needs.
- In connection to the above, the ADP needs better visibility at the district and state levels and increased opportunities for networking and experience sharing among the ADs.
- The quality of data collected for the ADP indicators is ensured by field verification by the district officials, data digitization, and geo-tagging. Making the data available to the public also ensures the accountability. Better integration of SDGs would be a good way forward, as the ADP indicators are only a part of the overall SDGs.
- Internet connectivity needs to be improved, particularly in remote corners of the districts. Availability of internet connection can help in digitizing data and improving monitoring.
- When the ADP indicators are fully achieved, new ones should be added to keep striving to meet SDGs. Some indicators need reconsideration as comparing the figures on absolute numbers may put any district at a disadvantage.
- Keeping and tracking separate data on SC/ST, gender, and other vulnerable groups may be built into the monitoring framework to focus on the last mile first. This will help understand any exclusion and slippage on certain groups of population.

The following sections present observations by thematic sector.

(1) Health and Nutrition

In the health and nutrition sector, all the three ADs are implementing the major national and state schemes such as the National Health Mission and Ayushman Bharat. The ADs have been making notable achievement in indicators such as percentage of fully immunized children and percentage of women receiving antenatal checkup (ANC) in the first trimester. However, government departments have had no choice but respond to the COVID-19 pandemic as top priority, and their routine programs have been affected. For example, in Chitrakoot, the operation of heath sub-centers and Anganwadi centers was adversely impacted, and their performance dropped in the period between February and June 2020.

Shortage of manpower is a common issue in the three Ads. They tend to lack qualified personnel such as nutritionists and laboratory technicians.

Chitrakoot district faces shortage of manpower and lack of qualified staff such as nutritionists, medical specialists, and laboratory technicians, in addition to acute shortage of equipment in health centers and hospitals. As reported from Nandurbar, continuous or refresher training is required for the existing personnel to build their capacity.

(2) Education

Both Chitrakoot and Goalpara achieved the 100% transition rate for students from primary to upper primary and from upper primary to secondary school. However, hilly terrain and inaccessible areas remain a challenge for universalization of quality education in Chitrakoot. Only 50% of the schools have electricity and less than 10% of the schools have computers (Ministry of Education, 2019). The annual dropout rates at schools of all three levels are a matter of concern.

Similarly, Goalpara struggles with the dropout rates in Bodo and Garo communities because the number of secondary schools in Bodo and Garo is limited. Meanwhile, Goalpara has produced several initiatives. Considering that Goalpara is a flood-prone area, the district has been providing education to flood victims in safe relief camps.

In Nandurbar, which has a high rate of migrants, dropout and transition rates are challenges. To address the dropout problem, Education Guarantee Card, a plastic card fitted with a microchip, was given to all migrant students to track their schooling.

(3) School sanitation

According to the Champions of Change dashboard of NITI Aayog, in November 2020, 100% of the schools in both Chitrakoot and Goalpara had toilets and hand-washing facilities while, in Nandurbar, 93% of the schools had toilets and 86% had hand-washing facilities, respectively. Despite the availability of the infrastructure, using the toilets and keeping them clean are issues observed across the three ADs. Apart from an insufficient number of toilets against the number of students, remaining challenges include lack of ownership of toilets, arrangements for menstruation at the primary school level, and shortage of budget for construction and renovation.

(4) Agriculture and water resources

Agriculture is affected significantly by the natural conditions of each district. Hence, each of three ADs has specific challenges as a result of terrain and climate. Although achievements in many areas have been seen, Chitrakoot experiences frequent droughts and floods, and has been unable to attract private investment. Goalpara, also a flood prone area, struggles limited funds in various government schemes and communities' lack of awareness of recent agricultural developments. However, developing the district as a banana market has been successful (see Chapter 4 for details). In Nandurbar, the terrain has posed a challenge for delivering government services, and animal vaccination coverage and artificial insemination remain low. The district's farmers are also unaware of schemes such as Kissan Credit Card (KCC), and Pradhan Mantri Kisan Sampada Yojana (PMKSY) has not been rolled out.

In addition to district-specific issues, slow progress on e-NAM[9] and lack of warehouses and cold storage are common issues facing the ADs. Moreover, approximately 65-70% of both technical and non-technical posts are vacant in the Department of Agriculture (DoA) and the Department of Animal Husbandry (DoAH) in the ADs. Crop raids and attacks on livestock by wild animals are increasing in the ADs, which cause conflicts and the overall reduction of livestock numbers. Addressing these challenges through an appropriate assessment is essential for the further growth of the ADs.

Through the AD surveys, it was evident that the ADs are facing several challenges due to the allocation of insufficient budget (~25%), fund reallocation to various departments, weak coordination among

[9] Linking local agriculture market with national electronic system.

relevant stakeholders, delay in getting farming inputs like seeds, fertilizers, pesticides and machineries, increase in input expenditures, delay and uneven distribution of rainfall, increase in the frequency of drought and flash floods, sudden decrease in market prices during peak harvest times, and lack of grain storage facilities. Additionally, many ADs belong to the backward category where the farmers' networks are weak. Moreover, most of them speak only local dialects. Adaptation to farming mechanization appears poor in AD. Poor responses were observed in milk production and the formation of cooperative societies, which provides a substantive income to the farmers.

(5) Financial inclusion and skill development

On financial inclusion, enrollment in schemes such as Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), and Atal Pension Yojana (APY) has increased from the onset of the ADP at varying degrees among the three ADs. However, Nandurbar struggles with low financial literacy, coupled with an uneven banking service network in which some of the branches have just two or three staff members and are unable to provide adequate services.

Regarding skill development, Chitrakoot has not seen any improvement in the relevant indicators. Although training programs are being conducted, the common issues reported by the ADs include lack of infrastructure for skill development training and limited job opportunities for the trainees.

(6) Basic infrastructure

Chitrakoot and Goalpara have benefitted from the ADP, achieving 100% in various basic infrastructure indicators such as households with electricity connection and households with individual latrine. As basic infrastructures spread across various sectors such as road, housing, and water supply, strong leadership of DC enabling coordination among the relevant departments has been effective. The key challenges are ownership, timely maintenance, and sustainability of the assets created.

3.2 Support to AD project formulation

In March 2021, two ADs were assigned to the Project Team to assist ADs in developing a PoA proposal to submit to NITI Aayog for approval of the challenge fund. The two ADs allotted to the Project Team are Malkangiri in Odisha and Baksa in Assam.

3.2.1 Process

After an introduction to the assigned ADs, the Project Team took the following steps to develop and finalize the PoA with each district.

- Initial contact with the DC/DM: The Project Team obtained from each district the draft proposals and the contact information of the sector leads who developed the PoA.
- Review of the PoA: In addition to a desktop analysis of the district situation and priorities, the Project Team reviewed the PoA to see if it conforms to the guidelines and the PoA template (Annex 3-1) set by NITI Aayog (NITI Aayog, 2019b). The team examined various aspects of the PoA thoroughly including the following: whether the PoA is aligned to the ADP objectives and contributes to achieving the ADP indicators or SDGs; key strategies, and outputs and deliverables planned; timeline of tasks and activities; monitoring plan and responsibility matrix; project rationale; collaboration or convergence with existing programs; and sustainability of project outcomes.
- Discussion with the district team: The Project Team gave feedback on the draft PoA to each district team consisting of DC and the sectoral leads, and asked the district team to modify the PoA.
- PoA submission: After the Project Team gave feedback to each district team several times, and both the Project Team and district team determined that the PoA was ready for submission, the PoA was sent to NITI Aayog with a request for an approval for funding at the Empowered Committee.

At the AD level, the ADP is headed by DC, with a support from the ADP nodal officer and sector specialists from respective departments. Identification of project ideas and PoA preparation process varies slightly depending on the AD. Therefore, examples are described in the following section.

Process at Malkangiri District, Odisha State
The DC led the development of the PoA for each department. The main coordinator for the writing work was the Aspirational District Fellow posted to the district (from TATA Trusts under its support agreement with NITI Aayog for ADs). After a district ADP review meeting, the main gaps and needs for the district was identified. A PoA was made for the proposal with the AD Fellow supporting the writing and individual leads in a particular department (e.g., Women & Child Welfare, Agriculture Department or Education Department) with data and technical aspects. As the DC himself was leading the development, and because of the COVID-19-related restrictions (and increase in cases during the pandemic's second wave), the development was delayed waiting for inputs from the DC for each iteration.

Process at Baksa District, Assam State
The PoA development was led initially by the Secretary of the Bodo Territorial Council (BTC). However, owing to delays in development, the Principal Secretary of the BTC assigned the DC to lead the development of PoA. The DC held a brainstorming meeting with the development departments and allocated the funds of INR 50 million in total to each department in the following predetermined portions: 30% for health and nutrition, 30% for the education department, 20% for agriculture and water resources, 10% for basic infrastructure, and 10% for skills and financial inclusion. The development department led the proposal development along with its deputies, Nodal officer, and assistant commissioner of Baksa district. The DC was actively involved in the development of PoA and provided his inputs in each step in it.

3.2.2 Key findings and observations
The following were the observations from supporting the selected ADs with their PoA formulation.

(1) Malkangiri district, Odisha state
Upon request from the Project Team, the following proposals were submitted by the district teams.

Proposals submitted in the 1st Round

1. Early grade literacy
2. Establishment of a sports school

The proposal on early grade literacy was found highly relevant considering the poor educational indicators, including the low learning outcomes in the district. Around 86% of standard III-IV students cannot read a standard II textbook （Parida, 2020）. The proposed project is also perfectly aligned with the SDGs and the ADP. Suggestions on the proposal included clearer objectives, a better rationale for this PoA, adding a theory of change matrix, enhanced monitoring indicators with a timeline of tasks (Logical framework [Log frame] and Gantt chart), and adding how the project will be sustained.

The sports school proposal was not evaluated favorably. Its concept did not fit the challenge funds' objectives. Its rationale was unclear and did not describe how the project would directly or indirectly lead to the achievement of the ADP indicators or the accelerated achievement of SDGs. The proposal mainly aimed to construct a new sports school and place teachers and sports coaches as instructors. The proposal also failed to fill out the proposal template's section on long-term sustainability of the project activities after the two-year project period. It had no clear description on any funding source for operating the school beyond the project period.

Proposals submitted in the 2nd Round

Based on the feedback from the Project Team and an online meeting in April 2021, the district submitted the following proposals in the 2nd round.

1. Early Grade Literacy Project (The modified version)
2. Project *Umeed*[10] – One-stop center for SHGs to create sustained livelihoods
3. Project *Lakshya*[11] - Career Counselling cum Coaching Center

After reviewing these proposals, the Project Team provided further comments on the revised literacy proposal. Comments were also given on the other two proposals and included the following: making the project rationale more focused, adding a monitoring matrix and a time plan with responsibilities. The Project Team believed that the other two proposals would contribute indirectly to attaining the ADP indicators by increasing access to information on resources, improving skills and aptitude of youths to take and pass competitive exams and gain more livelihood options. The proposals would also help the remote district fill vacant posts in government offices with local people. After finetuning, the three proposals were sent to NITI Aayog for funding approval. As of July 2021, the proposals were submitted to the State Prabhari Officer for onward submission.

(2) Baksa district, Assam state

The following are the proposals submitted by the district in June 2021.

1. Proposal for the construction of separate girls' toilets under the Education Department (education sector):
   - Building separate girls' toilets for 41 provincial schools in Tamulpur, Goreswar, Baksa, Tihu-Barama Jalah and Gobardhana Education Blocks
2. Strengthening the Anganwadi center infrastructure (Social Welfare Department for the nutrition sector)
   - Construction of 30 new Anganwadi Centers (AWCs), renovation of the eight existing AWCs, construction of toilets in the eight AWCs, informative wall painting in 50 AWCs
3. Training Hall and staying place for Accredited Social Health Activist (ASHA) workers (health and nutrition sector; Health Department)
   - Construction of a 12-bed ASHA waiting shed and a conference room at Dr. Ravi Boro Civil Hospital under the National Health Mission in Baksa District
4. Construction of cluster-wise Pucca Houses in the remote area near the foothill areas of Bhutan in Baksa District (basic infrastructure sector; Public Works Department or Civil Construction Department)
5. Distribution of paddy reapers at a subsidized rate (Agriculture Department)

The proposals pertained to construction or procurement. They had many shortcomings that included lack of a proper justification or rationale for the project, failure to complete the sections on activities, monitoring plan, sustainability plan and risks and mitigation, etc., either were not filled up or only partially filled. After discussions with the Project team, the following numbers of PoAs were developed: four in health and nutrition, four in education (including one for school sanitation), one in agriculture, one in skill development, and one in basic infrastructure.

3.2.3 Overall challenges and lessons learned

The key challenges in working with the ADs on proposal development include the following.

- Owing to the COVID-19 pandemic and related restrictions, field visits could not be undertaken for developing proposals. A field visit would have been an effective and efficient way to meet the

[10] Umeed in Hindi means "expectation."
[11] Lakshya in Hindi means "target" or "goal."

district leadership and the sectoral teams and help them assess the district situation, identify the developmental priorities in different sectors, and conceptualize an appropriate proposal that is aligned to the indicators and visions of the ADP and SDGs.

- The Project Team's interaction with the district teams revealed that the districts were short of capacities in conceptualizing and developing a proposal for the ADP. The districts under the ADP are remote and have low socio-economic and developmental indicators. This was also a reason for the lack of proficient and trained district officers and staff members. In addition to the vacant positions, the competence of the incumbent officials and the teams was low. Most of the district-level officers were appointed at a lower level at the start of their career and do not have formal qualifications in such aspects as social welfare, nutrition theory, and other relevant fields that would enable them to think of innovative solutions.
- It was observed that the district teams, especially in sectoral levels, did not have a proper understanding of proposals for challenge funds, and the funds' goals and vision. The sectoral teams also lacked proper orientation on the objectives and guidelines among the district teams. The district sectoral teams found it easier to develop a construction- or procurement-related proposal compared to one on an effective and solution-oriented program.
- The district "development fellow" appointed by Piramal Foundation and Tata Trusts (based on NITI Aayog's agreement with these organizations) were the key people who compiled information and wrote the proposals. These had only two to three years of experience in the field, and hence were unable to give professional advice or take the lead in developing the proposals.
- Because each district is an autonomous entity, the selection of the sector or topic of a project was based on the interests and priorities set by the district head, i.e., DC. It would have been better if the proposals were based on the district's situation and its real needs and priorities.
- There was a major delay in each district's response to NITI Aayog's notification of the challenge fund award. Although the district team in each AD wanted to undertake the challenge fund project, the team was extremely slow to develop a proposal (the delay was far more than any that was due to the pandemic and lockdown). The Project Team had to repeatedly push the district teams to complete the proposals.
- Government officials dislike and tend to avoid posting in the ADs because of the remoteness and backwardness of the districts. This makes it difficult for the ADs to have competent district teams and leadership, which are necessary to develop a good proposal that suits the districts' needs.

The following were the key lessons learned from the AD proposal development process.

- A stipulated time limit or deadline should be set for the submission of a proposal to NITI Aayog (for example, three months from the notification letter for the award).
- A mandatory briefing of NITI Aayog's ADP team with the district team in two to three weeks of the challenge fund notification would be helpful.
- Deployment of a technical assistance team to the ADs for supporting the proposal development and implementation of the project for several years would be helpful. This would help the district team work with development sector professionals and establish a rational process of developing proposals. The assistance team can also support the district teams in implementing projects, completing project activities, and producing results in the two-year project period.
- The AD proposal development process at the district level should include steps such as assessing the situation, brainstorming, and identifying priorities, creating a responsibility matrix for project activities, and roles of effective project monitoring, and convergence and collaboration with existing programs.

3.3 Japan-India SDGs forums and seminars

3.3.1 First forum

On February 18, 2019, the first forum was held as a kick-off meeting of the Program for Japan-India

Cooperative Actions towards SDGs in India. Members of the Program Implementing Unit and the PMC participated in the forum.

The key points discussed include the following:

- Mr. Amitabh Kant, CEO of NITI Aayog, wanted additional assistance to the District Administration so that the preparation of proposals would be expedited.
- The Ministry of Women and Child Development and the Ministry of Health & Family Welfare suggested using their resources for the preparation of AD proposals. The ministries also proposed additional ADP indicators and benchmark values for the indicators.
- Mr. Rajiv Kumar Sen of the Department of School Education stated that NCERT should be involved in the measurement and analysis of learning outcome tests by survey agencies under the support of NITI Aayog.
- The JICA Deputy Director General emphasized that the program envisaged not only financial cooperation between Japan and India, but also a technical partnership in which good practices and experiences of both countries as well as global practices would be compiled and disseminated to enhance program outcomes.

3.3.2 Second forum (Health and Nutrition)

On November 5, 2020, the second Japan-India SDGs Forum was held for the health and nutrition sector. The topics of the forum were finalized in consultation with key stakeholders, especially NITI Aayog and JICA. The forum was conducted online because of the COVID-19-induced restrictions.

The main objectives of the forum were to:

- Bring together Indian and Japanese stakeholders in health and nutrition to discuss the current health and nutrition issues and gaps, present best practices from Japan and other countries to be adapted in India to accelerate achieving SDGs; and
- Discuss steps for Japan-India cooperation and partnership in the health and nutrition sector and explore opportunities for knowledge and technology exchange.

The forum program schedule is presented in Annex 3-2.

(1) Summary of presentations and proceedings

Within the allocated 2 hours and 20 minutes, the forum covered "Achieving Zero Undernutrition Among Children – Bringing Japanese Experience to India."

In the opening remarks, Mr. Rakesh Ranjan, Deputy Director General (Evaluation) at NITI Aayog, firmly asserted India's commitment in achieving the SDGs and the need to learn from the Japanese experience in reducing malnutrition and how Japan addressed the health and nutrition problems and enhanced Japan's SDG performance in the health and nutrition sector. He wanted the lessons to be adopted to strengthen the ADP programs undertaken mostly in districts in remote and difficult areas. Despite the successful roll-out of the maternal and child protection card in most areas of India, gaps existed in filling the correct and complete information in many places. He also mentioned the mid-day meal program as a part of the school health program implemented in the public schools in almost all states of India. Mr. Ranjan's talk laid the basis for the subsequent presentations on the Japanese experience in MCH, MCH Handbook, and school nutrition.

Mr. Takuma Kajita, Counsellor at the Embassy of Japan in India, reiterated the same views as those of Mr. Ranjan and emphasized the need to strive to achieve the SDGs in an integrated manner, instead of mere stand-alone programs, for faster success. Mr. Kajita expressed the commitment of the Japanese government to support the Indian government in the latter's mission to achieve the SDGs through the former's loan program for the ADP.

a) Session 1: Presentations

The first presentation was "Key Issues in Health and Nutrition Sector" by Mr. Jayakrishnan Bhaktavatsala, Health and Nutrition Expert of the Project Team. This session presented some of the key findings on the current challenges and gaps in the health and nutrition sector in India. The key points shared included the following:

- India showed significant progress in SDG indicators over the years. The country has taken up many large national programs to improve the health and nutrition status among its population. This included Poshan Abhiyaan, PMMVY, Mother and Child Protection Card (MCPC), and the mid-day meal program undertaken in government-run schools all over India.
- Despite some progress, the nutrition indicators were still poor with high levels of undernourishment (about 38%, 21%, and 35% for stunting, wasting, and underweight children below five years of age, respectively, and anemia was seen in 56% of children aged 6 to 59 months and 50% among pregnant women aged 15-49 years).
- School-level mid-day meal had some key weaknesses such as poor monitoring of the quality of food served and lack of regular school-level health and nutrition checkup for students in many locations. The lack of health and nutrition manpower along with the lack of inter-sectoral coordination in many locations were some of the other weaknesses realized in the JICA project findings.

The second presentation on "Sharing Experience from Japan: Holistic Approach in Promoting Healthy Diet Among Children" was given by Dr. Marika Nomura, Senior Advisor on Nutrition and Health at JICA. The presentation covered the key nutrition services provided by Japan's local governments through life stages, especially from pregnancy to early childhood and their outcomes. The presentation covered the following key points:

- Japan successfully reduced the country's infant mortality rate from around 40 per 1,000 live births in 1965 to around two in 2019. The life expectancy also increased to around 81.41 years and 87.45 years for men and women, respectively, in 2019; it is the longest life expectancy among all the Organization for Economic Cooperation and Development (OECD) countries (OECD, May 19, 2020).
- Japan undertakes MCH services and promotion through a holistic life cycle approach, which includes MCH handbook, nutritional food education during pregnancy, parenting support for both parents during infant and toddler years, regular health examinations, growth monitoring, counselling, and the school lunch meal program in daycare, kindergartens, and schools.
- In addition to hygiene and eating manners, in the school meal program, students also go through regular health and nutrition checkups and have nutrition as a course curriculum to develop knowledge and skills at the early ages.
- Moreover, in Japan, the MCH services, growth monitoring, and health and nutrition education services are all under mandatory law.[12] Hence, all the public health centers must provide these services to all women in their maternity period, infants, and young children.
- Japan's nutrition strategy emphasizes making the first 1,000 days of life healthy, empowers the community under primary health care, promotes a healthy diet through a life-course approach that helps in creating high health consciousness and a good dietary habit from the early ages.

It was followed by the presentation on the "School Nutrition Program in Japan & Vietnam" by Mr. Kei Kuriwaki, Senior Advisor at the Ajinomoto Foundation. It covered the current school meal program in Japan and food and nutrition education (called *shokuiku*) in schools and its outcome. The presentation also introduced how this school meal program was contextualized in Vietnam. The key points presented were as follows.

- The school lunch program had three key components that strengthened the program in addition to making it popular in schools: i) the aspect of development of menu in which the nutritionist plans

[12] Law on comprehensive promotion of measures for seamlessly providing necessary childcare and medical care to persons in growth process, their parents, and pregnant women (2018 Law No. 104)

school lunch menu based on nutrition balance, taste, color, food texture, flavor and local culture; ii) a school-level and inter-school "school meal competition" in which the students participate in the preparation of food materials that were assessed on aspects such as the management of temperature during cooking, teamwork, hygiene, and cooking techniques; and iii) monthly/weekly menu plans with the right dietary mix were drawn for the mid-day meal provided at all schools in Japan.

- Monitoring of the program revealed that there was a significant increase in the average height and weight of school children aged 14 years and older. The school lunch program reduced the disparity of diet among those with higher household income and those with lower income.
- For Vietnam, the Ajinomoto Foundation created the courses of nutrition and dietetics to fill the absence of nutritionists and dieticians. By 2017, around 700 people graduated in the dietician course, and most of them joined hospitals, schools, government service, municipality and industrial health organizations, and organizations for elderly care. The foundation also supported to develop the national nutrition policy, built a nutrition services system, and trained the existing dieticians.
- With regard to the Indian situation, there were high-quality courses on nutrition and diet but the proper deployment of these professionals across and in the rural areas of India was poor.
- Large NGOs such as Akshaya Paatra were undertaking school lunch programs in India (one of the largest programs in the world), but it was suggested to create a government-led well-integrated school meal program for sustainability and ease of securing budgetary funds.

The presentation on "Maternal and Child Health Handbook as a tool for a comprehensive home-based record" was done by Ms. Keiko Osaki, Senior Advisor on Health at JICA. This presentation was about the optimal use of the maternal and child health handbook. In Japan, the handbook is a tool for a comprehensive home-based record to create a continuous approach across the life course, cross-sectoral coordination, and synergy in MCH services and nutrition services. The presentation also revealed how local governments in Japan contribute to the optimal use of the handbook, which could benefit the ADs in promoting better use of the MCH protection card in India. The key features included the following.

- The MCH handbook is an integrated format that combines the home-based record of maternal nutrition and child health and nutrition details. The handbook combines the maternal health card, child vaccination card, and growth chart card into one. The handbook is also used for school enrolment (child immunization and health history recorded at school).
- The handbook served as a medical and health record of pregnancy and delivery, child growth and development, personal diary, communication tool for mothers to converse with the health care providers, information source, participation tool for fathers toward the child, and also an educational tool for children as they grow up.
- In Japan, the use of the MCH handbook dates back to 1942 and has developed over the years.
- The use of the MCH handbook and the services around the handbook became law; hence, the local governments, public health workers, and private hospitals were bound to use the same and also give the required services to mothers, care givers, and the children.
- The experience of using the MCH handbook implemented in Japan would be useful for India to implement its own MCPC program more efficiently and effectively in India.

b) Session 2: Panel Discussion

The panel discussion was conducted on "Contextualizing MCH and school meal in Indian situation." The panel consisted of the following officials: Dr. Manohar Agnani, IAS, Additional Secretary, Ministry of Health & Family Welfare, GoI; Mr. Rakesh Ranjan, IAS, Deputy Director General (Evaluation), NITI Aayog, GoI; Mr. Ashwin Deshmukh, Head (Advisory), Piramal Swasthya, Piramal Foundation; and Ms. Varnali Deka, Deputy Commissioner, Aspirational District Goalpara, Assam state. The discussion was facilitated by Mr. Jayakrishnan Bhaktavatsala, Health and Nutrition Expert of the JICA Project Team.

The panel deliberated on how the best practices that were presented by the Japanese presenters could be

adapted to the Indian context and rolled out to strengthen the ADP toward the achievement of the SDGs while exploring the use of the ADP challenge fund in implementing relevant aspects of the best practices in ADs. With a consensus among the panelists on the need for and importance of using Japanese experience and lessons from the implementation of the MCH handbook program and the school meal program in India, the following key points emerged from the discussions.

- It was mentioned that the MCPC was introduced in India around a decade ago. After a few modifications, the current MCPC was devised and rolled out in 2018 and had almost the same details as the ones in the card. The details include antenatal checkups, institutional deliveries, and postnatal and child services, including immunization services obtained, until the child became six years old. With an affirmation of the scope of rolling out the Japanese lessons into Indian programs, especially in ADs, it was reiterated that government structures are in place to implement both the MCPC program and the school meal program.
- While the Indian MCPCs were designed in 2018 and rolled out in all districts, there are still gaps in filling out the MCPC at the ground level; either wrong information is captured, or the card is not filled at all. It was suggested to select two to three blocks in the ADs (one each from East, South, West, and North India) and implement a small project that incorporates lessons from the Japanese experience. The aim is to have a 100% error-free and efficient system of filling and keeping home-based records in the MCPC. Taking up ADs, which are mainly difficult districts (with regard to the terrain, existence of tribal population, or poor socio-economic indicators) will make be made easier during the scale-up phase.
- The need for digitized data at the facility level to complement the home-based records was also emphasized by the panel.
- Exploring how Village Health Sanitation and Nutrition Day meetings were successful all across India (and successfully converging and integrating various programs under the health and nutrition sector) could be used to promote nutrition awareness among pregnant women and mothers of young children.
- With regard to the mid-day meal provided at the Anganwadi centers for the children below six years of age, the panel observed the role of civil society partners in the capacity building of SHGs members in cooking quality food, improving nutrition knowledge of SHG members, training of SHG members to use the local food to provide an appropriate diet to the children, etc.
- It was suggested that the Japanese team that was implementing the school meal program along with the Project Team could visit a few districts to understand the situation and the challenges and gaps in the school mid-day meal program in India, and then devise ways to incorporate lessons from the Japanese school meal programs into the Indian school mid-day program.

In the question-and-answer session, one of the key questions was, “Can we get a clear vision for a hot cooked meal across India?” because a hot cooked meal provided by the Department of Education through the schools is not sufficient for nutrition improvement for students. In response, Mr. Rakesh Ranjan opined that the quality of mid-day meals was the responsibility of the concerned state’s government and the Department of Education. He also reiterated that the government policy is to continue providing mid-day meals and not to accept the direct benefit transfer of funds for the school meal. He also mentioned the need for capacity building of school meal teams in the schools.

At the end, a note of thanks was delivered by Mr. Katsuo Matsumoto, Chief Representative of the JICA India Office.

3.3.3 Third seminar (Education and School Sanitation)

The National Education Policy (NEP) 2020 prioritized early childhood care and education, improving learning outcomes, especially in foundation literacy and numeracy (FLN), and bringing out-of-school children back to school. With this background, the Japan-India SDGs seminar on

education was held on August 04, 2021, and focused mainly on a) improving learning outcomes, b) out-of-school children, and c) sharing issues related to school sanitation.

The main objectives of the education seminar titled "Enabling Access to Quality Education for All Children in India" were:

- To share global and Indian best practices addressing the issues of improving learning outcomes and reducing out-of-school children that could be replicated in the ADs.
- To share some Japanese initiatives and program experiences on establishing a sanitation and hygiene system, including building ownership of school toilets among school students which might be useful for schools in ADs.

The online seminar saw participation from the Ministry of Education, NITI Aayog, key civil society organizations and philanthropic foundations working in the education sector, JICA officers from Delhi and Tokyo, and the district teams from the ADP, especially the district education officers and DC.

The Forum schedule is given in Annexure 3-3.

(1) Summary of presentations and proceedings

In the opening session, Mr. Rakesh Ranjan, Deputy Director General (Evaluation), NITI Aayog, gave the opening remarks and set the tone for the seminar. Describing the Japanese funding as additional funding for the ADs, he requested JICA to share the innovations and best practices from India and abroad that could be adopted into the program structure of the new projects planned at the ADs. He also mentioned that, as the seminar sessions are directed toward the mid-level and senior team members, this will be useful for the teams from ADs, especially those led by the district education officer. Mr. Ranjan mentioned the tremendous progress made by India in the last 20 years in getting children back to school. This progress was achieved mainly by better outreach, persistence of the department, the rising aspirations of parents, a better mid-day meal program, and improved school infrastructure. While the dropout rates decreased over the years, they have recently risen again during the COVID-19 pandemic.

a) Session 1: Improving school climate

The first-session presentations were as follows:

The first presentation, which was titled "Education Guarantee Card–Intervention to Address the Dropout Rate Amongst Migrant Workers in Maharashtra," was given by Mr. Paresh J.M, Program Manager, Tata Trusts.

- In partnership with Tata Trusts, the Government of Maharashtra has introduced a Digital Education Guarantee Card (DEGC) to identify, enroll, and track the out-of-school children of migrant sugarcane cutter workers in Pune. The project aims to provide the children with access to the nearest government school in the locations of their migration, a continuation of their education, and a way of keeping their academic records and profiles. Please refer chapter 4 for more details.
- More than 9,700 children aged below 18 have been enrolled in school between 2016 and 2021.
- The participants asked the following questions: i) what the cost per district is, and ii) whether it is implementable in districts that receive mainly seasonal migrants. The presenter revealed that, in addition to the project being implementable in all places, the cost per child was INR 40 per child per month.

The second presentation, "Anandshala – Adaptation of Project U-Turn in Bihar" on the School Dropout Prevention Program in Samastipur, Bihar, was given by Mr. Amitav Nath, Associate Director, Quest Alliance.

- The Anandshala program was first designed as a three-year randomized control trial project in Bihar (supported by USAID between 2012 and 2015) for around 220 schools in the Samastipur district of

Bihar. It aimed to understand the reasons for school dropouts and devise different interventions and strategies to address this problem. The evaluation conducted at the end of the three-year project period revealed significant changes in key indicators in the intervention and control schools. The key more points discussed during the presentation were in Chapter 4.

- One of the questions asked by the participants was, "One of the reasons for poor learning outcomes was the poor capacities and skill constraints of teachers and teachers' absenteeism. How did the project deal with that issue, and how did the project incentivize the teachers?" The response was that the project realized how important the teachers were who played a critical role in the program's success. The district-, block-, and cluster-level teachers were first trained and were given opportunities to demonstrate their skills. They were exposed to other schools in their cluster or block where other teachers shared their experiences. Groups were formed among teachers, including WhatsApp groups, which was used to share experiences and motivate them.

The third presentation, titled "Three Important Principles and Japan's Efforts to Improve School Toilets," was given by Mr. Masato Nakanishi, Deputy Secretary-General and Senior Researcher, Research Society on School Toilets, Tokyo, Japan. Mr. Nakanishi explained the importance of clean school toilets and how Japanese schools have overcome the issues associated with school toilets over the last several decades. School sanitation is an essential part of school education and is critical in keeping children in school. The transformation and efforts of Japanese schools can become an example of learning for the schools in India. The key points discussed during the presentation were as follows:

- Part 1: Challenges of school toilets in India
  According to the JICA project report, the challenges of school toilets are threefold, namely i) poor infrastructure (lack of privacy and running water), ii) poor operations and maintenance (dark, dirty, smelly, scary, and blocked), and iii) social aspects (no menstrual hygiene arrangements at primary levels and lack of involvement from female teachers and engineers). While the underlying causes are lack of ownership and often lack of water supply, a lower priority for girls' toilet.
- Part 2: Three important principles for improving school toilets
  As part of an evidence-based approach to school toilets, the Research Society on School Toilets has three main principles:
  - Listening to students as users. Research Society on School Toilet conducted a questionnaire survey to students on school toilet. The survey revealed that children have bad image on school toilet; smelly, dirty, old, dark, and scary. By renovating the toilet based on the voices of children, the image of the toilet can be improved, and the ownership of the toilet can be enhanced.
  - Verifying the evidence of hygiene. As part of the verification, the research team surveyed the school toilets based on the hygiene parameters and the presence of bacteria and other microbes in the toilets. It was found that western-style toilets had fewer microbes and better hygiene levels compared to squat type toilets. Consequently, the use of squat type toilets "poses a higher risk of getting infections.
  - Pursuing a universal design for toilets. School facilities are also used by the wider public when a disaster or calamity occurs, or during public gatherings. Thus, it is important to ensure that everyone is comfortable using the toilets.
- Part 3: Efforts to improve school toilets in Japan
  As part of strengthening the ownership of toilets, respecting the needs of users is important. Hence, a participatory process was evolved for designing, implementing, and managing school toilets. It was also important to strengthen partnership and collaboration among a wide range of stakeholders, including the toilet material manufacturers and cleaning products manufacturers and creating synergy between the local and national governments for initiatives and policy development. In one of the cities of Japan, the local government organizes workshops where pupils, teachers, and construction companies make a renovation plan for the school toilets.
- School toilet safety and security involved i) fostering a culture that values toilets, ii) steps to ensure hygiene, and iii) establishing separate toilets for girls and boys and ensuring privacy. Students and teachers also get involved in toilet cleaning, and there is no stigma attached to cleaning and

managing toilet operations.

- One of the studies conducted in 2016 revealed that constipation among children is common, mainly due to their hesitation about using the school toilets.
- A question raised was, "In India, how can we invoke/encourage the private sector to join in school toilet improvement programs and what kind of learning from Japan can be applied to this?" The response was that one must involve all interested parties, not just the private sector. As well as the schoolteachers, one should not leave the students out of the discussions and planning process.

The fourth presentation, titled "Water Access, Sanitation and Hygiene (WASH) measures at Schools in Aspirational Districts," was given by Mr. Samir Kumar, Joint Secretary, Department of Drinking Water and Sanitation. The key aspects shared in the presentation were as follows:

- In 2014, a national campaign for *Swachh Bharat Swachh Vidyalaya* (Clean India: Clean Schools) was launched. The school sanitation target of providing universal access to toilets in all 1.2 million government schools was achieved before the target date of August 2015.
- As the Swachh Bharat Mission (SBM) in schools' impact studies showed, almost all schools in India have some form of sanitation facility (UNICEF, 2021). Another study in 2018 showed the number of schools in India without sanitation facilities decreased quickly. The dropout rates in government schools decreased because of the construction of school toilets, especially separate toilets for girls. Recent studies or information were not available because of the pandemic lockdown and schools being closed.
- While the ODF status has been achieved in most states, the department was focusing on an ODF plus campaign. The campaign worked on such aspects as access to a functional toilet in AWC and a separate boys' and girls' toilets in schools.
- It was further revealed that the water supply to AWC and schools along with supporting children with life skills education on hygiene, safe handling of stored water, handwashing, personal and community hygiene, and overall planning and achievement of water security at educational and public institutions, are all integral parts of the JJM of the GoI.
- A question was asked "GoI's SBM is a great global model, but in ADs, many locations are excluded and have sanitation problems. How are you going to include these in ODF plus?" The presenter responded that the sustainability of ODF is a critical indicator; JJM also planned to provide safe drinking water to all the schools and public institutions, and AWCs. Another question was on the maintenance of toilet facilities being a challenge in many locations. The presenter revealed that, in the 15th Finance Commission, around 30% of the grants provided to panchayats are specifically linked to the village toilets, and hence the villages and schools will have sufficient funds for the operation and maintenance of toilets.

The last presentation of the first session was on "Saksham Bitiya Abhiyaan" (The Empowered Daughter Campaign) by Mr. Manmohan Singh, Head, Aspirational District Collaborative, Piramal Education. The key points shared by the presenter were as follows:

- During the COVID-19 pandemic, owing to lockdowns, a high proportion of girls dropped out of school. They suffered domestic violence, faced early marriage, and the use of digital technology was not available in rural areas. The situation for girls has gone from bad to worse. The program was conceptualized to prioritize girls as a priority for schools. Under the program, the Piramal team worked with the district administration and started training fellows (called Gandhi Fellows) who are mainly young girl volunteers who have passed 12th standard or degree, and local volunteer teachers. These fellows were trained and, in turn, are imparting education to the female students at government schools in the villages. The learning initiative started with the fellows giving counselling to girls who have faced stress, hunger, and domestic violence among other issues, at their homes during the lockdowns. Following this, the school curriculum was taken up for learning math and languages.
- The program covers around 180,000 children through about 16,608 fellows in 15,000 villages in 28 ADs. In addition, the program is successful because of its cooperation with other government

programs and departments, local NGOs, media, women SHGs, colleges, panchayat leaders, and religious leaders.

- A question asked after the presentation was, "How does the program integrate the network at the local level and bridge the digital divide?" The program must work with multiple programs on the ground while strengthening networks and support systems must happen in the last mile and remote areas. The digital gap will remain for places without internet facilities, and other systems can be used (e.g., radio, the panchayat linkages) in many remote locations. Technology can become a facilitator but should not be a requirement for program interventions.

b) Session 2: Reengineering teaching and learning practices

The first presentation in the second session was on "Implementation Aspects of the National Education Policy in School Education with focus on Foundational Literacy and Numeracy Skills" by Mr. Santosh Kumar Yadav, Joint Secretary, Department of School Education & Literacy, Ministry of Education. The key aspects shared were as follows:

- The program "National Initiative for Proficiency in Reading with Understanding and Numeracy" Bharat was launched to support the implementation of the NEP 2020. The program has a goal of achieving FLN in primary schools by 2026-27.
- With a five-tier implementation mechanism (namely at national, state, district, block, and school levels), the teaching has three developmental goals for the students, these are i) maintenance of the physical well-being of the student, ii) becoming effective communicators, and iii) becoming evolved learners who connect well with their environment. Besides developing a pedagogy of creating an inclusive classroom, the program focuses on empowering the teachers, setting up a learning assessment system based on non-invasive methods like group work and project work. The program also develops collaboration and building school linkages with the panchayats and communities.

The second presentation, titled "*Bodhi Vriksha* – Reading and Books for Young Children in Bihar," was delivered by Mr. Kamal Nath Jha, State Head, Central Square Foundation. The key points shared in the presentation were as follows:

- The Bodhi Vriksha program was initiated in 2008-09 to improve language skills among children in lower primary grades.
- The program objectives included developing reading and comprehension skills in children in grades 1 and 2, ensuring adequate supplementary reading materials in classrooms, developing a joyful learning environment in schools, and achieving universal elementary education through quality pedagogy and retention of children.
- Program activities included the development of the lesson plan by a team of teachers for children (300 hours) in grades 1 and 2, and developing the training modules and training of teachers for grades 1 and 2. Based on the National Council of Educational Research and Training's research and guidelines, age-appropriate books were selected for the students. The selection of books was based on the interests and needs of the students. Book fairs were organized in 37 districts, and books were procured by government schools (almost 54,000 schools). At the ground level, more than 6,000 block representatives were trained, who in turn trained approximately 70,000 teachers. Mass rallies were conducted to popularize school education and increase enrolments. Storytelling, along with public functions and cultural programs, were also held with participation from the general public.
- The highlights of the reading improvement program included the following: a display of books in the classroom, maintenance of books in schools undertaken by Bal Sansad (child cabinet), special campaigns launched to strengthen reading improvement programs, and regular monitoring by cluster coordinators and block resource persons.
- The program outcome included government schools becoming attractive and hence increasing enrolment in grades 1 and 2 by around 6% between 2008 and 2010. Marginal increases in grade 2 and 3 performance were seen with an increase in scores from basic level 1 and level 2 assessments for reading skills. Seeing the results, more districts and states have taken up library initiatives in schools, especially those for grades 1 and 2.

The third and last presentation was on "*Nali Kali* – a Pathfinder for Activity-Based Learning in India and Beyond," presented by Mr. Binay Patnaik, Senior Consultant, World Bank.

- In keeping with the title, which means "joyful learning," the program was conceived as activity-based learning. The main features of this program include a warm classroom atmosphere (trusting and friendly), children of different grades working together, actively participating in learning, while the teacher becomes a friend and a facilitator (sitting down with the students). The key more aspects and features of the program that he shared were in chapter 4.

To summarize the valuable inputs from various presenters, Mr. Rakesh Ranjan mentioned the following points in the concluding session:

- Owing to the pandemic-induced lockdown, children in many locations were adversely affected by both the closure of schools and limited or no access to the internet. Although in other places school learning was undertaken online, the digital divide was quite evident.
- A positive aspect from India's experience in the sector is the new education policy with an emphasis on early learning, numeracy and developing an understanding for students in the early grades. The second positive aspect is that many people desire to do good work, as seen in the increased number of people becoming community volunteers in villages without asking for money. This aspect is a significant outreach opportunity for the programs.
- The best practices from the presentations will be documented and circulated to the ADs and the district teams will be asked to add their own ongoing innovations to the list. Thereafter, the ADs will be encouraged to adopt the innovations. The learning from Japan's experience based on toilet construction considering the response from the users (students) was something the Indian schools could adopt. He also recommended installing western toilets in schools where the water supply was not an issue as their advantages were shown in the research from Japan.

At the end, Mr. Kengo Akamine, Senior Representative of the JICA India Office, offered a note of thanks. He mentioned education as being essential for the country's development, and asked that, along with migrant population, school dropouts, especially those among girls, improving school toilets, and child labor be added as issues for future discussion. He opined that it was important to replicate the best practices, and the new initiatives conceptualized from them. While acknowledging the complexities of implementation, he opined that immediate measures for implementing quality education programs were needed for countries like India. He reminded the audience that the responsibility of this generation is to provide better education opportunities to future generations in India.

3.3.4 Fourth Japan-India SDGs Forum on Agriculture Sector (Promoting Sustainable Agriculture for Rural Development)

Agriculture is the primary source of livelihood for about 60% of Indian population, more so for the rural areas. Since its independence, India has successfully improved its agriculture sector. By the late 1970s, the country attained self-sufficiency in agricultural food production, which is a pioneering example for other developing countries. India has a competitive advantage in agriculture given its diverse agro-climatic conditions, but it has not been fully tapped.

With this background, the Fourth Japan- India SDGs Forum on Agriculture sector was held on October 21, 2021. The forum focused on the following two topics: a) improvement of agriculture production through an extension approach that empowers and promotes market-oriented agriculture production and distribution; and b) approaches for promoting locally developed agriculture methods and products through strategic marketing especially through intensive brand promotion and product development.

The main objectives of the forum were to:

- share Japanese initiatives and program experiences in horticulture extension to promote local agriculture and product development; and

- discuss possible ways of implementing the Japanese initiatives and approaches presented in ADs with due consideration of the ADs' situations.

The topic of the forum and the session plans were developed in consultation with key stakeholders, namely NITI Aayog and JICA. With COVID-19-related restrictions and based on the advice of NITI Aayog, the forum was conducted online with the following participants: Ministry of Agriculture & Farmers Welfare, NITI Aayog, key civil society organizations working on the agriculture sector, JICA teams from Delhi and Tokyo, and the district teams from ADP districts especially the District Agriculture officers and district collectors and magistrates.

Annexure 3-4 presents the forum's program and schedule.

(1) Summary of Presentations and Proceedings

With the duration of two and a half hours, the forum presented experiences in the horticulture extension approach that empowered systems of market-oriented agriculture. In the opening session, Mr. Rakesh Ranjan (Mission Director, ADP, NITI Aayog) set the tone for the forum. He made the is following key points.

- The main expectations for the forum are to draw lessons from the following two aspects: a) acquire knowledge from India and abroad; and b) find practices and products that can be applied in ADs. In addition, if approaches are successfully applied in difficult conditions of ADs, then they can be applied to any district in a similar agro-climatic area for improving crop production and supporting farmers.
- The main challenge of the agriculture sector is to identify the right crop or approach for the agro-climatic area of a location and how to motivate farmers to adopt the new crop or approach.
- While farmers are capable of making economic decisions based on the profitability of a crop, it is important to build their capacity in adopting innovations. The district administration team, especially the district agriculture sector teams, has an important responsibility for empowering farmers and introducing innovative methods.

Subsequently, Dr. Neelam Patel, Senior Advisor, Agriculture & Allied Sectors, NITI Aayog, revealed that the agriculture sector grew at an unprecedented rate of 3.4% per annum. She said that it was the only sector that showed growth during the COVID-19 pandemic mainly because farmers' efforts yielded increased production. She made the following key points.

- Indian Prime Minister, introduced in India, the concept of "One District One Crop" much similar to the Japanese concept of "One Village One Product." The concept provides a means of production and a complete value chain of distribution and consumption of farm produce in and outside a district.
- This forum and similar workshops would help devise programs and initiatives to introduce innovative technological knowhow to increase agricultural productivity and strengthen sustainability. Introduction of mechanized farm equipment for small and medium farmers are critical for increasing productivity.
- The forum should be an opportunity to introduce the "One Village One Product" concept in India focusing on ADs. Although GoI introduced many schemes for farmers and the agriculture sector, it was necessary to introduce innovations to benefit small and medium farmers. Such innovations can be tested in ADs and then disseminated to other districts.

a) Session 1: Presentations

The session on "Key Issues in Agriculture Sector" was presented by Dr. Umesh Babu M S, Agriculture Expert in the JICA Project Team. The session presented challenges in the agriculture sector in ADs. The key points shared include the following.

- With the recent introduction of GoI's major programs such as Soil Health Card, PMKSY, PMFBY and e-NAM, the agriculture sector improved significantly in crop diversification, intensification, food production, and water conservation.
- Challenges pertaining to ADs include lack of transportation and communication systems to provide doorstep services, and droughts and heavy rains posing constant threats to agriculture growth. Vacant positions in the ADs' departments also affect human resources and program implementation. Limited fund allocation for irrigation planning and extension activities for animal husbandry also slow down agriculture growth.
- Most farmers feel that their opportunities for growth and success are limited. Thus, it is necessary to improve farmers' understanding of a market-oriented approach and how best to seize opportunities. It is also critical to have stakeholders work together for identifying and implementing new ideas and opportunities.

The presentation on "One Village One Product: Concept for local revitalization through local branding" was made by Mr. Tomonori Uchikawa, Regional Advisor, JICA, Tokyo, Japan. One Village One Product (OVOP) is a concept for local economic and social development, made possible through the development of products and services taking advantage of local resources and uniqueness. Mr. Uchikawa presented the examples of JICA's OVOP projects in Africa and Latin America.

The key points discussed during the presentation are as follows.

- With an example from his hometown of Nagasaki, Japan, Mr. Uchikawa explained OVOP as a concept to identify and develop local resources through local branding developed around history, traditions, and cultural landscape. This was first developed by Dr. Morihiko Hiramatsu, then governor of Oita prefecture, Japan, and implemented from 1979 to 2003.
- The key OVOP concept is built on three principles: a) local yet global, b) self-reliance and creativity, and c) human resource development. The key steps include identification of local resources, identification of a local product, introduction of value addition and innovation for local resources, and creation of a brand around local tradition and culture. Being flexible to use any methods to develop the concept is the uniqueness of OVOP.
- Through its development assistance, JICA has disseminated this concept to Asia, Africa, and Latin America. Countries in each of these regions are developing their own OVOP methodology and concepts.
- Examples of the OVOP initiatives since 1979 include the following.
  - Kamikatsu Town, Japan – development of a "leaf and flower" business to address Japanese cuisine
  - Ama Town, Oki Island, Japan – making things that the island's residents do not have
  - Kanra town, Gumna prefecture, Japan – a comprehensive program of agriculture, experimental agriculture farming, agri-tourism and information and technical exchange
  - Malawi, Africa – example of developing "Baobab fruit jam" and branding it into an elite brand image. Sales beyond the production area increased despite an increased price, thus provided better income and sustainability to local farmers and producers.
  - Malawi, Africa – introduction of cow-dung-based recycled paper
  - El Salvador, Central America – introduction of basket products with elite branding. The locals' income increased through the sale of such products.
- OVOP in its early stage was managed by politicians and government officials. In later years, local residents participated in developing and implementing OVOP. In the third-generation OVOP, entrepreneurs who had gone to other parts of Japan came back and participated. In the fourth-generation OVOP, entrepreneurs from other parts of the country take an interest, come to a given locality, and participate in the OVOP program.
- Introduction of OVOP increased the participation of women, youth, and the elderly in entrepreneurship.

- In response to a question from a forum participant on difficulties in pricing and distribution of income among farmers, Mr. Uchikawa admitted that they were a challenge. OVOP products being more expensive than other local products must be supported by brand and strategic marketing to showcase OVOP's benefits and local traditions for promoting the products.
- Another question was on how the scale of the market for an OVOP product and the risks of having only one product are managed. Mr. Uchikawa revealed that, under OVOP, one did not look for a large market to promote for the product. It is difficult to have large-scale production because OVOP products are produced locally.

The presentation on "Introduction to SHEP Approach: Innovative Agriculture Extension Approach" was made by Dr. Jiro Aikawa, a Senior Advisor on Agriculture at JICA, Tokyo. Smallholder Horticulture Empowerment and Promotion (SHEP) is an agriculture extension approach developed by JICA to realize market-oriented agriculture. While SHEP treats farming as business, it also empowers and motivates farmers, transforming their attitude toward markets from "grow and sell" to "grow to sell."

The key aspects shared are as follows.

- As a commitment to African countries, Mr. Shinzo Abe, Japan's Prime Minister at the time, launched the SHEP approach in 2013 at the fifth Tokyo International Conference on African Development (TICAD - V). JICA disseminated the approach to 10 countries to build the capacity of 1,000 skilled agriculture trainers to support around 50,000 farmers.
- SHEP was developed in Kenya through a JICA technical cooperation project that started in 2006 and succeeded in increasing farmers' income through an extension approach for realizing market-oriented agriculture.
- The SHEP approach is undertaken in four steps: selection of targets and sharing vision/goal, increasing farmers' awareness of the current situation and new information, decision making by the farmers, and provision of technical solutions. The key activities in the approach include the following: a sensitization workshop; a participatory baseline survey and a market survey (both done by farmers themselves); crop selection and action plan development (also by farmers); training for extension staff; and demand-driven field training for farmers.
- In Kenya, the average income of a farm household who took the SHEP approach increased 24,055 Kenyan shilling (KES) in 2016-2018 to KES 56,086 in 2018-2019. The average net income of farmers increased by almost 147% in mixed groups, 164% among male groups, and 194% in female groups. Thus, the approach brought about the transformation from high-yield agriculture to high-profit one.

The last presentation was made by Mr. Vijay Vardhan, General Manager - Operations; ITC (Social Investments), ITC Limited, India, on "Tackling challenges of the Indian agricultural sector through a multi-pronged strategy."
ITC works on farmer welfare both through its agri-businesses and social investment program. With more than 100 years of engagement with Indian agrarian communities, ITC aims to nurture agri-value chains and strongly believes that only farmers' well-being will ensure value chain sustainability.

The key points shared are as follows.

- ITC has worked with NITI Aayog since 2018 in 27 aspirational districts in 8 states. The objective has been to increase the income of rural households through reducing the cost of production and increasing the productivity of major crops in each district.
- ITC's approach to solve current issues and ensure growth is based on multi-pronged interventions that can improve income from available assets and add new avenues through knowledge empowerment, augmentation of natural resources (water, soil, and biodiversity), diversification (on and off farm), and institutional support (leveraging government programs and farmer groups).

- A family-based sectoral approach can provide income for families and reduce risks in production.
- On a question from a participant on how ITC works with other organizations, Mr. Vardhan replied that ITC mainly worked with the agriculture department in a given locality while the firm gained knowledge from reputed institutions.

b) Session 2: Panel Discussion

The panel discussion titled "Leaping Forward: How to implement best practices in Aspirational Districts" was conducted with the following officials as panelists.

Panelists:
Ms. Alaknanda Dayal, Joint Secretary, Ministry of Agriculture & Farmers Welfare
Dr. A. V. Bhavani Shankar, NABARD
Mr. Sushant Gaurav, District Magistrate (DM), Simdega, Jharkhand
Panel Facilitator: Dr. Umesh Babu, Agriculture Specialist, JICA Project

- Ms. Dayal pointed out that, despite various government schemes and field personnel, the capacities of farmers must be strengthened directly. In addition, the private sector's support must be encouraged to supplement the government initiatives.
- Similarly, Dr. Shankar stated that an intuitional mechanism is required at the grassroots for operationalizing new innovative models in India, and it is imperative to strengthen the capacities of farmers' associations. SHEP and OVOP should be adopted into India's programs. Community-led decision making in choosing local products is just one of the aspects to take up. While both SHEP and OVOP are relevant for local conditions in the Indian agriculture sector, Mr. Gaurav felt that detailed pre-implementation planning is required.
- Mr. Gaurav also suggested having a longer duration for implementing an innovation. For example, NGO Pradhan is successful because it uses a five-year plan to implement its programs. While using the cluster-based approach, the NGO looks for another geographical area after an ongoing program becomes matured. He also pointed out a problem in Krishi Vigyan Kendra, and commented that transforming Krishi Vigyan Kendra would be important for the agriculture sector at a local level. He suggested use of NITI Aayog and JICA funds.

The forum concluded with a vote of thanks from Mr. Mitsunori Saito, Chief Representative of the JICA India Office. While reiterating the need for using the SHEPS and OVOP models in India, he also explained that it is imperative to empower farmers to sell their farm produce in their own district, state, city or globally. He assured support from JICA in agriculture projects to empower India's farmers.

3.3.5 Final Japan-India SDGs Forum (not yet conducted)

The final Japan-India forum is scheduled for December 2021 to discuss with stakeholders the recommendations formulated from the Project. It will be an internal meeting among the ADP stakeholders including DC from 112 ADs and ADP partners (e.g., NITI Aayog, other ministries and departments, and bi- and multilateral agencies dealing with ADP).

The objectives of the forum will be to:

1. share the observations and recommendations on the SDGs and ADP in the final report of the JICA Project;
2. have an open discussion on key recommendations among the ADP stakeholders; and
3. reach a consensus on issues on the SDGs and ADP in India, and think together of the way forward for ADP and the SDGs.

Two to three relevant recommendations will be pre-selected in the following two areas: policies related

to SDGs and ADP; and structural and operational issues. Participants are expected to engage in in-depth discussions. During the discussions, the participants may suggest any concrete way forward from those recommendations and provide new recommendations. The draft program for the final forum is in Annexure XX.

The following recommendation themes are to be taken up for the discussions:

1. Recommendations that would require policy changes and/or improvements in the ADP framework at the national and subnational levels:
    - Fast-tracking the use of the Challenge Fund
    - A more holistic approach and comprehensive development planning to vision beyond ADP
    - More comprehensive and result-based monitoring is needed to assess the real impacts of ADP and draw systematic lessons learned at the AD level.
2. Recommendations that can be dealt with at the AD level via enhancing the capacity building training, strengthening the M&E system, and enhancing the network and coordination among ADs:
    - More capacity building training and orientation to AD officials for developing PoA
    - Application of more disaggregated data is essential for ADP (e.g., gender, SCs/STs)
    - More innovative and convergence in ADP financing
    - More awareness raising is essential to the private sector and the general public in support of ADP and SDGs.

4 Synthesis of Lessons Learned

4.1 Synthesis on ADP

In this section, lessons learned from the AD surveys, the Japan-India SDGs forums, the support to PoA project preparation in select districts, document reviews, and discussions with key stakeholders are presented. The ADP approach is headed in the right direction as it prioritizes indicators that have the highest linkage to improve the lives of the poorest districts. The arrangements of the implementation of the ADP, which was headed by DCs with state and national level monitoring and oversight, have benefited the program substantially. Effective monitoring of accountability has evidently enhanced performance. The success of ADP shows that an appropriately designed development strategy can resolve historical stagnation. Moreover, the catalyst, facilitator, and change agent role of NITI Aayog has added momentum.

Simultaneously, the program needs more visibility at all levels, across stakeholders. Further, the core principles of convergence, participation, and collaboration need further detail. Decentralization and the role of local governments can be critical for institutionalization, sustainability, and improved ownership. The big picture of "inclusive and sustainable service delivery, everyone forever" and the roadmap to the 2030 Agenda is not well-articulated at the district level. Capacity building, gender mainstreaming, inclusion, and focus on the poorest districts need to be embedded profoundly and at all levels. There are critical challenges of inter-departmental coordination that occasionally warrant higher level timely interventions, for instance in forest clearances for road construction or housing. The uptake and use of challenge funds are apparently slow.

Synthesis on ADP

The ADP successfully created the necessary priority, interest, and motivation within a district team for establishing a good review system of indicator achievements and prioritizing action for subsequent periods. A multi-sectoral review at the district level is encouraging. However, the percolation of this review system to the block and village level was still slow. Therefore, it was found necessary to orient the district, block, and village teams. Going beyond data collection and reporting, a system of community-owned SDGs of the ADP and review system, and sustained commitment toward the achievement is important.

Furthermore, based on the experience of the PoA proposal development, it was found that:

- Apart from a mandatory orientation/briefing of the NITI Aayog's ADP team with the district team within 2-3 weeks of the challenge fund notification, the deployment of the team for technical assistance to the ADs to support the proposal development and implementation of the project for a few years was found useful. This would help the otherwise less qualified district team, to have an interface with development sector professionals and thus, help in the development of a better objective proposal as well as the monitoring of the project in the two-year project period.
- A robust process of the development of the AD proposal at district level (with steps like assessing the situation, brainstorming and identification of priorities, creating a responsibility matrix for project activities and roles of effective project monitoring and convergence and collaboration with existing programs) can help reinforce the district team as well as the germination of innovation and increase the implementation of effective policies in other geographical areas.
- Improving the quality of project preparation, by strengthening the ADP team at the district level by inducting handpicked officials from the district on merit, train them in project identification, prioritization, preparation, and management. External technical support often does not get embedded and, once withdrawn, does not lead to the institutionalization of the capacities.
- The PoA circulated among districts are more of a content sheet and the district officials are not aware of exactly what is needed to develop the proposal under the respective headings (e.g., risk analysis, monitoring indicators, and project implementation plan. Thus, NITI Aayog may need to issue a detailed guideline and tool kit for project preparation.

- Special check of project proposals for (a) implementation readiness (b) innovation (c) replicability at scale (d) sustainability by strengthened SPV.
- The Challenge Fund is a great opportunity to innovate and do things differently. However, most proposed projects seeking approval of the fund are a conventional hardware-dominated wish list. Accordingly, the principles of convergence, innovation, and inclusion must be incorporated as key guiding principles for project approval based on normative weightage.
- The projects, once sanctioned, should be monitored for quality assurance and timely implementation to avoid cost escalation and ensure the stream of benefits as envisaged. This aspect must be addressed and included under the monitoring framework.

4.2 Sector-wise discussions

This section presents a synthesis of the lessons learned in each sector.

4.2.1 Health and Nutrition

- The ADP was effective in the use of technology for enhancing service delivery, especially during the COVID-19 pandemic, which was encouraging. The ADP districts have made good attempts in the use of technology for the program services delivery and review system. Chitrakoot used "tele-medicine" to provide treatment to people at grassroots centers by linking them to district hospitals with specialists.
- The ADP successfully spread the quality systems (LaQshya[13] and National Quality Assurance Standards (NQAS) certification) used in Gujarat to the other ADs. The AD quality certifications of the LaQshya and NQAS certification (maternity operation theatre and labor room) helped in improving the community's trust in public health facilities and providing the visibility and quality perception that eventually resulted in better use of public health services. Goalpara district had its district hospital certified. Moreover, the certification of the First Referral Units (FRUs) and Primary Health Centers (PHCs) were ongoing. While this was a measure established and implemented by the specific district team, it should be implemented in all the ADs.
- A clean and tidy hospital is crucial for the better use of key treatment services (and institutional deliveries) and quality patient care. A technical assistance initiative to support the district is also prudent. This becomes even more relevant during the current COVID-19 pandemic, mainly to stall the spread and to provide quality treatment to patients.
- In Goalpara and Nandurbar, there was need for improved food production through better agriculture (based on climate) and better cooking methods at school meal programs, and at homes. The district-specific advantages, especially climate and soil, can be used to grow appropriate crops, vegetables, and fruits. Hence, incentivizing locally generated food and supplements can improve nutrition and the overall health status of the population, especially women during maternity, as well as children.
- Addressing manpower shortages in districts is an important aspect that influences the success of the ADP directly. Most of the ADs (including the ones studied through online survey) had a shortage of manpower and lack of qualified staff (nutritionists, medical specialists, laboratory technicians, etc.). The shortage of equipment was more acute in Chitrakoot. Therefore, there is need for a systematic involvement of the state's health and nutrition sector leadership to provide the necessary support to the ADP.
- A better district health and nutrition development system that is more resilient and proactive toward emerging pandemics must be established. Responses to and lockdown owing to the COVID-19 pandemic had adversely affected routine services such as operations of grassroots service centers like sub-centers and AWC, among others. The program performance had also declined during the six-month period. The current pandemic necessitates a robust district-level strategy to address the emerging diseases especially the severe acute respiratory syndrome (SARS) (COVID-19 is one type of SARS diseases) as well as future disease outbreaks. This includes preventive services like vaccinations, wearing masks, hand-washing and body hygiene, and treatment services including the

[13] Quality improvement in labour room and maternity operating theatre

provision of the right medication, isolation wards, oxygen, ventilator equipment support and so on. As the country with the largest population worldwide (next only to China), it is critical for the ADs to address preventive measures and undertake mass communication campaigns to educate the masses about vaccinations and disease prevention methods. This initiative is the only one that will help reduce the adverse effects of the spread of such diseases on otherwise weak health systems, especially in ADs.

4.2.2 Education

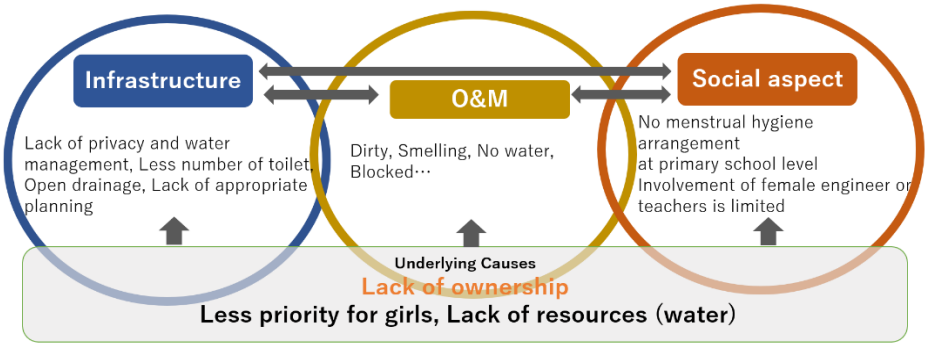
- Historical and geographical disadvantages have been major reasons for the lagging of ADs in the progress of education, compared with other districts. Considering the extensive diversity in physical topography and demography, customized and contextualized initiatives are necessary to accelerate educational achievements.
- The critical parameters identified by NITI Aayog have resulted in a shift in focus toward addressing the educational progress in the district. Data indicate that districts not only incorporated most of the children into the educational system but also took the initiative to retain them and ensure that they received an education. The flagship centrally sponsored program of *Samagra Shiksha Abhiyan* (SSA) has been the guiding force in the implementation of the ADP in districts.
- The PoA assistance to two districts shows that the ADP has successfully developed healthy competition among the districts. The initiative was found to bring about the changes through target interventions. Districts have learned to develop action plans, strategies, and set the targets for all ADP indicators in consultation with stakeholders. Both districts were also found to have strong leadership. The long-term association of the DC is considered important in effecting change in both districts.
- The long-term closure of schools owing to the COVID-19 pandemic brought about challenges in retaining children in schools, particularly those belonging to the financially disadvantaged section of society. However, this challenge also provided an opportunity for districts to venture into the new experience of online teaching and learning. Districts have developed portals and are reaching students through online media, including YouTube. Moreover, many districts have invested in Smart Classes. The GoI's initiative of teacher training and online platforms has helped teachers develop lessons and reach out to the students. The DIKSHA[14] (Digital infrastructure for knowledge sharing) and SWAYAM[15] (Study Webs of Active learning for Young Aspiring Minds) portals of the central government have been widely accepted at the district level.
- Despite the good results yielded in 2018 to 2020 on most of the indicators identified by NITI Aayog, there are gaps in capturing data on the outcome of the learning of the students. Although the National Achievement Survey (NAS) captured by the National Council for Educational Research and Training (NCERT) remains a baseline for districts, updating the same regularly, remains a challenge for districts. In the absence of yearly NAS, a uniform and agreed assessment system must be established to note the changes in the outcome of the learning of students.
- Only one or two NGO partners were found to be involved in the implementation of interventions at the district level. In both Chitrakoot and Goalpara districts, the Piramal Foundation helped to develop action plans and implement programs. Wider consultations with active local NGOs or civil societies and School Management Committees (SMCs) are encouraged during the implementation of the ADP. This will help to bring about a greater consensus among the diverse group of stakeholders.

[14] Launched in 2017, the DIKSHA portal enables teachers to create training content, in-class resources, profiles, assessment aids, and connect with other teachers more seamlessly. DIKSHA means "initiation."
[15] Launched in 2014, SWAYAM (Study Webs of Active learning for Young Aspiring Minds) envisions extending best-quality education to over 30 million students in India. Swayam means "self."

- Based on the experience of the district-level PoA preparation, the ADs showed sufficient interest and desire to improve education in their district. One of the ADs, whom the Project Team supported, produced a proposal for improving early grade education in the district. However, owing to the lack of qualified professionals in the district, it took more time to develop the concept and proposal. It would be useful to orient the ADs immediately after their challenge fund award intimation. Technical assistance for proposal development and during the program action is crucial for higher quality outcomes (even if it is for a few years).

4.2.3 School Sanitation

- Although the ADP indicators on school toilets are saturated, there are obvious exclusions. There are many challenges in terms of infrastructure, lack of ownership, O&M including daily cleaning, water supply, and water management, and changes in behavior. It is quite important to encourage ownership, through the "Our toilets by ourselves, for ourselves" initiative, and motivate ownership of toilet among students, teachers, and local governments, from the planning stage.



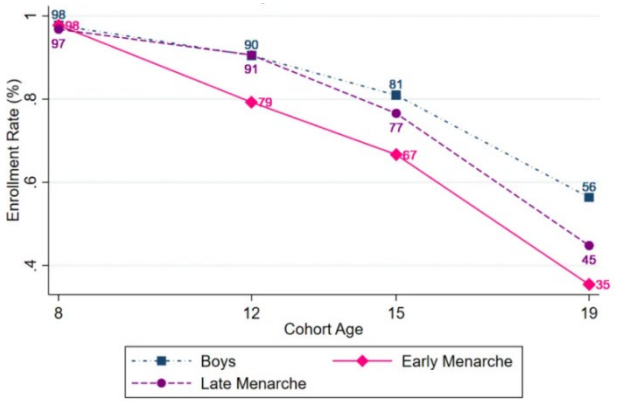
Source: JICA project

Figure 4-1 Causes of Current Challenges in School Toilets

The following effective practices were identified in Japan, to raise ownership of school toilets among students, teachers, and district officers. Chapter 4 gives details of the practices.

- Learning importance of discharge of feces
- Participatory toilet designing with students
- Departure from the black image of toilet ("dark, dirty, broken, smelly, scary")
- Daily toilet cleaning by students and teachers
- Some attractive tools for toilet cleaning

- It is crucial to set the arrangement on menstrual hygiene at the primary school level and involve more female officers at the district and NGO level on school toilets. During the AD survey in the three districts, the Project Team held interviews with district education officers, civil engineers, school headmasters and donors. When the Project Team asked the interviewees (18 male and 1 female) about menstrual hygiene at primary schools, all interviewees stated that girls in primary school do not experience menstruation, hence, there is no need to provide sanitary pads, insulators, and education



Source: Khanna (2019)

Figure 4-2 Enrolment Rate: By Gender, and Menarche Status in Andhra Pradesh

for these girls. However, in actual sense, girls get their first period between the age of 9 and 15. The study conducted in Andhra Pradesh found that the enrolment rate of girls who experience early menarche drops at 79% by the age of 12 (Khanna 2019). This means that menstrual hygiene at the primary school level is quite important.

The Project Team also found schools without female toilets through the project proposal formulation. Less prioritization for female toilets is possible. However, school toilets tend to be male dominant at district offices or NGOs. Additionally, out of the 19 interviewees, 18 were male. Therefore, they might not be familiar with menstrual hygiene or prioritize friendly female toilets.

To avoid these kinds of challenges, all levels of governments, donors and primary school headmasters are encouraged to know and understand the importance of menstrual hygiene at primary schools. Moreover, it is crucial to involve more female officers at district and NGO levels to create more awareness on the importance of toilets in school. Female officers would share the importance of friendly children and female toilets. If possible, teachers and girls should be involved in the process, as they are the ultimate users of the toilets.

- ADP proposal needs a more programmatic approach. While interacting and supporting the ADs in the development of the proposal of toilets in schools, the team realized that the district has not implemented any programmatic approach. In the proposals, the ADPs do not fill up the required information in the given template. The proposals generally lack objectives, outcomes, O&M and strong rationale. In the proposals regarding the construction of toilets in AWCs or separate female toilets, the team found that, the current proposals are for the general development of infrastructure rather than behavioral change, capacity building, and improvising existing infrastructure.

  To address these challenges, the following few measures can be implemented during the devising of the proposals:
  - Participation of the beneficiaries from the outcome of the project.
  - Giving a brief of clear guidelines of the NITI Aayog grant, and the activities to the nodal officers.
  - Inclusion of female officers/teachers, and students while devising plans for school toilets.
  - Demanding the generation of proposals from the targeted population.
- Guidelines for the design of disaster-resilient toilets for schools must be developed. An extensive section of India (states such as Bihar, Assam, Uttar Pradesh, and Madhya Pradesh) is under the flood plain of various rivers. During the AD survey in Goalpara district, the project team found out that many schools suffer floods yearly and that toilets are the most affected. The pits and urinals get filled with mud so that children do not have access to toilets for several months, yearly. Moreover, the feces matter also contaminates fresh water during floods. Therefore, disaster resilient school toilets are necessary. However, the project could not find clear guidelines for the design of disaster resilient toilets for schools where many pupils use toilets every day, despite there being disaster resilient toilets at the household level. Moreover, school toilets can be community-centric, so that the local community can use toilets even during emergencies. Therefore, it is important to construct disaster resilient toilets especially in ADs, which are highly prone to disasters.
- It is recommended that toilets and hand-washing facilities be constructed based on the national and state manuals. Schools and districts are encouraged to follow the design of toilet infrastructure that the national or the state government defines and promote sustainable and user-friendly toilets. For example, the design in the manual of Uttar Pradesh sets doors for each female toilet, and partitioning between urinals, hence leaving room for light and ventilation, and enough toilets. However, ADs are not aware of the manual. Moreover, many schools are still struggling to meet the requirements. The number of toilets in many schools in districts is quite less compared with the number of students. Additionally, the two schools, in which the project held interviews, did not have private rooms: one of the schools did not even have enough water. Moreover, septic tanks are generally used in school toilets in India. However, GoI mentioned that many on-site sanitation structures are mistakenly referred to as septic tanks, even when they are inadequately sized or

designed, have only one chamber, or have open bottoms, and therefore, do not perform primary wastewater treatment (Ministry of Drinking Water & Sanitation, 2019). Therefore, we cannot conclude that all schools have basic and user-friendly toilet facilities. The district should construct toilets based on the design standards and material specifications proposed in the manual. Further, the quality of construction should be checked, preferably by a third party. Moreover, because the budget would be limited for some schools to develop the user-friendly toilets, which the manual promotes,[16] it would be better for the ADs or states to allocate enough money for that.

- Misunderstanding of data and insufficient data collection tools lead to unrealistic indicator data. The definition of "a functional toilet" differs from that of school headmasters/headmistresses and organizations. This has caused a huge gap between the government data and reality in terms of the school toilets. In the regular report to the government, the headmasters/headmistresses need to submit "the number of toilet/ urinals" and "the number of the functional toilets/urinals." In contrast, the NGO strictly calculates the number of functional toilets using the checklist. According to the survey conducted by one of the NGOs, in one of the clusters in Nandurbar, only 2 out of 14 schools have functional toilets. However, the government officially reported that all the 14 schools have functional toilets. To mitigate the gap, it is necessary to 1) train school headmasters/headmistresses to provide them a clearer understanding of indicators and the definition of "a functional toilet", and 2) use the revised data collection tool to obtain the realistic data at the school and district level.
- New additional indicators on toilets are recommended to ascertain the usage and functionality of the toilets. The current SDGs indicator on school toilets is "the proportion of schools with access to single-sex basic sanitation facilities." The current data of NITI Aayog shows 100% achievement of the indicator in Chitrakoot and Goalpara and 92% in Nandurbar (NITI Aayog, 2021c). However, the number of toilets compared with the number of students is not enough; this is not captured by the indicator. There should be 1 unit of toilet available, that is, 1 male toilet, 1 female toilet, 3 male urinals and 3 female urinals, for every 40 students (Ministry of Education, 2014). However, one of the schools in Chitrakoot that were interviewed had 2 toilets for 237 boys and 2 toilets for 185 girls. Moreover, there was no private toilets with doors. The situation was the same in Goalpara. Moreover, despite toilets being damaged by anti-social activities or flood, it is difficult to ascertain the situation in the current indicator.
- Developing a daily cleaning mechanism at school level for the cleanliness and usage of the toilets is recommended. During the online survey, the project was introduced to the headmasters of two schools in each district to explore the reality of toilet and hand-washing facilities. One school ideally performs well regarding the toilets and hand-washing facilities, while the other lags. The Project Team found that the well-performing schools in the districts had daily cleaning mechanism. The well-performing schools have their toilets regularly cleaned twice a day by a person paid by the SMC or Gram Panchayat. Don Bosco School, a secondary school in Goalpara, put dust bins in the female toilets for the disposal of sanitary napkins; these dustbins are cleaned daily. In contrast, the other schools clean their toilets on a need basis.

  One of the reasons of this discrepancy between the well-performing schools and the lagging ones is the budget support from Gram panchayat. Schools generally receive approximately INR10,000 yearly for 100 students from the government for the overall maintenance of the school. Schools can just spend approximately 10% of the budget for school toilets, which is not enough. All the well-performing schools in the three districts, which the Project Team had interviewed had received some financial support from the Gram panchayat and allocated money to the daily cleaning of the toilets. This discrepancy can also be attributed to the activeness of the SMC. Active SMC generally promote a clean environment for children.

  In the Japan-India SDGs seminar, the Japanese experience on school toilets were shared. A locally evolved partnership of schools, education department, toilet material manufacturers and toilet cleaning materials manufacturers were also found to add value and improve the sustenance of the

[16] Swachh Bharat and Swacch Vidyalaya Guideline mention that it costs INR 260,000 per school for the construction of a single-sex toilet and an incinerator, INR 80,000 for water supply in each toilet block for flushing, and INR 60,000 per year and school for O&M and repairing.

toilet O&M in district schools.

4.2.4 Agriculture and water resources

- The ongoing schemes and programs such as the National Food Security Mission (NFSM); National Mission for Sustainable Agriculture (NMSA); National Horticulture Mission (NHM); Rashtriya Krishi Vikas Yojana (RKVY); Pradham Mantri Krishi Sinchayi Yojana (PMKSY); Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA); Pradhan Mantri Fasal Bima Yojana (PMFBY), Soil Health Cards, electronic-National Agriculture Market (e-NAM), Animal Vaccination and Artificial Insemination and other region-specific schemes such as Horticultural Development in Bundelkhand and Vindhyan Areas, Krishi, Kalyan Abhiyan Scheme and Horticulture Mission for North East and Himalayan States (HMNEH) support the progress of the sector significantly.
- All the schemes are established to support many beneficiaries with limited funds. For example, the PMKSY provides partial subsidies at the ratio of 85:15 (PMKSY: farmer) to small and marginal farmers to purchase pipes, rather than pumps, and construct water sources (tube well or ponds) and overhead tanks. In some other places, it is in the ratio of 55%: 45% where small farmers, especially those that belong to tribal communities and other backward categories, are not able to afford additional costs of micro irrigation. This approach of reducing subsidy is slowing down the progress in ADs. Therefore, subsidies should target poor farmers to improve agricultural infrastructure in India.
- Under MGNREGA, the construction of farm ponds with specific dimensions in small and marginal lands is becoming difficult owing to the low availability of space, which is allocated for food production by farmers. The objective of MGNREGA and PMKSY is more suitable to drought prone areas like Chitrakoot and Nandurbar than flood prone areas such as Goalpara. The re-appropriation of these schemes while keeping such issues in view, may benefit many farmers dependent on agriculture the sector.
- Organizing capacity building programs and awareness campaigns at village and block levels helps farmers to enroll more food crops under the PMFBY, which compensate the income from losses owing to the adverse effects of changing weather and climate.
- The vagaries of weather affect the standing crops, yield, production, and income. PMFBY has further enrolled more farmers in the Rabi season than Kharif owing to uncertainty in weather, climate, and rainfall. Rabi has also lower premium costs. Poor responses are observed in hilly areas, and in areas where compensation is delayed by insurance companies. Additionally, the implementation of crop loan waiver schemes by some states such as Uttar Pradesh, also cause poor performance. Addressing the above issues, such as giving compensation on time, withdrawing the crop loan waiver scheme, making enrolment mandatory among others, may improve the confidence levels of the farmers to enroll in the scheme.
- The Project Team observed e-NAM, linking local mandis to national markets, intended to improve transparency in the market system are not performing as expected owing to their geographical locations, poor infrastructure, less budget allocation, and less networking opportunities, to create demand and supply. Recently, these schemes have been adversely affected owing to the COVID-19 pandemic.
- The ADs are positively responding to introduced varieties and high value crops especially food crops (paddy, wheat, and maize) and horticulture crops. This is attributable to regular field demonstrations, organizing capacity building training programs, and arranging exposure visits of interested farmers by their local partners like ITC Agri Business, Assam Agribusiness and the Rural Transformation Project (APART), as well as the Agricultural Technology Management Agency (ATMA) under the guidance of the DoA. Recently, black rice and other climate resilient varieties of paddy (*BINA Dhan 11, Bahadur Sub-1, Ranjit Sub-1 and Swarna Sub-1*), dragon fruit and Indian

plum (*Zizipus Mauritiana*) have been introduced in some ADs like Goalpara, owing to high demand and market value.

- From AD surveys and discussions with ADs, some potential for agriculture development has been identified. That includes organic farming as ADs tend to have a large number of livestock. Most ADs also show high potential for meat and milk production .
- Animal vaccination has achieved up to 100% coverage in some ADs, owing to the active involvement of department staff and officials in regularly conducting frequent health camps, awareness programs, and visiting dispensaries and farmers' home when necessary to treat the animals. However, in some areas the achievement is limited owing to their geographical locations, strong belief in the traditional healing system, and lack of transportation systems.
- Artificial insemination program is progressing (up to 100%) in certain areas where awareness among farmers is extensive. However, it is showing average performance in hilly areas where diverse communities are present, for example, in Goalpara and Nandurbar. Organizing district-specific food exhibitions and krishi melas, yearly, through Farmers Produce Organizations (FPOs), Farmers Groups, SHGs and social medias to attract buyers from different places have helped farmers to get additional income and livelihoods.
- Successful farmers are identified, and felicitated yearly to encourage them to get achieve effective production and income.
- Convergence of state schemes, for example seed distribution from state seed corporations, construction of farm ponds, and subsidies for drip irrigations, among others, with central schemes such as MGNREGA, PMKSY, Soil Health Card Schemes are helping farmers to acquire income and secure a livelihood.

4.2.5 Financial inclusion and skill development

- The number of people certified under the Recognition of Prior Learning (RPL) to non-formally skilled workforce The scores of 103 districts are at "0." This indicates that either RPL was not able to get the attention of beneficiaries, or these districts require a proper skill gap study. Awareness camps and events should be organized for getting more youths interested in undertaking skill development programs.
- The percentage of youth certified in short term or long-term training schemes to the number of youths in the district and between 15-29 years - This is a key indicator of skill development as it brings out the employable manpower. There are 59 districts with a score of "0." NSDC and state skill missions are allocating skill development targets to every district in state. "0" value of indicator may be because of ongoing training or dropout batches. Another possible reason is the migration of youths to another district for seeking training and employment.
- Based on the online survey conducted at Chitrakoot (Uttar Pradesh) and Goalpara (Assam), the following was observed:
  - PMKVY is getting implemented in these districts. The actual number of placed candidates after the completion of the training program is small. This influences the performance of schemes in districts. Kaushal Yatra (Skill Fair) are being organized as mandated. Lack of training infrastructure according to the guidelines of the PMKVY is significant.
  - Skill training among the youth for managing self-enterprises under the PMMY or PMEGP should be promoted for the optimal performance of a scheme. Handholding support for preparing a proposal for above schemes and value chain support for running business successfully should be provided.
  - Chitrakoot has opened 32,911 new accounts under the PMJDY, made 18,396 enrolments under the PMSBY, made 4,467 enrolments under the PMJJBY, completed 3,204 registrations under the APY, INR 85.6 million Mudra loan (PMMY), and have linked 79.4% accounts with Aadhar which is low against target of 100%
  - Chitrakoot's skill development indicators indicate that 24.34% of the certified youth got

employed, 0.42% of the youth between 15-29 years got certified under long- or short-term training and 1.76% of the youth got certified under the RPL. This indicates that achievement of training outcome is extremely low, as the minimum placement required by the ministry guideline is 70% of the trained number.

- Goalpara has opened 62,222 new accounts under the PMJDY, made 12,001 enrollments under the PMSBY, made 3157 enrollments under the PMJJBY, completed 1,575 registrations under the APY, INR 111.4 million of Mudra loan (PMMY), and linked 10.4% of the accounts with Aadhar. Goalpara is doing well in other sectors and indicators of ADP but must plan for scoring high and achieving targets in skill development and financial inclusion.
- Goalpara's skill development indicators show that 33.66% of the certified youth got employed and 0.01% of the youth between 15-29 years got certified under long- or short-term training. The above figures indicate that more young people must be covered under skill development programs and more emphasis should be given to getting at least 70% of the trained youth employed for sustainable livelihood.

- The challenges experienced during the implementation of skill development initiatives in ADs are increasing, mainly because of lack of aspiration among the youth to acquire the skill in demand, proper infrastructure, trained manpower, certified trainers, and industry connects. The unavailability of local jobs for the youth also deters the successful implementation of skill initiatives in ADs. Financial inclusion is also facing challenges with perceived notions of beneficiaries for banking transactions. This is mainly because of the lack of awareness of banking services and its benefits. The PMJJBY, PMSBY, PMEGP and other schemes are offering the necessary benefits to beneficiaries.

4.2.6 Basic infrastructure

- Under basic infrastructure, interventions are generally standalone hardware models that are not embedded within a comprehensive local development framework. India has been investing heavily in large infrastructure such as railways, ports, roads, and airports. However, small last-mile infrastructure including the following has not been given sufficient attention: village roads to connect national highways to ensure access to critical socioeconomic facilities such as health, education, government services, and markets. As a result, the full growth potential of large investments has not been achieved. The next phase of the focus on infrastructure should be on rural infrastructure including agriculture and irrigation. It should be a movement similar to the Saemaul (New Village) Movement, which was an inclusive growth strategy for rural development in South Korea in the 1970s with the active participation of communities and local governments (Asian Development Bank, 2012). It may be helpful to develop a district infrastructure master plan linking large infrastructure and markets to maximize forward and backward linkages, strengthen local capacities, and build and maintain inclusive rural infrastructure.
- Success stories in the PMGSY, which include household electricity connection and CSC in Goalpara, have shown that flexibility, freedom, and delegation can enhance creativity and momentum. Flexibility and freedom at the implementation level, including the delegation of power for decision making and streamlining procedures, are important to accelerate achievements. To strengthen the necessary capacities in design, construction, quality assurance, and the management of basic infrastructure, capacity building programs for officials and the local governments are critical.
- Asset management has tended to be neglected, leading to potential slippages. In India, asset creation is done well but asset management is poor particularly in rural areas, leading to premature infrastructure dysfunctions and failures. The system of inventory, operation, and maintenance of assets must be a priority given the significant infrastructure dilapidation rate in rural India.
- Progress is target driven and evaluated on the basis of change and in percentage. Therefore, although targets are achieved, there are deprivation and exclusion.

- Data inconsistency remains a challenge. A clear baseline across indicators is necessary to understand the magnitude of exclusion and strategically adopt the "antyodaya" (last one first) approach to achieve universal coverage. Disaggregated data on SC and ST, women, and other vulnerable groups must be incorporated into the monitoring framework.
- As districts move to the "last mile," the common implementation guidelines and norms may not address the contextual challenges such as remoteness, high transport costs, lack of skilled manpower, and access to raw materials and technology. Instances of this nature include household toilets for high water table and rocky remote areas, housing, and electricity connection. A top-up flexible fund for "last mile connectivity" should be provided, and a district-level technical committee chaired by the DC may be empowered to approve technical and price variations on merit.
- The local governments may also incorporate geo-tagged basic infrastructure in their asset register for O&M using the Union or State Finance Commission grants supplemented by cost recovery, and community oversight and management.
- Prompt trouble shooting is necessary for fast-track implementation. Developing a tool kit for programmatic and policy convergence, and a web-based "knowledge point" to clarify field queries will expedite implementation.

4.3 Good practices and innovations with scale-up potential

During document reviews, AD surveys, and the PoA formulation support, the Project Team collected information on best practices and innovations that have the potential to be replicated elsewhere in India or in future scale-ups. Best practices are identified from both within and outside of India. Within India, close attention was paid to practices from ADs. Those from outside India are mostly from Japan and JICA-related projects in other countries.

From the number of so-called best practices and innovations that the Project Team found, the ones with sufficient information fulfilling most of the prescribed criteria are presented in this chapter. Criteria include that the best practice addresses specific issues and challenges, has brought certain impacts or changes to improve the situation in question, has unique features regarding practices being implemented, is a financing model, encourages partnership with other stakeholders, promotes inclusion of weaker sections of society, has a sustainability mechanism in place, and has potential for replicability.

For international best practices, particular attention was paid to the possibility of adopting such practices in India based on the challenges in the ADs, which were identified through AD surveys.

4.3.1 National programs

Some of the ADs had numerous "best practices"; however, it is not mentioned in this study if they are only in the conceptual stage or were best practices once upon a time, but became widely practiced. In addition, not all the best practices chosen here necessarily fulfill all the criteria, as some are innovative practices, but their real impact needs to be seen soon.

(1) Health and nutrition

a) Telangana Electronic Family Health Record

Outline of the initiative/project

Electronic Health Records (EHRs) are a real-time digital version of patients' records. An EHR is a comprehensive report of an individual's overall health. It helps to track the patient's clinical progress, facilitate improved healthcare decisions, and provide evidence-based care. This is a major step toward ensuring universal access to healthcare services and improving the quality of treatment and healthcare services rendered to the whole population. Thus, technology-based initiatives are an important approach to meet SDG 3, namely "to ensure healthy lives and promote wellbeing for all at all ages."

The health services that a family (and the individual members of the family) receives at various levels in hospitals are captured on different information database systems, and the information on these systems never get integrated at one place to give comprehensive information on the health condition/episodes over time for the individual. While it is important to plan and improve service delivery, it is also important for individuals and their healthcare providers to access relevant information about their medical history along with information on the medical services that have been provided. The EHR is a step towards providing a complete database of medical and health history for each individual in each family.

In February 2019, the Telangana government launched an integrated E-Family Health Record initiative. This initiative addressed one of the biggest challenges, namely the integration of all the individual information databases and family records into a single database based on the family and individual identification numbers along with other details such as residence, phone numbers, e-mail addresses, and the nearest health center.

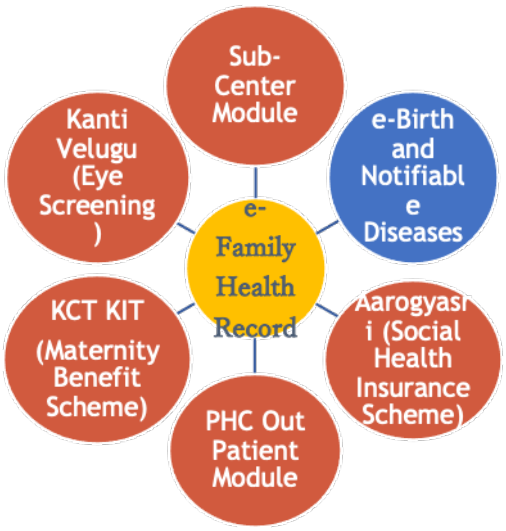
The database was created in the two steps: i) Conducting a "Samagra Kutumba Survey (SKS)," which is a survey of all households in the state with each household given an SKS identification (ID) number and an Aadhar card number used for individual identification; ii) The survey was then digitized. These details form the base data. Then, health-related data were updated from two basic sources in this portal:

1. Monthly village-level data updating by an auxiliary nurse midwife (ANM), on a hand-held tab, (preloaded with village-level households), on details about the registration of the pregnant woman and regular medicine issuance for illnesses such as hypertension and diabetes. This set of information allows one to understand various health issues at the village level and details of the causes of death help one to start preventive and information education communication activities. For example, based on this data, a death audit of tuberculosis cases and awareness and screening activities are planned.
2. Integration of data from other portals: All data available through such sources as PHC outpatient department details, KCR kits,[17] Aarogyasri, Kanti Velugu, Basti Dawakhana, and sub-center records (refer to Figure 4-3) were collated by linking members to enter details under one family ID that then displayed the health status of the family. The data from six different software applications developed for various programs at several points in time are integrated to form an e-family health record.

Outcome of the initiative/project

The Department of Health and Family Welfare has already created 30.9 million records covering 11,567 villages, 5,690 public health facilities, and 2,247 private facilities.

[17] KCR Kit is a maternity benefit scheme for pregnant women to compensate for the wage loss during the maternity period. Aarogyasri: health insurance scheme. Kanti Velugu Scheme: Universal eye screening. Basti Dawakhana: An urban health initiative (urban PHC/SC).



Source: Ministry of Health and Family Welfare (2019)

Figure 4-3 A Simple Depiction of Telangana E Family Health Record

Contextualization for ADs

The future scope includes the following.

- Integrated data from primary, secondary, and tertiary level institutions.
- Integrated data from government as well as private institutions.
- Management Information System reports/dashboards that are created for key functionaries on a real-time basis so that they can be used for effective management.
- The data that are used for planning remedial actions in disease-prone areas such as promotive and preventive activities, disease outbreak monitoring, monitoring of the performance of field functionaries, and assessment of disease burden in a small area. The above details are available any day and to any village.
- Can be disseminatedScalable throughout the country with very user-friendly software. The tablet PC available with ANMs and medical officers can be used for entering and accessing the records at the field level.
  This would be a good complement to the Mother and Child Protection Card (MCPC) that is rolled out in all districts of India.

b) Labor room and quality improvement program

Outline of the initiative/project

According to the National Family Health Survey 3rd round (2005-2006) and 4th round (2015-2016), the percentage of institutional deliveries in India has doubled from 38.7% to 78.9% within one decade (International Institute for Population Sciences, 2017; International Institute for Population Sciences, 2007). This increase in coverage has resulted in a corresponding reduction in maternal and neonatal mortality and stillbirths. However, one of the major negative factors is the inadequacies in the quality of care provided in health facilities. It is estimated that approximately 46% of maternal deaths, over 40% of stillbirths, and 25% of under-five deaths take place on the day of the delivery. Half of the maternal deaths each year can be prevented if higher-quality health care is provided. Quality of care is increasingly recognized as a critical aspect of the unfinished maternal and new-born health agenda, mainly with respect to care around labor and delivery and in the immediate post-natal period. In this respect, on December 11, 2017, the Ministry of Health and Family Welfare launched a program called "LaQshya" (a quality improvement initiative in the labor room and maternity operation theatre, aimed at improving the quality of care for mothers and infants during the intra-partum and immediate post-partum period.

- Standardized protocols have been developed for minimum equipment in the facility, the training level of the delivery service providers, the process of conducting the delivery, protocols for the identification and prognosis of high-risk pregnancy deliveries, the system of record-keeping, and follow-ups.
- Each district facility, namely, district hospital, sub-district hospital, community health centers, primary health centers, and select sub-health centers (normal pregnancies), is visited by a team of surgeons, gynecologists, nurses, and lab technicians for assessment.
- The facilities are scored at the first assessment stage (called baseline scores). Then, interventions are planned to achieve the minimum standards for the hospital facility. After the initial quality certification, the facility is monitored, and certification is extended for three to five years.
- Quality improvement in the labor room and maternity operation theater are assessed through NQAS. Every facility achieving a 70% score on the NQAS is certified as a LaQshya-certified facility. Furthermore, the branding of LaQshya-certified facilities is done based on the NQAS score. Facilities scoring more than 90%, 80%, and 70% are given platinum, gold, and silver badges, respectively.

Outcome of the initiative/project

The types of healthcare facilities that have been identified for the implementation of the LaQshya program include the following: i) government medical college hospitals, ii) District hospitals and equivalent health facilities, and iii) designated FRUs and high caseload for community health centers with over 100 deliveries per month (60 in hilly and desert areas). By July 2019, 2,427 public health facilities across the country were identified for the implementation of the LaQshya program. By January 2020, 184 district and sub-district hospitals received the certification for the maternity OT and labor room (National Health Systems Resource Centre, 2020).

Goalpara District, one of the districts where the Project Team has conducted the AD survey, adopted LaQshya quality accreditation for its facilities, namely the district hospital and the FRUs (refer to photographs in Figure 4-4).

Contextualization for ADs

- This is a critical step toward strengthening the supply side that would result in increased sustained facility service utilization.
- High-quality and clean facilities have a direct impact on increasing institutional deliveries and increasing utilization of pregnancy service and child service.
- Better impact regarding the outcome of delivery, that is, decreased complications during the delivery process and, hence, reduced loss of birth and maternal morbidity or mortality.
- The Japanese experience from its "Quality Improvement of Health Services through 5S-KAIZEN-Total Quality Management Approach" can be used in this initiative for value addition. This experience can contribute to establishing the quality of processes, protocols, and a continuous quality monitoring system, and ensuring the sustenance of quality in each hospital covered through this initiative in India.

Source: Goalpara district (2020)

Figure 4-4 Photographs of the Facilities Certified under LaQshya Quality Standards at Goalpara, Assam

(2) Education

a) Hanging library and BaLA innovation in Goalpara schools of Assam

Outline of the initiative/project

Goalpara is a flood-prone district in Assam, where more than 45% of the population is affected by loss of life and livelihood, and migration every year. Dense forest areas, hilly terrains, undulating landscapes, and riverine tracts (chars) add to the difficulties of the people. Schoolchildren suffer because of a longer closure of schools during floods, insurgencies, and other calamities.

The present District Collector tried to address

Source: Goalpara district (2020)

Figure 4-5 BaLA Intervention in Goalpara District Schools

the sufferings of schoolchildren with many innovative initiatives. One such initiative is the Poshan clubs established in all schools within the district which impact 15KPIs of the ADP. The initiative is a combined effort of the Social Welfare Department, Sarva Shiksha Abhiyan, and Department of Education. The initiative has been widely appreciated and received the Chief Minister's Award. It has been approved by the Ministry of Women and Child Development (MoWCD) of the GoI for replication across all districts of the state.

Outcome of the initiative/project

Poshan Clubs brought awareness in wholistic and healthy lifestyles among children and parents. The clubs helped in implementing various learning innovations in schools. One of the innovations that gained the State's attention was "library campaigns" and "BALAnisation of schools."[18] Poshan Clubs have mobilized communities to take ownership of Aksharam[19] Libraries/Hanging Libraries and Classroom Makeover Campaigns, while Poshan Club members helped in inculcating reading habits among children. This was seen in the quantitative improvements measured and tracked through Assessment Tracker App.

The Education Department has taken initiatives to strengthen learning in schools by creating a print-rich environment in schools. Children observe adults using printed materials and realize that print carries meaning. They explore print and become motivated to try to read and write themselves. A print-rich environment is one in which children interact with many forms of print, including signs, labelled centers, wall stories, word displays, labelled murals, bulletin boards, charts, poems, and other printed materials.

Contextualization for ADs

The district has taken initiative to strengthen learning in schools through this process. Motivating teachers to adopt a print-rich environment and BaLA in all schools of Goalpara makes learning joyful and attainable for the students of the district. Poshan Clubs and members involved in improving the learning environment are good examples of community support, and the initiative has enough potential to be scalable and replicable in other parts of the State and the country.

b) PATHA KI PATHSHALA, Chitrakoot, Uttar Pradesh
(An innovating remedial teaching program for children of dacoit infested areas)

Outline of the initiative/project

Chitrakoot is one of the most remote and cut-off districts in Uttar Pradesh. The district was previously affected by dacoits and hooliganism, which impacted negligence and suppression in young children who required schooling and aspirations to grow.

Under the ADP, the community approach was initiated, which centered around mobilization, convergence, and appreciation. To make education possible for children in the crime-infested blocks, the District Administration, the police department, and local young men and women together initiated the project named 'gyan mandakini.' (Mandakini is a tributary of Alaknanda River which together form auspicious Ganga River)

Source: NITI Aayog Twitter (2019)

Figure 4-6 Volunteers Engaged with Children in Chitrakoot District

Outcome of the initiative/project

To bring about a shift in the perspectives of community members and teachers, educated youth and women working in the self-help groups under the State rural livelihood mission were targeted to come

[18] BaLA stands for "building as learning aid." In BaLA, modification in buildings is used for learning for children. This includes attractive paintings on the wall, using windows, doors, and staircases for math learning.
[19] Aksharam means teaching alphabets to young children.

together and spend two hours in the community teaching language and math, especially for students who have dropped out or were lagging behind in classes. The district approached intermediate colleges, the District Institute of Education and Training, degree colleges, self-help groups, and the youth to join the team.

Convergence has been the major element of this program. The police department gave support by reaching out to remote villages. More than 400 volunteers got involved in 20 villages that had no schools in a 5-km radius. Thirty volunteers from police department supported the volunteers to move in the vulnerable pocket. Women who had some basic education became the role models and supported the school staff in a 45-day remedial teaching program.

Contextualization for ADs

This program provided a good opportunity for local youth to emerge as community leaders. Social media platforms were widely used for connecting the volunteers and showcasing their achievements. Patha ki Pathshala is an example of convergence and may be replicable in other insurgency-affected areas.

c) Digital Education Guarantee Card (Intervention to address dropout rate among migrant workers in Maharashtra)

Outline of the initiative/project

There exist 1 to 1.2 million seasonal migrant workers in around 200 sugar factories in Western Maharashtra, with the season of migration being October to March or April every year in which the workers migrate with their families consisting of an estimated 100,000 to 150,000 children of school-going ages. In addition to lack of records on this vulnerable population and those who suffer from poor living conditions and inferior sanitation, the children often do not enroll in school because of their migratory habits (consequently no records of their school education or grades). The government education department also does not have any system of tracking or providing school enrollment to such children.

The Government of Maharashtra, in partnership with Tata Trusts, has introduced an innovative program where Digital Education Guarantee Cards (DEGC) are issued to children of seasonal migrants. The program identifies, enrolls, and tracks out-of-school migrant children of migratory sugarcane cutters in Pune while issuing them DEGC. Increasing the enrollment of children and provision of school services to the children of the sugarcane cutters in Pune is the main aim of the program.

The DEGC is provided to the children after a household survey of migrant families at the start of each worker season. After enrollment at the nearest government school, the DEGC app provides functionalities such as tracking regular attendance of the children, identification of the reasons for absenteeism, the transfer of progress cards and information from one school to another, and the storage and provision of formal certificates filled with grades on completion of each grade or standard at their base school. The students are provided with both printed and digital copies of the DEGC when they move from a particular school to another.

Besides being a project manager, a psychologist works as a project counsellor. The psychologist helps the children to cope with such factors as frequently changing school environments and making friends. The village mobilizers conduct regular surveys among the migrants and enroll and bring more and more children to school in addition to staying connected with the parents. The DEGC app also has a teacher's version named "*Saral App*," which helps the teachers to track out-of-school children and their progress. In addition to the school services, the project also provides creches to support younger siblings of students, storybooks to read, cycle pool for local commutation, and security guards for the safety of children especially after school, to girl children.

Outcome of the initiative/project

Between 2016 and 2021, more than 9,700 children aged less than 18 years were enrolled in school. In addition, 3,525 (or nearly 73%) out of 4,839 children aged between 6 and 14 were enrolled in school even during the pandemic.

Contextualization for ADs

The program has enough scope for scaling up to the migrant population in both agriculture and industrial or construction workers and their children to access continuous educational services and school enrollment even when they are mobile. At the moment, the Department of Education of the Maharashtra state government is undertaking the project in Pune and plans to replicate it to other industrial cities of the state.

Source: Tata Trusts (2018)

Figure 4-7 DEGC Project Field Team Counselling the Workers and Children with Their School Progress Report

d) Anandshala Program – Adaptation of Project U-Turn in Bihar (School Dropout Prevention Program in Samastipur, Bihar)

Outline of the initiative/project

First designed as a randomized control trial (RCT) program in Bihar (supported by USAID) over a three-year period between 2012 and 2015, the Anandshala program covered around 220 schools in the Samastipur district of Bihar. The program objectives were mainly to understand the reasons for school dropouts and devise interventions and strategies to address this problem. With a focus on students, teachers, and parents, the program also aimed at a more responsive education system and student-friendly environment in schools. Regarding the program design, half of the 220 schools were intervention areas while the rest were control schools. The RCT program was later scaled up to all schools in Samastipur and then expanded to six districts of Jharkhand State in the period between 2015 and 2021.

At the *implementation level*, the program had a three-pronged approach, namely:

- *Early warning system*: A database system to help teachers to have attendance-, performance-, and engagement-related data on each student and assist in identifying the students who are at the risk of dropping out through a shift in their mindset and attitudes, and other response strategies.
- *Enrichment program*: A program to build a conducive learning environment in the school so that the students can express themselves without hesitation and see the school as a safe place. Building student leadership by engaging them in various activities is one of the key learning processes.
- *Parent engagement*: Processes to engage parents in their child's learning process and create space for mutual dialogue (between teachers and parents) and building trust. The activities include open house meetings, regular phone calls and voice messages, and home visits.

At the *systems strengthening level*, the program worked through building capacity and leadership

among the headmasters/headmistresses s and teachers, and creating student leadership. The program also worked with the district level officials to mainly strengthen relationships and understanding of the program concepts, increase the capacity of the village-level volunteers, and promote village- and block-level innovations especially when engaging with the parents of the students.

Outcome of the initiative/project

At the *impact assessment level*, the program established a robust monitoring and evaluation system. The evaluation conducted at the end of the three-year project period revealed significant changes in key indicators in intervention and control schools: 1. Perception of changes in school functioning: Proportion of head teachers and teachers who said there were changes in the school in the last three years and perception of changes in school functioning significantly increased in intervention schools than those in control group schools; 2. Overall attendance rates at the time of evaluation in intervention schools were higher than in control group schools; and 3. Percentages of passing from the 8th class increased from 60.1% in intervention schools (61% in control schools) in 2015-2016 to 83% (81% in control schools) in 2018-2019 (statistically significant at 10% level). Furthermore, 92% of students felt that parental support for them improved, with about 79% of parents reported to have attended the parents-and-teachers meeting (PTM) against about 35% in Bihar, and about 70% of the school managed to organize PTMs once in seven months.

Contextualization for ADs

With the project's sufficient scope and potential for replicability to other remote areas especially in other ADs, the Ministry of Education plans to first document the experiences of the project and then explore ways to replicate it to other districts in the state and elsewhere in the country.

e) Nali Kali – "joyful learning"
(a pathfinder for activity-based learning in India and beyond)

Outline of the initiative/project

The program, much in keeping with the title (meaning "joyful learning"), was conceived as an activity based learning. The Rishi Valley group of schools developed this concept and launched the comprehensive learning package in India in 1995.

Began in 1995 with UNICEF's support, 15 teachers from HD Kote block went to Rishi Valley rural schools to learn more about the Nali Kali initiative. The main features of this program included a warm classroom atmosphere (trusting and friendly), all children of different grades or levels working together, actively participating in learning while the teacher became a friend and a facilitator (sitting down with the students), and a variety of learning materials and tools and not limited to textbook learning. Some of the key components of the program were as follows:

- *Creating a conducive physical environment and materials for students*. This included charts (attendances weather, health) and children's work, use of low blackboards, and use of learning cards.
- *Establishing a learning process*: This included curriculum building (smaller clear milestones, each child knows what to do next, tracking children's own progress, etc.), peer learning, variety of methods (like cards, singing, role play, drama, and games), and children learning at their own pace.
- *Strengthening teacher-student relationship*: This included teacher-motivated skill-building programs, teachers becoming facilitators in class and sitting down with the students, and an inviting atmosphere around the teachers so that students approach them without fear.
- *Creating social equity within and around the school*. This included the democratic participation of students, mentoring student leaders, group work for more intermingling, reduced achievement gaps, and mainstreaming out-of-school children (catching-up-at-own-pace approach).
- *Establishing a transparent and student-friendly assessment system*. This included a continuous built-in learning process, student self-assessment and learning at their own pace, promoting confidence, and achievement charts and individual student tracking systems for students to monitor and work on their progress by themselves.

Outcome of the initiative/project

With the core content being language, mathematics, and environment studies, the curriculum, especially for grades 1-4, was seen as a continuum instead of being compartmentalized into class-wise contents. Many evaluation studies conducted in the program areas, revealed the following:

- Increase in student attendance in Tamil Nadu, Madhya Pradesh, and Jharkhand.
- Retention and transition improved in Tamil Nadu.
- Reduced burden of textbooks, homework assignments, need for tuitions, etc.
- Children enjoy learning through activities.
- Confidence and responsibility increased thru self-attendance, self-assessment, and showcasing talents.
- Children learn more independently, feel motivated and a sense of achievement.

Contextualization for ADs

In partnership with the Government of Karnataka, the Education Department first started this in HD Kote Block of Mysore district, Karnataka State, engaging 15 schools around Rishi Valley in 1995, which grew to about 4,000 schools by 1998. This program was later scaled up in Tamil Nadu in 2001 and to more than 20 states by 2020. The project concept has enough scope to get scaled up to other parts of the country. The new method of assessment must be accepted and integrated as another option within the school curricula and assessment process that are adopted in the central and state departments of school education.

Source: Binay Patnaik (2021)

Figure 4-8 Glimpses from "Nali Kali" School Sessions and Teacher-Student Interactions

(3) Agriculture and water resources

a) Promotion of banana cultivation to increase the income of farmers in Goalpara District, Assam

Outline of the initiative/project

The Goalpara district in Assam is known for its banana cultivation, production, and marketing in India. The banana plantation is an ambitious initiative of the DoA in Goalpara, to assist the SHGs and Farmers Producer Companies (FPCs), as well as individual farmers that are interested in banana cultivation. Bananas are planted by over 800 farmers (about 8–10% of the total farmers in the district) between the months of March and May. As of 2019–2020, they covered an area of about 3,767 ha (3.67 % of the total agricultural land) in the district. Most bananas that were grown belong to the semi-dwarf (Malbhog, Chenichampa, Amritsagar, and G-9), dwarf (Jahaji and Sahebkal), and tall (Bhimkal) varieties.

To promote this initiative, the State government is providing an 85% subsidy to cultivated areas up to 1 ha and a 75% subsidy for areas up to 5 ha to install drip irrigation pipes and fertigation technology in the district. Support is also extended to farmers supplying seedlings through APART and HMNEH.

Outcome of the initiative/project

Banana plantation began to be taken up at a wider scale because of the suitability of local weather and soil, but more importantly, to increase the income of the farmers. The adoption of the drip irrigation system and fertigation technology between 2018 to 2020 has helped save up to 50% of water, increased the plant survival rate up to 90%, reduced 50% of labor costs in weeding and 100% in fertilizer application, reduced the time required for fruit setting and harvesting from 430 days to 400 days, increased the yield by up to 25%, and increased income by up to 25% compared to traditional furrow methods (refer to Table 4-1).

Table 4-1: Comparison of Banana Plantation between the Traditional Furrow Irrigation Method and Drip Irrigation with Fertigation Technology in Goalpara District, Assam

Sl. No	Banana Farming Activity	Unit	Traditional Furrow Irrigation (2016-17)	Drip Irrigation with Fertigation Technology (2018-20)
1	Girth of plant	cm	48-57	64-68
2	Average number of leaves	No/plant	32	34
3	Average fruit setting period	Days	350	322
4	Uniformity in fruit setting		No	Yes
5	Average weight of bunch	Kg	15	25
6	Labor for weeding	Man days	54	20
7	Labor for fertilizer application	Man days	80	Nil
8	Percentage of plants harvested	%	75-80%	90-95%
9	Average harvesting period	Days	430	400
10	Average yield per ha	Kg	16,255	21,674
11	Selling price per bunch	INR	200	350
12	Total expenditure per ha	INR	131,250	50,000
13	Total income per ha	INR	541,850	677,300

Source: District Agriculture Officer (DAO), Goalpara

The Darrangiri Banana market in Goalpara is recognized as one of Asia's largest banana markets. Traders from Nepal, Bhutan, West Bengal, Bihar, and other parts of Assam visit the market to buy and export bananas to their areas. During the peak season, the Darrangiri market sold roughly 300 tonnes of bananas per day, and in the off season they sold around 150–200 tonnes of bananas per day. To attract traders, the market authority organizes banana *melas* during the festival season, especially in Dussehra, Diwali, and Chhath Pooja, in the district. Nearly 20% of the female farmers in Goalpara are involved in banana farming, which has given them better prospects regarding their income and livelihood. Moreover, many value-added products such as chips, cakes, bags, caps, disposable plates, and wrapping materials are developed from banana fruits, flowers, stems, and leaves. The DoA and APART are organizing many training programs on micro irrigation, fertigation, and other marketing strategies to scale up and improve the income of the district's farmers.

Banana plantation with the traditional furrow method

Drip irrigation with fertigation technology

Uniform robust growth of plant with drip irrigation

Fruit bunch grown with drip irrigation

Source: DAO, Goalpara

Figure 4-9 Banana Cultivation in Goalpara

Contextualization for ADs

As the initiative shows a credible outcome in Goalpara, it can help increase the income of farmers in other ADs where local climate conditions are similar to the one of Goalpara. Thus, the provision of similar government benefits such as subsidies to micro-irrigation systems and distribution of seedlings may be necessary. In addition, it may be worthwhile to promote a similar marketing system and agronomic practices at the local level.

(4) Financial Inclusion and Skill Development

a) PayPoint India Private Limited - Delivering Financial Services to the last mile

Outline of the initiative/project

PayPoint has played an important role in India's financial inclusion since 2008. More than 120 service providers reach out to their customers through PayPoint's retail network of more than 64,000 large and small stores. These stores work as a single digital window and provide comprehensive services to customers in areas such as banking, payments, wallets, telecom, travel, and assisted e-commerce. The company now focuses on financial services. Over 3.2 million accounts have been opened and serviced exclusively by PayPoint. The company also manages over 28,000 micro ATMs and operates the Pre-Paid Wallet under the Reserve Bank of India's Payment and Settlement Act.

Through its network of service operators, PayPoint also offers SBI Kiosk, Domestic Money Transfer, Aadhaar Banking System, Mobile ATM, Wallet Payment, Mobile Recharge, DTH Recharge, Bharat Bill

Payment, Amazon Store, Insurance, Flight Booking, Bus Booking, Pancard and much more to increase revenues for entrepreneurs across India.

Outcome of the initiative/project

- The COVID-19 pandemic boosted PayPoint's reach to build deeper inroads for its financial services.
- The company responded to the lockdown by helping GoI disburse the COVID subsidies to over 12.7 million beneficiaries in the first 100 days.
- PayPoint has contributed to the Indian economy by providing micropayments.
- Online services by PayPoint helped entrepreneurs sustain their livelihoods even in the hard times of the pandemic.

Contextualization for ADs

Thousands of retailers became PayPoint franchisees as their primary business. Many others use it to attract more customers and increase the sale of their other businesses. As PayPoint services are dispensed digitally over the Internet, entrepreneurs across India that use the services do not need any space, storage, inventory, or stock. With just one device and table space, a business can be started. Thus, this can be a scalable business model for youths of ADs and a source for providing various e-governance services by GoI and other organizations.

b) Samsung Technical Schools – under the CSR Initiative of Samsung India

Outline of the initiative/project

Samsung India Electronics Private Limited, as part of its CSR initiatives, is empowering India's youth with education through technology and has instituted Samsung Technical Schools.

There are 20 Samsung Technical Schools across India. Ten schools are run in cooperation between Samsung India and the Ministry of Micro, Small & Medium Enterprises. The other 10 schools are at ITIs in partnership with the State Governments of Delhi, Bihar, Kerala, Rajasthan, and Bengal. Samsung appoints its authorized and trained trainers to conduct courses at these schools to provide specialized training in the technology sector. It also provides all the tools, modern test equipment, and other consumable materials required for training and skill development of the students.

Outcome of the initiative/project

The students are provided with the opportunity to learn on the latest mobile phones, audio visual and home appliance products. Training covers areas such as repair, troubleshooting, and installation. After the training, the students receive a month-long on-the-job training at Samsung Service Centers that leads them to take up jobs as technicians or start their own service center at a remote location.

Contextualization for ADs

The Samsung Technical Schools are located in major towns of the states mentioned above. Youths from any area interested in getting trained in digital technologies can connect with the schools for selecting a course of interest. (Refer to photographs in Figure 4-10).

Source: Samsung (no date)

Figure 4-10 Samsung Technical School

(5) Basic infrastructure

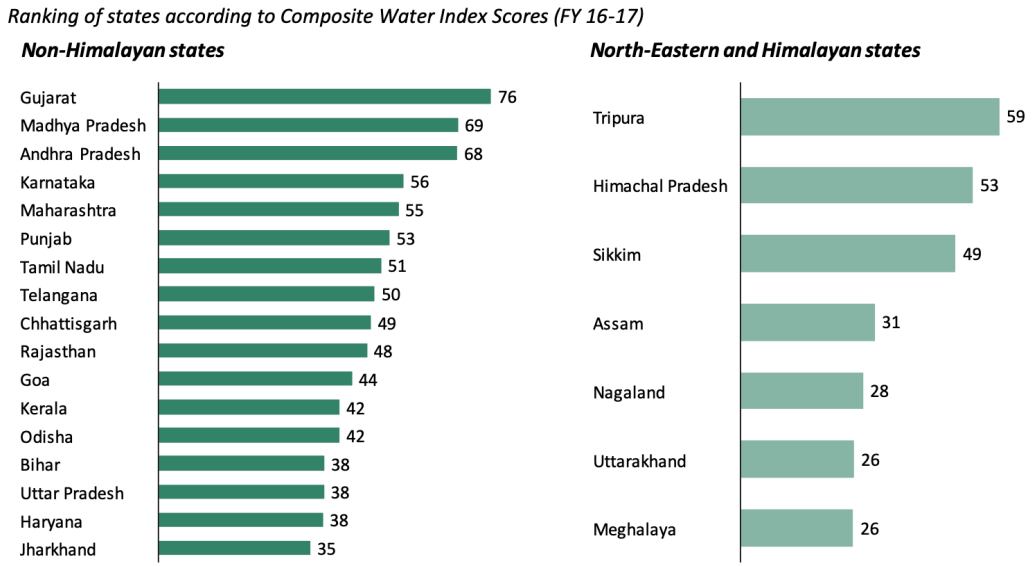
a) Measuring progress in water management: Composite Water Management Index (CWMI)

Outline of the initiative/project

India is severely water-stressed. The impact of climate change coupled with challenges of water governance is making the country increasingly vulnerable. It is estimated that over 600 million Indians face high to extreme water stress and about 200,000 people die every year because of inadequate access to safe water (NITI Aayog, 2018). Although water is a state subject, the GoI is influencing water governance and management by announcing water policies, national flagship programs, and part financing sector investments. To improve water management across India, NITI Aayog has developed the Composite Water Management Index (CWMI) to: (1) establish a clear baseline and benchmark for state-level performance on key water indicators; (2) uncover and explain how states have progressed on water issues over time, including identifying high-performers and under-performers, thereby inculcating a culture of constructive competition among states; and (3) identify areas for deeper engagement and investment. The CWMI is the comprehensive collection of nationwide water data in India despite the non-availability of reliable data at the disaggregated level. The report is a great initiative to create an index that can measure progress made in managing water resources by different states.

Outcome of the initiative/project

Water Index scores vary widely across states as can be seen in Figure 4-11. Most states have achieved a score below 50% and could significantly improve their water resource management practices.



Source: NITI Aayog (2018)

Figure 4-11 Ranking of States According to Composite Water Index Scores (FY 2016-17)

b) Making the Roads Green: in Goalpara, the AD in Assam, by using green technologies for construction of roads, reducing dependency on natural resources, improving resilience, and bringing down the cost of construction

Outline of the initiative/project

As the Goalpara district in Assam is prone to flooding, the sustainability of all-weather rural roads is a real challenge. The depletion of local natural resources and the closure of stone quarries resulted in a shortage of materials for road construction, and, therefore, hampered progress. To overcome this challenge, the district adopted green technologies for construction. By using waste plastic in surfacing, the district has brought down the cost of construction and road maintenance, leading to economic benefits and community resilience. Along with using recycled plastic technology, the initiative made use of green technologies such as cell-filled concrete technology, geogrid technology, interlocking concrete pavement blocks, and cold mix technology.

Outcome of the initiative/project

The use of green technologies has reduced environment pollution, and is expected to reduce the cost of construction.

Contextualization for ADs

This sustainable and environmental-friendly model can be replicated in other ADs, particularly flood-prone areas. The technology would be effective in cutting the cost of construction and road maintenance.

4.3.2 JICA-supported and international programs and projects

Focusing on the Japan–India partnership, the best practices from Japan and JICA-supported programs and projects in and out of India were considered. As this exercise was taken up prior to the SDGs forum on health and nutrition, those best practices are presented here. Considering that economic, social, and cultural conditions are vastly different in Japan and India, possibilities for contextualizing each of Japan's or JICA-supported best practices are also included.

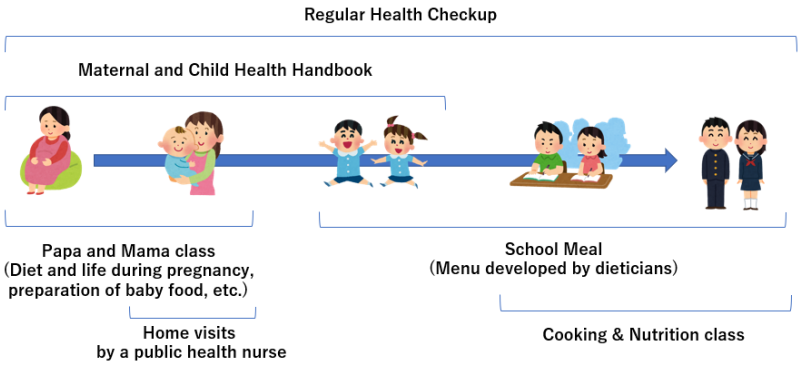
(1) Health and nutrition

a) Holistic approach to mother and child health

Outline of the initiative

Japan takes a holistic approach to ensuring the health of mothers and children by combining several educational mechanisms and health checkups, from pregnancy till the child reaches high school. The local government provides information on maternal and child health and nutrition through the Maternal and Child Health (MCH) Handbook, "papa and mama class," school meal, and cooking and nutrition class in school. The targets of this holistic approach are not only mothers and girls but also fathers and boys. There are also recommended regular health checkups by doctors to ensure a healthy lifestyle during the period.

Outcome of the initiative



- The holistic approach has helped bring the maternal mortality ratio (MMR) and infant mortality ratio (IMR) down.
- All pregnant women, caregivers, and children have access to every service offered and can learn about maternal and child health and nutrition.

Figure 4-12 Holistic Approach in Japan

Contextualization for India/ADs

<u>At the state/national level</u>

India needs an educational mechanism for maternal and child health and nutrition that is developed holistically. ANC and PNC are insufficient for providing support for maternal and child health. For self-learning and monitoring purposes, the state and national governments can review the current approach while focusing on health education.

<u>At the district level</u>

Based on this holistic approach, ADs can prioritize activities on an annual basis. School meals and menus developed by dieticians, and informative maternal and child health handbooks and their optimal usage are the priority.

b) School lunch in Japan and Vietnam

Outline of the initiative in Japan

There are two aspects of school lunches in Japan.

<u>Providing nourishing meals</u>

- A dietitian develops a monthly menu. Labor costs are borne by the local government and material costs by parents.

<u>Education on balanced diet, nutrition, meal arrangement, table manners, food culture, cleaning, and appreciation for cooks and food producers</u>

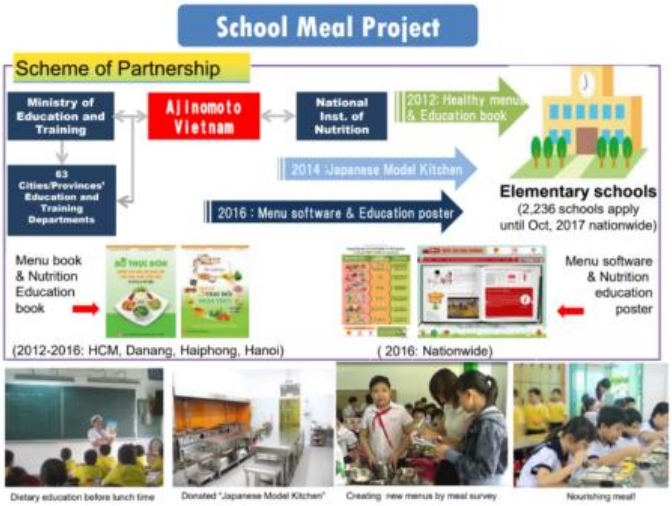
- A dietician provides dietary education and food culture information.
- During the lunch period, students serve themselves wearing clean white clothes and hats. They thus learn about hygiene and cooperation with each other.

Outline of the project in Vietnam

A problem regarding school meals in Vietnam was that the menu had been developed without considering the nutritional aspect, and variety was limited. To address this, the Ajinomoto Foundation in Japan started the "School Meal Project" in 2012, which aimed to improve children's health by providing school meals and support parent/child behavior changes through dietary education (Ajinomoto Foundation, 2020).

Project activities

- A menu for eight weeks was developed based on the food culture in Vietnam's four geographical areas.
- The balanced meal menu was certified by the National Institute of Nutrition.
- Instead of the usual menu book, a software application was developed—this application automatically calculates nutrition and proposes a lunch menu based on the available ingredients.
- Dietary education materials were also developed, designed for use by teachers during the lunch period, to explain the nutritional value and individual benefits of each food item, in just three minutes.



Source: Ajinomoto Foundation (2020)

Figure 4-13 Outline of School Meal Project in Vietnam

Outcome of the projects in Japan and Vietnam

In Japan

- The nutritional status of children in Japan has improved.
- Children learn about many new things through the school lunch, such as a balanced diet, nutrition, manners, local food culture, and cooperation with their peers.
- The provision of school lunches has promoted the local agricultural industry.

In Vietnam

- The Government of Vietnam has officially announced and recommended the use of menu book and software applications in schools providing meals.
- Children learn about food and nutrition at school and share this knowledge with their parents at home. This then becomes a catalyst for advancing parents' knowledge and triggering behavior change in them.
- Positive feedback from schoolteachers, children, and parents on the nutrition and variety in menus has increased after the project.

Contextualization for India/ADs

For the many young girls in ADs expected to bear a child in the future, a nourishing meal at school is key for having a healthy baby later—malnourished pregnant women are more likely to give birth to underweight babies. School meals can break this negative cycle.

At the state/national level

- The state/national government can develop a system whereby registered dieticians and nutritionists contribute to communities, especially in schools and hospitals. To ensure the quality of the school lunch menu and provide appropriate dietary education to children, dieticians and nutritionists should ideally be certified by the government or a competent authority.

At the district level

- Based on the food and diet culture, ADs can recruit dieticians or nutritionists to develop school lunch menus for several weeks, using locally available ingredients. School lunch preparation should be based on the quantity and quality of the available foods.
- The dieticians and nutritionists can also visit each school and provide dietary education before the lunch period. The students can then share their knowledge of nutrition with their family members.
- ADs can work with NGOs or philanthropic foundations such as Akshaya Patra that currently have sufficient facilities to prepare and provide school lunches. ADs can develop the menu, while the NGOs and foundations can prepare and deliver the lunches.

c) Capacity building and allocation of registered dietitians and nutritionists nationwide

Outline of the initiative

In 1924, a school of nutrition was established to train dieticians, and in 1947, the Dieticians Act was enacted. Currently, Japan has two types of professionals in this field: registered dieticians and general nutritionists.

Table 4-1 Differences between Registered Dietician and Nutritionist in Japan

Type	**Registered Dietician**	**Nutritionist**
	Certified by the Minister of Health	Certified by prefectural governor
Working Place	Facilities that require special nutritional guidance and meal arrangements • Hospitals that provide advanced medical care • A catering facility that requires medical nutritional arrangement, etc.	General facilities that require nutritional guidance and meal arrangements • Hospital • Company • School • Elderly care home, etc.
Requirements for license	Course on nutrition at training institutions such as universities	
	To pass the National Exam for Dietician	-

Source: Ministry of Health, Labour and Welfare of Japan (2019)

Outcome of the initiative

- Balanced meals are available at many locations, especially schools and hospitals.
- Nutritionists develop monthly school lunch menus by taking calories, nutrition, volume, seasonal vegetables, and the budget into consideration.
- Children learn about a balanced diet and nutrition from the nutritionist at school, thus promoting behavior changes among them and their families.
- Registered dieticians and nutritionists are involved in the policymaking process at the government level.

Project in Vietnam

Based on Japan's experience, the Ajinomoto Foundation started the Vietnam Nutrition System Establishment Project in 2011. The project aim was to improve people's knowledge of nutrition by fostering professional dieticians and nutritionists, and thus contributing to tackling malnutrition in Vietnam. With Japan's support, a nutrition department was established at Hanoi University. In 2015, a job code was developed for dieticians; then, in 2017, 43 students were certified as dieticians. Now, nine universities have a nutrition department to provide education to aspiring nutritionists.

Contextualization for India/ADs

At the state/national level

- A system that registered dieticians and nutritionists for contributing to communities, especially in schools and hospitals, can be developed.
- An educational system can be established for registered dieticians.

At the district level

- Under the ADP fund, ADs can recruit dieticians and develop menus that provide balanced meals in schools using locally available ingredients. Dieticians can also contribute to improve students' knowledge of nutrition.

d) Maternal and Child Health Handbook

Outline of the initiative

MCH Handbook

The MCH Handbook is an integrated, home-based record that covers all stages of maternal, newborn, and child health, from ANC and delivery to PNC, child vaccinations, and child growth monitoring. The first Handbook was compiled in 1942 in Japan to promote healthy pregnancy and delivery (JICA, 2016).

Revision of the MCH Handbook

The Handbook is revised every 10 years to enable it to address the evolving key MCH agenda. However, its basic concept and structure remain unchanged: (i) standardized and user-friendly MCH data recording; (ii) guidance on maternal and child health; (iii) the minimum number of pages, with handy tools such as mobile health records; and (iv) a timely and reliable source of information on each child to prevent infant mortality.

The wording of the text in the Handbook has become increasingly user-friendly over the course of the series of revisions—until the 1970s, the wording was quite assertive or imperative, with limited consideration for clients' privacy and laypeople's knowledge; in the 1980s, it became more user-friendly to enable the Handbook to serve as a psychosocially supportive tool as well.

Since 1991, the municipal governments (which had been the prefectural governments) have been responsible for publishing and distributing the Handbook, whose contents fall into two categories: (i) those nationally defined or regulated through a series of MCH Acts and (ii) those locally defined or recommended by municipal governments (JICA, 2017a).

Structure of the MCH Handbook

The Handbook is divided into four parts: (i) basic information; (ii) during pregnancy; (iii) during and right after delivery, as well as the newborn period; and (iv) the infancy period. Each part is further split into two sections: (i) recording and (ii) guidance. Non-MCH related values can be added to the Handbook (e.g., birth certificates) (JICA, 2017).

Outcome of the initiative

Decrease in IMR and MMR

The Handbook has contributed to a decrease in the IMR and MMR. In 1942, the IMR and MMR were quite high—86.2 and 196.9 respectively; both, however, gradually decreased over the decades, coming down to 2.2 and 5.0 respectively by 2017.

An educational behavior change and self-monitoring tool

The Handbook is an appropriate tool for mothers and caregivers as it covers a wide range of essential information (e.g., nutrition for pregnant women and infants, breastfeeding, supplementary food recipes, the danger signs during pregnancy, childhood illnesses, and child vaccination schedules). Through this, it could encourage mothers and caregivers to adopt appropriate health-seeking behaviors and self-monitoring.

Increasing communication between health workers and mothers
A study found that the Handbook could serve as an effective interface between health workers and pregnant women/mothers. It is expected to fill the current communication gap.

Contextualization for India/ADs
Mother and Child Protection Card in India
The Mother and Child Protection Card (MCPC) was introduced in April 2010. However, a study found that the data recorded in MCPCs have not been consistent, but rather sporadic (JICA, Bag S, 2017); it was reported that while certain types of data (e.g., ANC) were adequately recorded, others were not (e.g., PNC) (JICA, Bag S, 2017b).
At the state/national level
Based on the context and situation in each district, content can be added (e.g., recipes for supplementary nutrition, or baby food made with locally sourced produce and hospital information).

e) Kitchen car: Education on balanced diet in communities

Outline of the initiative
After World War II, Japan faced the problem of undernutrition. Activities implemented over the last 70 years to address it are classified thus: 1) community-based nutrition activities, 2) capacity building of dieticians, and 3) national health and nutrition surveys that monitor and evaluate the nutritional status.
Between 1945 and 1965, operating a kitchen car was one of the community activities that the Government of Japan promoted. The kitchen car was a small bus, equipped with cooking equipment and materials, that travelled to remote areas to conduct cooking demonstrations for and provide nutrition guidance to people; this helped enhance their knowledge of nutrition and, consequently, contributed to an improved nutritional status. A nutritionist was assigned to a local health center and driven to the areas that were his or her responsibility. Generally, it took one hour to demonstrate the preparation of several dishes. The nutritionist would propose several new recipes based on the area's food culture with the aim of sharing balanced meals using locally available ingredients (Nomura, 2017).

Outcome of the initiative
People learned how to cook balanced meals using limited ingredients.

Contextualization for India/ADs
At the district level
A private company involved in agriculture or food could implement this idea as part of its CSR policy, employing nutritionists and drivers. Thereafter, a kitchen car or community-based cooking class that uses locally sourced produce could be held. This may serve to eradicate undernutrition by ensuring that mothers and caregivers are provided sufficient knowledge of supplementary foods and a balanced diet.

f) Nutrition improvement through agriculture project

Outline of the initiative
Nutritional improvement is part of the JICA-funded Himachal Pradesh Crop Diversification Promotion Project. Along with infrastructure development and support for farmers and farmer organizations, the project promotes diversification of crops, particularly vegetables.

To inculcate the cultivation and consumption of iron-rich green leafy vegetables, the project raised awareness among residents, predominantly women, on the nutritional value and health benefits of Swiss chard, amaranth, and kale, among others. Because most of the local farming households were not familiar with these vegetables, agricultural extension officers conducted cooking and processing training using these. How to grow these vegetables in kitchen gardens was also demonstrated. Furthermore, extension materials were prepared for trainers and training participants.

Under the project, a page "Healthy! Tasty! Recipes"—was also created on the Cookpad website; it contains recipes beneficial for addressing several issues, including anemia, hypertension, and obesity. Cooking competitions featuring the vegetables introduced as part of the project were held, as were online joint sessions for geographically varied target sites, to facilitate the exchange of opinions on the use and benefits of these vegetables (https://cookpad.com/in/users/19505633).

Outcome of the initiative

Beneficiary farmers are gradually adopting cooking and processing methods that were introduced under the project, and the consumption frequency of the selected vegetables has increased. Some farmers are using the nutritional information they have acquired through training to boost the sale of vegetables.

(2) School sanitation

a) Importance of discharge of feces

Outline of the initiative

Defecation is a normal, as well as crucial, human process. Thus, it is necessary to change the mindset that toilets are unclean and discharge of urine and feces embarrassing, and recognize it as a matter of course. The school toilet is a place that can be used to drive home this point. It is also important to have the perspective that excretion is part of the education on health and nutrition. In Japan, excretion is part of the dietary education, called "SHOKUIKU." Dance with music and physical activity are used to help children become comfortable with defecation.

Outcome of the initiative

Children learn the importance of excretion and recognize it as a matter of course.

Contextualization for India/ADs

Now, the GoI plans to incorporate dietary education in the school curriculum. It is also recommended that such programs be included in the curriculum in ADs.

"What is the source of poop?"

"How does the food you eat pass through your body and become poop?"

"Poop de Samba" stimulates the intestines

Monitoring of feces
"Poop clinic by yourself"

Source: Prevention of Adult Disease Association (2021)

Figure 4-14 Learning the Importance of Defecation at Primary School

b) Departure from the black image of toilets ("dark, dirty, broken, smelly, scary")

Outline of the initiative

In the 1990s, the image of school toilets in Japan was not good—both students and teachers viewed them as dark, dirty, smelly, scary, and sometimes broken places. However, this perception has changed over the last 20–30 years following efforts by the government and the organizations and third parties. Some of the initiatives implemented are shown below.

- To develop a sense of ownership of the toilets among students and teachers (please see details in section c))
  - Listening to the voices and needs of students and teachers, and involving them in the toilets' renovation process—situation analysis was conducted through a questionnaire, which was distributed to 30,000 schools.
  - Raising awareness on the importance of feces through games and dance
- To work with a third party (*Gakkou no toire kenkyu kai* [Research Society on School Toilets]), the Ministry of Education, local governments, and the Japanese Society of Pediatric Surgeons
- To allocate operation and maintenance (O&M) funds from the national budget

Source: Research Society on School Toilets (2021)

Figure 4-15 School Toilets with Unfavorable Images

Outcome of the initiative

The toilets of the government-run schools have been renovated or maintained in a sanitary manner so that children no longer have the black image of toilets. Sometimes toilets are meeting points for children.

Contextualization for India/ADs

Potential to scale up to the other ADs is high. Many ADs tend to construct toilets without a sense of

child-friendly toilet or sustainability because they want to achieve the ADP indicators in a short period. However, children would not use a toilet if it were dark, dirty, broken, smelly, or scary. It is recommended for ADs to allocate more budget for the construction or renovation of the school toilets per school based on the idea of child-friendly and sustainable toilets.

c) "Our toilets by ourselves, for ourselves": Development of ownership of school toilets through participatory toilet designing with students

Outline of the initiative

Efforts of the Education Department, Oumihachiman city, Shiga prefecture

The initial image of school toilets in Oumihachiman city was not good, as mentioned above, so much so that students did not want to go to the toilets. Considering that not going to toilet is bad for health and that toilets with such an image can become a place of bullying, the education department started renovating the school toilets in 2011 by engaging the students—the government started by listening to them to build the toilets they needed.

During the planning stage of the renovation, the department held workshops on design in primary schools with the cooperation of graduate students—through these, not only were students' opinions reflected in the design, but they themselves designed some part of the toilets; the department's hope was that this would help them feel attached to the toilets and thus take good care of them.

Outcome of the initiative

After the renovation, positive changes were observed. Some students volunteered to clean the toilets themselves, while others said, "Earlier, I had to put up with going to the toilet, but now, I willingly go often" and "It is fun to go to the toilet." The students cleaned the toilets without complaint.

Analyzing the questionnaire

Planning the toilet design

Opening ceremony

Source: Research Society on School Toilets (2019a)

Figure 4-16 Participatory Toilet Designing

Contextualization for India/ADs

Potential to scale up to the other ADs is high. Through the AD surveys and AD proposal formulation, the Project team found that school toilets are constructed without any needs assessment and opinions of women and girls. It is crucial to conduct a needs assessment of each school and reflect voices of women such as district officers, teachers, and students. This would help develop the ownership of toilets among students and teachers, and construct child-friendly toilets.

d) Daily cleaning practice by students

Outline of the initiative

Students in Japan clean their classrooms, common spaces, and toilets every day after lunch for around 20 minutes. Cleaning the school is part of their school education—they view it as part of their school life and culture. Teachers educate them about keeping the areas they use clean.

Outcome of the initiative

Students not only learn how to sweep the floor, wipe desks and windows, and clean toilets and other areas but also how to divide the roles equally and build teamwork.

Source: India Today (2019)

Figure 4-17 Daily Cleaning by Students

Contextualization for India/ADs

Teachers also need to keep in mind that toilet cleaning is not a punishment or a task of students from the lower castes. The ADs and schools must divide roles regarding cleaning areas equally and provide enough water and instruments.

e) Some tools for cleaning toilets at school

Outline of the initiative

O&M is critical for the sustainable use of toilets. Schools in Japan have developed and introduced some simple tools at the ground level—for example, posters showing how to clean toilets and a list of cleaning equipment, and instruments for appropriately dividing roles regarding cleaning areas. Games have also been developed for teaching the importance of O&M and the use of toilets.

Cleaning procedures

List of cleaning equipment

Tool for role division

Source: Research Society on School Toilets (2019b)

Figure 4-18 Examples of Tools for Cleaning Toilets at School

Outcome of the initiative

Toilet cleaning is done in a systematic way every day by students.

Contextualization for India/ADs

Visualization by using simple tools is effective and incurs no cost. Districts or schools can develop those posters and implement simple tools for role division.

f) Toilet training for pre-school children

Outline of the initiative

Toilets have been constructed in the schools and anganwadi centers (AWCs) in many ADs in India—one of the proposals submitted by Baksa district had been the construction of toilets at AWCs; however, in many cases, programs focusing on O&M and behavior change are missing. Figure 4-19 shows toilet training at a kindergarten in Japan. Preschool children, in particular, tend to feel afraid of going to and using the toilet by themselves. To boost their confidence and familiarize them with the facility, they need adult support and some practical experience, as shown in Figure 4-19.

Source: Kindergarten in Hattaso, Japan (2021)

Figure 4-19 Toilet Training at Kindergarten

Outcome of the initiative

Pre-school children can learn how to use toilets and gain confidence to use them.

Contextualization for India/ADs

This type of a behavior change program can be added to the activities conducted at AWCs. It will not be costly because the needed materials are just pens and papers.

(3) Agriculture and water resources

a) Smallholder Horticulture Empowerment and Promotion (SHEP) Approach

Outline of the initiative

SHEP is an agriculture extension approach first developed in Kenya through a JICA technical cooperation project. Since 2006, it has transformed farmers' mindset from "grow and sell" to "grow to sell." Recently, farming has been promoted by many projects and initiatives as a business. SHEP adds on to this by developing the capacity and morale of farmers. As the asymmetric flow of market information is prevalent, SHEP encourages farmers to visit and survey the market and interact with the players in the market. Furthermore, by employing market-oriented agriculture practices, it has been successful in doubling small and marginal farmers' agriculture income.

The SHEP approach comprises four main steps, as shown below.

4 Steps	Activities
1. Selection of target beneficiaries beneficiaries and sharing the vision/goal.	Sensitization Workshop Selection of Target District Selection of Target Beneficiaries
2. Awareness of current situation and new information	Participatory Baseline Survey Stakeholder Forum Market Survey
3. Decision making	Crop Selection Action Plan Making
4. Provision of technical solution	In-field trainings after TOT

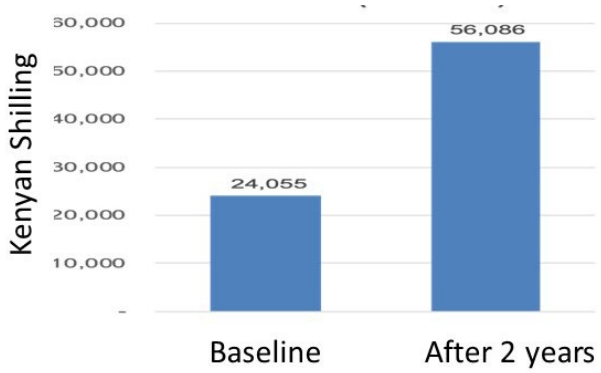
Source: JICA (2021)

Figure 4-20 Four Steps of SHEP Approach

Activities under each step are designed to boost farmers' motivation and help them see agriculture as a business. Today, the SHEP approach has been introduced in other African countries as well as in South Asia.

Outcome of the initiative

The SHEP approach has proven successful in African countries, resulting in increased income for farmers. As shown below, the income from horticulture crops has more than doubled in countries such as Kenya .



Source: JICA

Figure 4-21 Change in horticulture income due to SHEP intervention

Increased income from agriculture has enabled many small and marginal farmers to spend money on improving their living conditions. In some cases, the income increase ratio has been much greater for female farmers than for their male counterparts. Moreover, it has been reported that, through SHEP projects, the relationship between the spouses in farm households has been transformed. As both men and women are given opportunities for training and capacity development, the husband and the wife have become partners rather than the husband managing the farm while the wife is only considered to be labor required for farming.

Contextualization for India/ADs

In India, many farmers are small and marginal ones. One of their main challenges is access to markets and market information. SHEP addresses these concerns. Without a large investment, the approach can be applied in some of the existing schemes and support systems.

More and more farmers in India are also getting aware of some crops being more profitable than others. However, it is important for them to understand not only the cultivation method, but where the demand comes from and whether they have a ready market for such crops in their areas.

b) Controlled temperature warehouse: low-cost Japanese technology

Outline of the initiative

Kawasaki Rikuso Transportation Co., Ltd. built a warehouse in Singur, West Bengal, which it has been operating. It caters to the local farmers, providing controlled temperature storage and value addition through sorting and grading. It has also been helping to mitigate vegetable wastage while providing enhanced income opportunities to the farmers.

The warehouse was built through JICA's public-private partnership scheme. It is powered by solar energy and, giving due consideration to Indian conditions, the company has adopted medium, instead of advanced, technology. By keeping the storage temperature between 18℃ and 22℃, it can extend the life of perishable vegetables by two to three days. Traditional Japanese plaster, which can provide protection against humidity and mold better than ordinary plaster, has been used on the warehouse's walls. Wooden grilles have also been installed on the inside of the walls to protect the consignment from

damage as well as direct contact with the wall, which would increase the chance of mold due to humidity.

The warehouse employs local women for the sorting and grading. The sorted vegetables are wrapped in banana leaf instead of plastic and sold in supermarkets in Kolkata.

Outcome of the initiative

The controlled temperature warehouses were constructed in more than 200 places in West Bengal State. This has helped improve the income of farmers and prolong the freshness of vegetables.

Contextualization for India/ADs

Even in places that have no electricity, the warehouse can be operated with a power generator. Thus, this is an innovative solution that can be implemented even in remote areas such as ADs.

c) One Village One Product (OVOP)

Outline of the initiative

OVOP is a concept for local economic development first initiated in Oita, Japan. It identifies local resources for branding, and by value addition or through innovation, it taps the opportunities for promoting and marketing local products and services.

JICA has provided assistance in OVOP under various schemes across different countries. The main interventions have been in the following areas:

- Local brand sensitization
- Training for business administration and accounting
- Training for quality control and product development
- Training for packaging and product design
- Training for tourism
- Marketing support and promotion

Outcome of the initiative

Economic benefits on the basis of business turnover and income for the stakeholders have been the most obvious impact of OVOP. However, it is not necessarily easy to take advantage of local resources and turn them into a business opportunity to recognize the uniqueness and importance of local products as well as human resources in a given region.

Contextualization for India/ADs

Given its vast and diverse geo-climatic conditions, India is rich in culture as well as agriculture products that are available across the country. Some places are known for specific local commodities such as *tasar* silk in Bhagalpur or pineapples in Tripura. However, many regions also struggle to discover the charms and opportunities that are available to them using tangible or intangible locally available resources. The OVOP concept can help develop new products and services, particularly in the areas that has not seen the development of industries or other economic opportunities.

As many institutions have been working in local product development and promotion using locally available or unique resources, such as Dastkar, the OVOP approach can help existing efforts expand to other products and services, and promote certain regions and localities with specific products.

Furthermore, many start-up companies today are committed to working for the social and economic development of a particular region or community. These start-ups can be also asked to become a promoter for the OVOP approach.

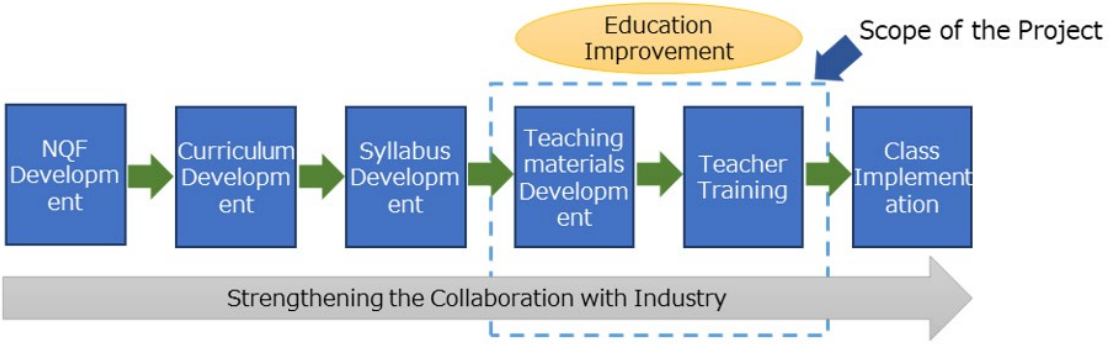
(4) Skill Development and Financial Inclusion

a) Technical Education for Industrial Human Resources Development

Outline of the initiative

In 2019, JICA started the Project for Improvement of Technical Education for Industrial Human Resources Development in Bangladesh, targeting three polytechnic institutes. Technical education in Bangladesh faced the challenge of being unable to train human resources with the basic and practical skills required by the country's industries. In addition, at the root of this issue was insufficient practical training at educational institutions, and teachers lacked the specialized knowledge and required teaching techniques. Other issues were a lack of knowledge of the country's industrial human resource needs and a lack of job placement and career counselling.

The project focuses on the development of teaching materials such as teachers' manuals and teacher training. The project also aims to improve the teachers' ability to conduct practical courses. In addition, because close cooperation with industry is the key to improving technical education, the project is developing teaching materials and conducts teacher training in close cooperation with industry. This educational improvement through industry-academia cooperation aims to develop human resources that meet the needs of industry by improving the quantity and quality of students who will find jobs in industry. The chart below shows the scope of the project.



Source: JICA, IC Net Limited (2019)

Figure 4-22 Scope of the Project

Outcome of the initiative

As of October 2021, the project is still ongoing. The expected outcome is an improvement in the employment rate of job applicants and student satisfaction with pilot polytechnic institutes' education are expected.

Contextualization for India/ADs

In India, many skill development training courses and curricula are beneficial to ADs, but those curricula can be strengthened for improving teachers' ability to conduct practical courses. Moreover, collaboration with industry can equip trainees with the skills required by industry and provide them with better employment opportunities.

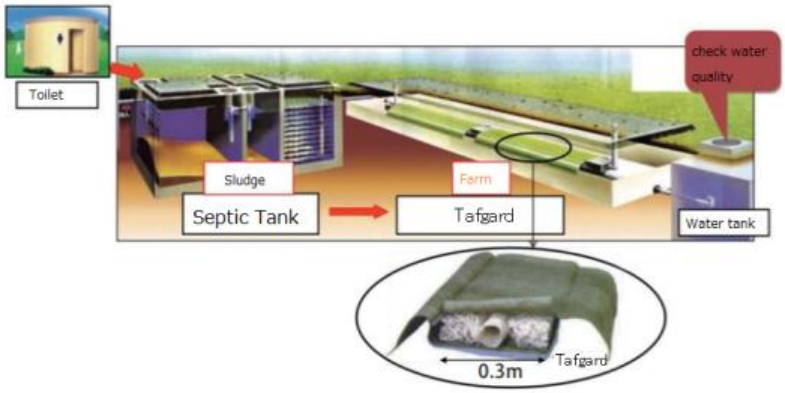
(5) Basic infrastructure

a) Wastewater treatment system for community public toilets

Outline of the initiative

Taisei Soil System

Taisei Kougyou Co., Ltd. has developed a new type of environmentally friendly toilet wastewater treatment system, called the Taisei Soil System (TSS). TSS is in a no-discharge sewage treatment facility that enables on-site treatment of waste from toilets and household wastewater through the special polyester fibers "Tafgard." The facility has the following strengths:



Source: Taisei Kougyou (2020)

Figure 4-23 Taisei Soil System

- The facility can be set up in places without sewers or electricity.
- The material of TSS is robust and can be used semi-permanently.
- TSS is energy-efficient with low maintenance cost and labor.
- Because TSS uses natural purification processes, there is no need to add chemicals for water treatment.
- The facility is also effective during an off-season period such as a long school vacation.
- The facility can handle flood-prone areas as well as those without water.

This technology is used for public toilets in Japan's mountainous areas. It has also been found that the facility can withstand floods. Moreover, even Japan's Ministry of the Environment has recognized this technology as environmentally friendly.

Community public toilet in Varanashi

In 2019, JICA and Taisei Kougyou constructed a TSS-equipped community public toilet (use frequency: 200 times/day) in Varanasi and another at a university in Muzaffarnagar (use frequency: 400 times/day). Taisei Kougyou targeted the areas without sewers. Moreover, in rural India, some people prefer to have the toilet outside the home as they consider the former impure. Therefore, Taisei Kougyou and JICA cooperated to construct a TSS-equipped toilet on the premises of a primary school, which is in the center of the community, to provide toilet access to not only the students but also others in the community. Because the school roof is wide, the rainwater it collects can be used for the toilet, and purified water can be reused for sprinkling and cleaning, thus ensuring optimal water harvesting and use.

Source: Taisei Kougyou (2020)

Figure 4-24 TSS-Equipped Community Public Toilet in Varanasi

Outcome of the initiative

Now school students and local people have good access to the toilets.

Contextualization for India/ADs

For constructing a TSS-equipped toilet, all materials except "Tafgard" can be procured in India. The cost is around INR 5 million. However, considering the merits mentioned above, ADs can consider this technology as one of the ways to become an open defecation-free district.

Taisei Kougyou developed the TSS in the Solomon Islands. A TSS-equipped toilet also has the mobile-charging facility, making it a communal toilet where people gather. In some cases, local governments have created prepaid cards for using toilets, which people share with their families. This initiative can be also adopted in the ADs.

b) Bridging the infrastructure financing gap: Blended financing in Water Supply in Rwanda

Outline of the initiative

Kigali, the capital of Rwanda, is a rapidly growing city of over 1 million people. This is putting pressure on its water infrastructure. Despite the impressive progress in expanding access to water over the past 15 years, many households in Kigali are served by communal stand posts where supply is intermittent and many are excluded because of limited water production capacity (WHO&UNICEF, 2021). The barriers to private investment in water infrastructure in Rwanda are similar to those in many other developing countries, which include the following: (i) lack of commercial loans for the long term; and (ii) untested regulatory and uncertain governance framework. Water tariff affordability is also limited because of low levels of household income.

The project started in September 2010, with International Finance Corporation's (IFC) Public–Private Infrastructure Advisory Facility (PPIAF) for capacity building and the water sector reform.

Metito Utilities Limited, a Dubai-based global provider of intelligent water management solutions, was awarded a contract. Metito became the 100% shareholder of Kigali Water Limited (KWL), the Rwandan incorporated limited liability company that owns and operates the project. KWL will sell potable water to Water and Sanitation Corporation (WASAC)[20] under a 27-year Public Private Partnership (PPP) agreement. WASAC will pay a regulated tariff in consideration for the water supplied by KWL. Water will be drawn from the Nyaborongo River to be treated before being distributed to 500,000 customers. Subsequently, Emerging Africa Infrastructure Fund[21] (EAIF) was appointed as the mandated lead arranger for the transaction, co-lending with the African Development Bank (AfDB). EAIF worked with Metito to refine the financing model, incorporated subsidies to ensure the tariff affordability objectives by way of a viability gap funding grant.

Outcome of the initiative

This blended financial model of a utility project made it possible to run a utility with PPP. In particular, the project recognized that financial structuring is a dynamic process and accommodated it to reflect the policy and governance changes. One of the key challenges faced was to manage the credit risk of the newly incorporated WASAC. During the project preparation phase, WASAC was reorganized by the government as a new corporate entity, with implications for its credit standing.

The project also benefited from a well-coordinated package of blended finance: EAIF and the AfDB provided loans, technical advice was also provided by the Infrastructure Development Collaboration Partnership Fund (DevCo), a multi-donor facility managed by the IFC, while a Technical Assistance Facility grant helped bridge the gap between the costs of development and operation, and the tariff level was affordable.

[20] Water and Sanitation Corporation (WASAC), which is in charge of setting tariffs for bulk supply and distribution of water as well as operating water distribution infrastructure in Kigali

[21] Emerging Africa Infrastructure Fund (EAIF) is a donor-funded company launched to support infrastructure PPPs in 47 sub-Saharan African countries with long-term debt.

As one of the first bulk surface water supply projects in sub-Saharan Africa to be structured on a PPP basis taking place in the context of an untested regulatory framework, close coordination with the government and among all the providers was essential in determining the project's scope, alignment with broader water access goals and water affordability implications. In addition, considerable time and effort were invested by the stakeholders to develop a bankable set of project agreements. Having Metito's commercially minded development team on the ground helped project partners anticipate and mitigate issues in consultation with government stakeholders.

Contextualization for India/ADs

Considering the funding gap, around USD 565 billion per annum during 2016-2030, over and above the resources needed to address the climate risks and reverse the adverse CVOID-19 pandemic impact, unconventional financing options need to be explored by India (Yes Bank Institute, 2017). Since project risks during the entire life cycle or contract period cannot be predicted with exactitude and the risks need to be proportionately shared, blended financing can help bridge the investment financing gap in Indian infrastructure. The innovative financing approach is also relevant to ADs, where finance flows are scarce and governance capacities limited.

c) Water-purifying equipment

Outline of the initiative

Nippon Basic Co., Ltd., invented a water purification system that can change water sourced from river, lakes, water tanks, bath water, and sea to potable water. One of the equipment, which is called Cycloclean, is a mobile water purifier mounted on a bicycle. No electricity or fuel is required. By pedaling the bicycle, the core pump starts to pump up raw water. The three filtration filters remove bacteria such as E.coli, sand, mud, bad odor, and iron rust. From river or lake water, Cycloclean can produce 5 liters of potable water per minute; that means 300 liters per hour, which would be enough for 150 people. The quality of water has been confirmed by a Japanese testing company.

Not only the bicycle type, Nippon Basic also manufactured a portable water purifier that can be stored in a carrying case or box. Moreover, the company invented equipment to remove arsenic and produce drinking water from the sea.

In Japan, this equipment was introduced in many hospitals, schools, and government offices for emergency cases. In addition, Nippon Basic has worked with international organizations and has been doing business in water-scarce areas in other countries such as India, Bangladesh, Thailand, Indonesia, and China. The equipment has been introduced in refugee camps and slums. From 2013, the devices of the equipment have been assembled in Bangladesh. Except for pumps and filters that are imported from Japan, all parts including a bicycle are procured locally, which helped reduce the cost to 1/4 to 1/5.More details on this approach are available at the following website. https://nipponbasic.ecnet.jp/en/

Source: Ministry of Economy, Trade and Industry, Japan (2021)

Figure 4-25 Water supply support in flood-damaged areas

Outcome of the initiative
People can gain enough quality of drinking water more easily even in water scarcity areas, and this will reduce diseases caused by unpetrified water.

Contextualization for India/ADs
Bicycle type of water purification equipment can be used in ADs and villages where the availability of drinking water is scarce. If the ADs procure the bicycle parts in India, the cost will be further reduced. This can be also useful in flood-prone areas and other regions often affected by natural disasters.

4.3.3 Discussion on replicable practices and innovations

During the course of the Project, the Project Team had conducted document reviews and AD surveys, in addition to providing PoA formulation support. The Project Team also organized the 2nd Japan–India SDGs Forum on Health and Nutrition, the 3rd Japan–India SDGs Seminar on Education, and the 4th Japan-India SDGs Forum on Agriculture where it presented several best practices and innovations that have the potential for replication elsewhere and/or future scale-ups in other ADs in India. These include not only the best practices in India but also those from Japan and elsewhere that are appropriate for India's economic, social, and cultural contexts and challenges—these have been presented in Chapter 3 and earlier on in Chapter 4, and have great potential to promote SDGs in the ADP.

To accelerate their replicability, the ADP shall continue to strengthen the following supports:

- To create opportunities for knowledge and information sharing among the ADs and institutions by organizing workshops for ADs;
- To employ a more systematic advocacy and communication strategy among wider stakeholders by utilizing web portals of NITI Aayog and other offices at national and subnational level;
- To strengthen a system to provide technical support in contextualizing the best practices and innovations to meet the needs and livelihoods of the ADs and helping implementation and replication of best practices and innovation to fulfil capacity gaps in the ADs;
- To encourage the use of Challenge Fund for replication of best practices and innovations in the ADs.

5 Conclusion and Recommendations

5.1 Conclusion

5.1.1 Key achievements in SDGs

India has fully adopted the SDGs framework and aligned its national development policies and priorities with them. The country has a federal system of governance, where the subnational governments have constitutional and well-defined legislative and executive jurisdiction. State and local governments are responsible for providing critical public service infrastructure, including water supply, electricity, sanitation, drainage, police, courts, roads, traffic systems, schools, colleges, healthcare, and a myriad of other services.

To implement the SDG agenda, the Government of India (GoI) has launched several national programs towards faster SDG achievement. In addition, the GoI has been monitoring the progress on SDGs and the achievement of targets with measurable indicators, including the SDG India Index and Dashboard. The GoI has also been implementing SDGs localization, creating strong collaborative environment for partnerships among various stakeholders at different levels, such as a) nodal bodies for institutionalizing SDGs at the national and sub-national level – NITI Aayog (at national level) and planning department (at sub-national level), b) mainstream development priorities in States and Union Territories, c) promoting the private sector through their own businesses, and d) civil society organizations (CSOs), through education and awareness raising.

The GoI presented the second *India Voluntary National Review (VNR) 2020: Decade of Action taking SDGs from global to local*, a report prepared by the active participation of all stakeholders of the local governments, private businesses, and civil society organizations. Over a thousand CSOs, NGOs, and community organizations participated and were instrumental in highlighting reflections from the grassroots.

In the report, the GoI presented an update on the progress made towards the fulfilment of the 2030 Agenda. This report displayed a comprehensive view of the country's efforts. India has been one of the largest and fastest growing emerging market economies worldwide. Through consistent growth and social inclusion, the country could successfully reduce poverty, steadily improve education, aggressively expand basic infrastructure, conserve rich biodiversity, and build strong partnerships for sustainable development with multi-stakeholders. A few examples of the progress highlighted in the report include:

- Not only monetary but also multidimensional poverty has been considerably reduced over the recent years. From 2005/6 to 2015/16, India halved its Multidimensional Poverty Index (MPI) and over 270 million people exited extreme poverty. (Sabina Alkire, Christian Oldiges, Usha Kanagaratnam, 2021)
- Health insurance coverage programs have been rolled out to over 500 million people.
- Over 100 million households have had toilets built since 2014.
- Most villages and households have been electrified. Under SDG 7, the Pradhan Mantri Sahaj Bijli Har Ghar Yojana - Saubhagya since 2017 has succeeded in the electrification of 603,175 villages in India. The percentage of households electrified in 2019-20 reached 99.7%. See Chapter 2.2.5(3) .
- An assessment showed that forest coverage has consistently increased. The 2019 forest area represents an increase of 78,852 km^2 (2.4%) over the past two decades, with the 1997 Forest Survey of India (FSI) reporting 633,397 km^2 (19.27%).
- India's technical assistance programs have reached over 160 countries across the world. India has moved up 14 places to be 63rd among 190 countries in the World Bank's Ease of Doing Business ranking report 2020 (The World Bank Group, 2020). The country was 77^{th} in the previous ranking. Sustained business reforms over the past several years has helped India's rapid progress to have its place among the top ten improvers for the third consecutive year.

- India and France facilitated the formation of the International Solar Alliance, with membership from about 120 countries, bringing together countries that are well-positioned to invest aggressively in solar energy.[22]

While the second *VNR 2020* reported satisfactory accomplishments in India, the COVID-19 pandemic has brought up several new developmental challenges. They must be addressed as early as possible to keep the momentum of SDGs and regain the progress made prior to the COVID-19 pandemic. For examples, the report highlighted:

- India needs to build a resilient system that will help bring the economy back on track, generating the necessary business opportunities and employment, accelerate women's active participation in the economy, expand structural reforms, thereby creating overall prosperity.
- The SDG India Index is the first government-led measure of SDG progress at the sub-national level. It needs to be a principal tool to regularly monitor progress towards attainments of the SDGs in India. The Index also needs to promote healthy competition among the States, which are the key driver for SDGs localization, to achieve the SDGs and national targets. The *VNR 2020* includes key findings and insights from the SDG Index 2019–2020.

5.1.2 The ADP and its achievements

Given that the socioeconomic conditions in India varied greatly between regions, the GoI set priority to the districts with slow development efforts in order to achieve the SDGs. To this end, the ADP was launched in 2018. Under the ADP, 112 districts in India were selected based on indicators in the areas of a) health and nutrition, b) education, c) agriculture and water resources, d) financial inclusion and skills development, and e) basic infrastructure, and ranked based on the performance of each district. The rankings are updated periodically to stimulate competition between the target districts. The progress and performances are monitored by NITI Aayog, and supported by several development partners including multi- and bi-lateral agencies and the private and the philanthropic organizations. Progress and changes on KPI of five thematic sectors can be monitored on Champion of Change dashboard. To encourage the districts to work on the five areas of focus, Challenge Funds for implementing ADP are provided based on proposals submitted by each State for review and approval by the Empowered Committee of NITI Aayog.

The ADP has had a positive impact on the districts where it has been implemented (UNDP, 2020b). Lauded as "a successful model of local area development," ADP is a replicable global best practice and the most backward districts in remote locations are on a positive trajectory of growth with more growth and development in the last three years. Health and nutrition, education, and agriculture and water resources have registered massive improvements. Although it was initially planned as a policy initiative to improve India's rank in the Global Human Development Index, it has not served this initial objective. India remains as low as 131st in this ranking, suggesting that some indicators should be revised and re-designed. It is also important for the ADP to be more visible and incentivized to wider stakeholders and individuals through various re-training and learning programs. The ADP is a key government program accelerating SDGs in India. Thus, the momentum of the ADP should be sustained in the future. The best program practices should be systematically collected and shared among the districts, allowing their effective replication in other areas.

India reiterates its commitment to the principles of sustainable development and the goals set under the SDG framework. The COVID-19 pandemic disrupted the plans and timelines set earlier. Because the pandemic is not over yet, India will continue to face additional challenges for the attainment of SDGs. With a deep commitment to sustainable futures for the global community, the country shall do its utmost

[22] India is the only country in G20 that is moving fast toward achieving its climate goals. India has set a target of 450 GW of renewable energy by the end of this decade (by 2030). Of this, the target of 100 GW has been achieved by India, which is ahead of schedule (Hindustan Times, 2021).

to achieve the Agenda 2030, improving equity in society and preserving nature.

5.2 Recommendations

5.2.1 Recommendations on SDGs in India

Initially, the GoI identified the key developmental challenges in the way to fully attain the SDGs and mapped out the way forward to address any roadblocks and achieve the goals on time.

However, the COVID-19 pandemic spread worldwide in December 2019. India was no exception, as the country has become one of the most affected since then. As of August 2021, India has 31.61 million COVID-19 cases in total (97.5% recovered), which resulted in 429,179 deaths. India successfully administered more than one billion COVID-19 vaccinations, an outstanding milestone. GoI successfully coordinated with the states for achieving this target in a transparent manner. More than 31% of the eligible population has been fully vaccinated; 75% has received their first dose (Mint, 2021). The pandemic has forced the country not only to delay the timelines or shift the SDG timeframe, but has also created new developmental challenges. While some of those are more universal to pandemic, others are more unique and specific for India.

Regarding the recommendations on SDGs in India, a few crucial areas of action have been identified including the following: a) revising and updating SDGs India programs and KPIs; b) strengthening SDG financing; c) capacity building of all stakeholders; d) creating stronger awareness and visibility for SDGs; and e) strengthening pandemic and emerging diseases surveillance system.

a) Revising and Updating SDGs India programs and KPIs

Given that India continues to lead the SDGs worldwide, the GoI needs to build a flexible system to revise and update its programs and their indicators to address new challenges. The areas that require more action would include recovery from COVID-19, building for solid resilience, and climate change. For examples, India has implemented several measures to address the COVID-19 outbreak. But GoI needs to continue to build solid resilient health systems. To continue to address the new challenges arising in the post-COVID-19 period, the SDGs India programs and KPIs need to be revised and updated for SDGs attainment.

b) Strengthening SDGs financing

To meet the Agenda 2030 goals, it is critical to set a SDGs financing mechanism and generate sufficient financial resources to support SDGs initiatives and projects in India, especially in the ADs, which are lagging behind in development. It is critical for the GoI to mobilize such funds to accelerate the SDGs attainments (Goal 17). The country may adopt an overarching SDG aligned financing framework; a) converging public resources (central, state, and local government levels); and b) leveraging private sector resources, commercial and development finance institutions including national investment funds, institutional investors, donors, CSR, and philanthropies. The financing model may create value proposition for private sector contributing solutions to sustainable development challenges and by reducing risks. It also means adopting and incentivizing innovative and blended financing strategies that are unconventional including say SDG bonds, ensure effective convergence, private and third sector (NGOs, philanthropies, civil society, communities); prioritization and designing a medium-term expenditure framework for assured funding, and cost effectiveness and value for money (OECR, UNDP, 2020).

In short, it is necessary to direct all finance and investments to support SDGs. The SDG alignment agenda shall focus on the achievement of two objectives:

1. **Equality**: Resources should be mobilized to leave no one behind and fill the SDG financing gaps; and
2. **Sustainability**: Resources should accelerate progress across the SDGs.

According to the Yes Bank Institute Report, there is a global financing requirement of USD 90 trillion to achieve the Global Goals, of which India's funding gap will be around USD 960 billion annually. The report indicates that India will face a financial shortfall of approximately USD 8.5 trillion (INR 533 trillion) if it is to achieve the SDGs by 2030, translating to an annual shortfall of USD 565 billion (INR 35.5 trillion) from 2016 until 2030.

ADP indicators are mostly target driven against sanctioned funds and do not cover the funding required for universal coverage or for achieving the SDGs by 2030. Thus, no quantitative estimate of funding gaps is available. Considering that the ADs account for around 20% of the total population and are the most underdeveloped regions of India, it is safe to assume a funding gap share of 30%, which is around USD 170 billion.

This is in addition to the investments required to arrest and reverse the COVID-19 pandemic induced slippages. Though the COVID-19 pandemic is not over yet, India needs to quickly stabilize its economy. In this respect, it is essential to foster more active participation of women in the economy (Goal 5) and expand structural reforms to accelerate employment (Goal 8).

c) Capacity building of all stakeholders

India has adopted a variety of institutional, policy-level, program-oriented initiatives and has been monitoring these initiatives to drive the SDGs at the national and local levels. As a result of these focused efforts, assignment of responsibility and leadership and review mechanisms have been set up at various levels. However, there have been several gaps, such as in finance, skills, knowledge, innovation, which have become obstacles in SDG localization. It is important for the GoI to further strengthen better coordination and collaboration among the relevant stakeholders to fulfill those gaps. Capacity building for SDG localization is a great challenge in any country. Like India, the Government of Indonesia has undertaken a "SDGs localization Program," which consists of the following five key areas: a) policy, advocacy, and institutional strengthening; b) data system strengthening; c) capacity building and knowledge management activities; d) sub-national localization implementation; and e) SDGs promotion and communication strategy.[23]

d) Creating stronger awareness and visibility on SDGs

Although India is making steady progress towards achieving SDGs, many among its people do not understand the concept of SDGs well. SDGs should be made more visible through campaigns and raised awareness, which in turn will promote better and common understanding among institutions and citizens. Both central and local governments, as well as corporate institutions tackling developmental issues and pursuing SDGs, should be appreciated and recognized for their effort. This can create further momentum in the process of achieving SDGs.

e) Strengthening the pandemic and emerging diseases surveillance system

Regarding the attainment of SDGs by 2030, India seems to have made steady progress since 2015. However, the COVID-19 pandemic has brought significant obstacles, decelerating, or reversing some of the SDG's gains. In the future, pandemics are likely to be frequent. Hence, it is recommended to have an institutionalized system for pandemic and emerging disease surveillance at the national and state levels to act early, build resilience plans, and respond effectively. India has taken a number of measures to address the COVID-19 outbreak, including screening and quarantining relevant people, treating patients, and providing vaccines. However, COVID-19 is not yet over. GoI must continue to build solid resilient health systems that protect the people of India from the onslaught of emerging and re-emerging infectious diseases. They may include restrengthening health governance and law, establishment of robust disease surveillance and laboratory systems, and strengthening health human resources. It is also essential to allocate specific budgets to disease prevention and the public health sector, and activities for

[23] For more details about SDGs localization programme in Indonesia, please refer to: https://sustainabledevelopment.un.org/partnership/?p=12378

a resilient system. Although it is premature to cite good practices in successfully controlling the COVID-19 pandemic anywhere in the world, lessons can be drawn from a few examples (Frendos, 2020, JICA 2020).

India is proud of its achievements for the first five years in adopting, implementing, and monitoring the Agenda 2030. However, many challenges still remain ahead, especially during and post the COVID-19 pandemic. India's size and diversity presupposes unique challenges in any developmental programs and initiatives. This is the same for SDGs worldwide. The country has identified the key challenges in the way of fully implementing the SDGs. It has also charted the way forward to address the roadblocks and achieve the targets on time. India will continue to do its best to pursue the Agenda 2030.

5.2.2 Recommendations to the ADP

a) Project design, and integration and synergy between national and subnational programs

- Fast-tracking the use of Challenge Fund: To provide Challenge Fund as an incentive to monthly top-ranked ADs, they must have ideas of using the awarded fund for certain purposes. It has been observed that awarded ADs take at least several months, sometimes nearly a year, to submit the PoA proposing the usage of obtained funds. Those situations occur despite setting deadlines for PoA submission. Therefore, it may be necessary to have an ultimate deadline, past which the funds should be reallocated.
- More attention to low-performing districts: One key finding is the gross inequity in performance across the top and bottom districts. Within ADP (and areas within districts) there is an urgent need to design a special intervention package to include handholding, capacity building, and professional backstopping support to the consistently underdeveloped districts.
- District Development Plan: To provide a holistic development vision, the districts may prepare a comprehensive development framework and an action plan, and fit them together with the ADP. The district development plans should be a consolidation of the block/Grama Panchayath (GPDP) level plans following a participatory bottom-up planning process. NITI Aayog has already started the process of testing and scaling up block-level development plans giving freedom to the blocks to adopt their own KPIs. The block/district plans should be composed of thematic sectoral and sub-sectoral plans from a baseline. The identified and quantified gaps should be translated to budgets, financing, and an implementation plan. This can be based on the basic ADP convergence model on the principle of sustainable and universal access to basic services to all. The districts must have a clear roadmap beyond the current ADP targets. For example, some ADs have achieved their ADP indicators such as electricity and toilets, but that should not make them complacent. Each district must design its own development plan and objectives beyond the set of ADP goals and localize the SDGs.
- Financing the ADP: Financing should progressively move out of the "budget driven" approach, helping districts to explore more innovative ones, including hybrid-annuity (the annuity model[24]), convergence (i.e., MNREGS), CSR, and District Mineral Foundation Trust Funds, while bringing in international support, such as that of UNICEF, ADB, JICA, other bi- and multi-laterals. To adopt the approach, districts need to take a U-turn from the current practice of "let me know how much the budget is and I will plan for it" to "let me plan for what needs to be done and how to use the funds, including the budget." For effective implementation, along with funding, the absorptive capacity of the districts also needs to be strengthened considerably and incentivized. Streamlining procedures, role clarity and accountability, and timely monitoring will be useful tools.

[24] In financial terminology, hybrid annuity means that the government makes payment of a fixed amount for a considerable period and then of a variable amount in the remaining period. This payment method is called HAM in the technical parlance. http://www.arthapedia.in/index.php?title=Hybrid_Annuity_in_Infrastructure_Sector

b) Implementation arrangements

- Strengthening and augmenting the capacity of ADs: Shortage of manpower and lack of technical capacity pose challenges to the development of ADP. Shortage of human resources in various government departments at the district and block levels hinders the implementation of both ADP and numerous other programs. There is no doubt that the individuals recruited by philanthropic organizations have been helpful in this regard. However, in the long run, it is critical to institutionalize the capacities within the government and reduce the transaction cost. This is possible only by adopting a comprehensive need assessment, designing focused capacity building strategies and plans, and providing training using the wide network of public- and private-sector training institutes. Rewarding and incentivizing performance is the key to capacity building. Strengthening SPVs by handpicked officials from the districts and the government on merit will also be a feasible option. It is also urgent to optimize manpower allocation, redeploy excess staff, avoid overlapping and duplication of work, clarify roles, ensure transparency and accountability, and adopt a technology-enabled governance structure.
- Networking and collaboration: The ADP needs increased opportunities for networking and experience sharing among the ADs. It has also been observed that there have not been sufficient opportunities for networking and sharing of knowledge and good practices among the ADs. Although an experience sharing workshop was originally planned in JICA TCP, the spread of COVID-19 and slowed implementation prevented the workshop from happening. A convenient time for such workshops should be considered in the future. It must also be noted that holding such events physically, instead of virtually, provides incentives to the district officials.
- Coordination: Along with the capacity constraints, major limitations are the institutional and inter-departmental coordination challenges. Although the DC's office can provide the needed coordination, often it is not effective downstream. Furthermore, there are issues that cannot be resolved at the district level (e.g., forest or environmental clearances) and need higher level intervention. A self-escalating problem-raising system needs to be integrated with the monitoring framework and aligned with the institutional structures. For example, if an implementation issue is not resolved in five days, it would be automatically escalated to the higher levels of government for resolution.

c) Capacity development

- Needs assessment: The training and capacity building component should be strengthened with assessment of the most underdeveloped ADPs category, with a program designed and rolled-out based on the capacity building strategy and action plan. Special thrust should be given in program and project design, project management, procurement and contract management, and asset management for quality service delivery. ADP should also be integrated with the capacity building component of the flagship programs such as JJM and SBM.
- Regular orientation: Although a PoA template has been designed, many districts do not understand what should be included under each heading. Thus, it is necessary to set a simple guideline explaining how proposals are to be identified, selected, and prepared to aid ADs. Regular orientation or training on project preparation can help guide the ADs officials, particularly newly appointed officers.
- Set up of a help desk/FAQ section on the portal: Although the ADs were provided with initial training, some district officials have experienced wrong interpretation of indicators or wrong reporting of data, for example. While frequent training is desirable, it is not always possible to address the questions and concerns ADs may have regarding the program, or to acquaint officers who may be newly appointed. Setting up a help desk or a FAQ section in the Champion of Change portal to address such concern may help the day-to-day operation.
- Promoting awareness on ADP and SDGs: Although district officials are aware of the objectives of the SDGs and the ADP, they have limited understanding of how the ADP is essentially related to the SDGs. This is, in part, due to the lack of better understanding of the comprehensive and cross-cutting relationship between the SDGs and their corresponding indicators.

- Technical inputs from Japanese experts: As the ADP was implemented under the Japan-India partnership, enhanced opportunities for cross-learning and technical input from Japanese experts would be of help to ADs. For instance, a medical specialist from Japan can mentor the medical personnel/specialists from an AD once a month, or once every two months. Furthermore, regarding the health sector, input can be sought from Japanese experts on Total Quality Management measures and neo natal care for specific ADs where neonatal mortality is high, as well as support in management of SAM children, strengthening MCPC card use, and other areas.

d) Monitoring

- Revising indicators: Better integration of SDGs is a desirable way forward, as ADP indicators are part of the overall SDGs. For example, some ADP indicators have been fully achieved (e.g., electricity and toilets). In cases where some indicators are saturated, new ones should be added to progressively pursue and meet the SDGs. Accordingly, district officers should be aware of the larger picture and the magnitude of the challenges in order to ensure that the vision of the districts is not confined only to the ADP. In this regard, progressive refinement and expansion of the scope of ADP monitoring, by inclusion of new SDG-related indicators, may be considered.
- Disaggregated data: To add to the current monitoring, disaggregated data on gender, SC/STs, and exclusion against the baseline may be included. This will track the quality of program delivery and facilitate analysis and corrections. Disaggregation is also important for tracking cross-cutting indicators, such as stunting and malnourishment, and the work of both Health and Social Welfare/Women and Child Development Departments helps in this regard. Second, as data-driven development is fundamental to the ADP, data integrity and protocols are critical for making correct choices and decisions.
- Tracking Outcome of Challenge Fund Projects: As more and more projects are getting approved under the AD award and challenge funds, it is necessary to monitor the progress and outcome of these projects. Such monitoring would examine the duration and cost of the projects and see if the projects benefitted the target people as envisaged.
- Process monitoring: The monitoring system must go beyond the tracking progress to facilitate on-course correction and address troubleshoot implementation delays and streamlining procedures. The sustainability and quality of SDG achievements also depend on the adherence to critical process elements in the implementation strategy. Process monitoring can be introduced and tested in a few ADs.
- Horizontal monitoring: In addition to the vertical flow of monitoring data, the indicator status may also flow horizontally within the district to the blocks and GPs to be discussed at the Block/Mandal Panchayath or Grama Sabha, where participation and feedback from officials could be made mandatory.

e) Others

- The ADP seeks convergence of central and state schemes anchored around specific activities. For example, if the objective is to prevent stunting, the district officers will work to coordinate the efforts of different schemes, such as the Integrated Child Development Scheme (ICDS), the Public Distribution Scheme, and public health and sanitation. The ADP should progressively embrace at scale this essential element in programmatic design and delivery. This may require rapid diagnostics, simplification and streamlining of procedures, creation of a conducive and workable mechanism for coordination at local level, and institutionalization of appropriate incentives and disincentives, such as outcome-based results monitoring.
- The DCs/Sub-Collectors in the ADP may launch “Village Immersion Program” and reach-out programs to make periodic field visits, with key relevant district officials to address developmental challenges and “on the spot decision making,” starting from the most underdeveloped villages and areas. The district heads of the relevant departments may also make such visits at least once in a month. Protocol and essential checklist for such visits could also be issued.

6 Annex

Annex 1-1 India SDG Index Rank (Composite Score) - State-wise and Goal-wise (2019/20)

2019	2020	AREA	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8	Goal 9	Goal 10	Goal 11	Goal 12	Goal 13		Goal 14	Goal 15	Goal 16
60	66	India	60	47	74	57	48	83	92	61	55	67	79	74	54			66	74
70	75	Kerala	83	80	72	80	63	89	100	62	60	69	75	65	69		53	77	80
69	74	Himachal Pradesh	80	52	78	74	62	85	100	78	61	78	79	77	62			68	73
67	74	Tamil Nadu	86	66	81	69	59	87	100	71	71	74	79	78	61		11	63	71
67	72	Andhra Pradesh	81	52	77	50	58	92	100	67	52	74	78	84	63		79	69	77
65	72	Goa	83	78	72	71	55	100	100	76	68	75	89	47	44		50	59	63
66	72	Karnataka	68	53	78	64	57	85	100	66	64	67	78	89	62		60	67	76
64	72	Uttarakhand	74	61	77	70	46	85	100	63	56	77	76	82	60			64	86
65	71	Sikkim	80	69	62	58	58	89	100	71	52	61	85	76	65			73	72
64	70	Maharashtra	66	44	83	64	51	90	100	62	66	71	87	82	58		57	52	69
64	69	Gujarat	66	46	86	52	49	93	94	64	72	64	87	50	67		57	61	82
67	69	Telangana	68	50	67	63	41	96	100	73	59	67	76	73	43			81	71
56	68	Mizoram	80	72	79	60	54	85	100	51	32	64	61	87	66			48	81
62	68	Punjab	69	73	77	60	45	66	100	57	69	68	91	71	51			48	76
57	67	Haryana	69	58	72	64	43	80	100	59	66	68	81	77	51			48	71
58	65	Tripura	82	52	67	42	39	82	83	57	35	85	67	99	41			69	80
60	64	Manipur	60	64	68	63	41	87	96	36	35	70	65	89	57			60	69
58	62	Madhya Pradesh	44	43	62	45	55	88	86	60	37	51	81	78	49			84	66
60	62	West Bengal	59	46	76	54	41	81	98	57	53	71	45	79	39		50	53	81
56	61	Chhattisgarh	49	37	60	55	64	89	78	64	36	72	78	64	38			65	71
57	61	Nagaland	73	64	61	39	48	87	69	48	30	46	48	91	69			63	79
58	61	Odisha	41	42	67	45	46	86	80	48	46	66	70	73	70		82	83	59
53	60	Arunachal Pradesh	54	66	64	41	37	67	85	50	31	69	39	77	58			93	64
54	60	Meghalaya	77	37	70	48	51	75	50	63	25	88	51	73	62			64	72
57	60	Rajasthan	63	53	70	60	39	54	100	57	45	45	81	74	49			43	73
55	60	Uttar Pradesh	44	41	60	51	50	83	100	53	42	41	77	79	39			61	79
55	57	Assam	51	41	59	43	25	64	98	50	39	65	55	66	53			78	62
53	56	Jharkhand	36	19	74	45	51	83	77	54	37	65	71	55	25			71	70
50	52	Bihar	32	31	66	29	48	91	78	50	24	48	67	59	16			62	73

Source: NITI Aayog (2021a)

Annex 3-1 Template of Plan of Action

TEMPLATE FOR PLAN OF ACTION (POA)
UNDER ASPIRATIONAL DISTRICT PROGRAMME

This template may be filled and submitted to NITI Aayog at pmu.tadp@lsmgr.nic.in for the consideration of the Empowered Committee of the Aspirational District Program (ADP). In accordance with the guidelines, this POA should be recommended by the State Prabhari Officer and concurred by the Central Prabhari Officer, before submission to NITI Aayog.

Section I. Proposal at a glance	
Name of proposed project/activity	
State	
Aspiration District's name	
Total Funds Requested[25]	
Implementation Period	_____ **year** _____ **months** *(Should not exceed 2 yrs)*
Total estimated number of beneficiaries	

Sector proposed for Improvement *(Tick the relevant sectors in the next column)*			
	Sector/ Themes		**Sector/ Themes**
	Health & Nutrition		Drinking Water
	Education		Internet Connectivity
	Agriculture		Common Service centre at GP
	Financial Inclusion		Pacca House
	Household Electrification		Process Digitization
	Water resources		Skill development
	Roads		Capacity building
	Sanitation		Livelihoods
	Others (Please specify)		

[25] Estimated cost of the proposals should not be above the prescribed limits given in the table under clause 4.2 of the program guidelines.

Section II: DETAILS OF THE PROPOSAL

1. PROJECT TITLE, DISTRICT NAME, STATE

(Please provide name of the project/activity title, beneficiary GPs and district name along with the state)

Background of the District

(Please provide a background of the district, its constraints, demography, natural resources, issues affecting development, public health & nutrition status/ status of agriculture and water resources available / internet-telecommunication connectivity / physical connectivity to nearest district /block headquarters/ livelihood activities practiced by the people in the district, infrastructure requirement (water supply, sanitation, electrification, road,housing, internet, common service centre) any other key requirements affecting development of the district.)

Rationale of the proposed project

(Please provide a brief rationale for the proposed intervention stating why and how the intervention was chosen and how the intervention will contribute to ADP relevant indicators)

PROJECT OBJECTIVE

(List out at least three key objectives and their corresponding envisaged results that could be achieved through implementation of the activities given in this proposal. Add rows if required).

S.no	Objective	Envisaged results/Improvement expected
1.		
2.		
3.		
4.		

2. PROJECT AREA

Add blocks, Panchayats and Villages based on the coverage of the activity. If there are declared tribal blocks/ village, Educationally Backward blocks being covered under the activities in this proposal – please specify.

Block :
Panchayats :
Villages :
Municipal corporation/Municipality/Nagar Parishad

(Add blocks, Panchayats and Villages as appropriate based on the coverage of the activity).

(If there are declared tribal/blocks village proposed under the activities in this proposal – please specify separately in the same forma as above)

3. TARGETED BENEFICIARIES

Profile of beneficiaries (*Provide a general the Economic status of the population in the project area including their vulnerability to events, natural disasters, or others)*	

	Description	Number
Total estimated number of beneficiaries *(Provide numbers)*	**Total Population**:	
	SC Population	
	ST Population	
	OBC Population	
	Total households	
	BPL households	
	Adults (18-60 years)	
	Male (18-60 years)	
	Female (18-60 years)	
	Infants (0-1 year)	
	Children (Under 5 years)	
	Children (5-11 years)	
	Adolescents (13-19 years)	

4. KEY PROJECT ACTIVITIES, PARTNERs & IMPLEMENTATION ARRANGEMENTS

List of Key activities:

(List the set of activities proposed to be undertaken. Also, list the activities that don't require any additional funds and can be managed with the available resources. Add rows if required)

- _____
- _____
- _____

Project partners:

(Any implementing partners/ stakeholders identified. Please mention details such as their area of work, their legal status, any other information as applicable)

- _____
- _____
- _____

Implementation arrangements:

- **Institutions**

(Short description of existing institutional arrangement for the program. Define who is going to constitute the implementation, coordination-for logistics/ resources, approval, fund disbursal, monitoring and evaluation teams)

- **Implementation of activities**

(Short description of the activity/ tasks carried out by the Institutions/ teams mentioned above along with expected timelines.)

5. MONITORING PLAN

(Please provide what are the expected outputs of the project and what are the indicators for measurement of each output. Add rows if required.)

S.no	Outputs of the Proposed Activities	Monitorable performance Indicator

6. ESTIMATED COSTS[26]:

S.no	Tasks/ Activities	Number of Units	Estimated cost per unit (Rs)	Estimated total costs (Rs)
	(A)	(B)	(C)	(B*C)
1.	Civil Works (*such as renovation, new construction, etc*.)			
2.	Goods & Supplies			
3.	Training and Capacity building			
4.	Services – (*Consultants, contractual staff*)			
5.	Monitoring and Reporting			
	Total			

Procurement

Is there any procurement of item(s) given in the negative list ? *(Refer to the EAP guidelines and please respond in Yes or No)*	

Financial details

Provide SPV Bank account details for receipt of additional allocations	

7. REVENUE GENERATION

Will the project activities/ assets generate revenue? *(Please respond in Yes or No)*	

(If Yes – provide expected revenue. Also confirm if the revenue generated could support operation & maintenance (O&M). - not more than 1 or 2 paras.)

8. RISKS AND MITIGATION OF RISKS

(Add potential risks if any expected and also indicate what measures will be taken to address the same)

POTENTIAL RISKS	MITIGATION

[26] Provide detailed breakdown of estimates under the respective categories – as much as possible

9. PHASE OUT AND SUSTAINABILITY PLAN

(Please mention the steps you will undertake to ensure that the activities initiated are sustainable and if the activity/ project have a recurring cost and how would it be financed after completion of the project?)

Submitted by : Name:
(District Collector, (*add name of district*)
Date:

Recommended by : Name :
State Prabhari Officer
Date:

Concurred by : Name:
Central Prabhari Officer
Date:

(Annexures if any to support the proposal may be attached but not mandatory)

Annex 3-2 Second Forum program schedule

Japan-India SDGs Forum on Health & Nutrition

Achieving zero undernutrition among children – bringing Japanese experience to India

Date: November 5, 2020

Time: 10:30-12:50 (IST)

Program

Timing	Agenda	Speaker
10:30	**OPENING SESSION** Welcome & announcement	Moderator: Ms. Yumiko Onishi, *Co-Team Leader, JICA Project*
	Opening Remarks	Mr. Rakesh Ranjan *DDG (Evaluation), NITI Aayog*
	Welcome Remarks	Mr. Takuma Kajita *Counsellor, Embassy of Japan, India*
10:40	**SESSION 1: Presentation** **Key Issues in Health and Nutrition Sector** *This session will explore the current Aspiration District Program and share the current challenges and gaps in health & nutrition sector especially in ADs.*	Mr. Jayakrishnan Bhaktavatsala *Health & Nutrition Expert, JICA project*
10:50	**Sharing Experience from Japan: Holistic Approach in Promoting Healthy Diet Among Children** *We will look at key nutrition services provide by the Japanese (local) government through life stages especially from pregnancy to early childhood and its outcome. This would help ADs and states to explore how they provide key services at the local government level to reduce the infant mortality rate and undernutrition in Indian holistic approach.*	Dr. Marika Nomura *Senior Advisor on Nutrition and Health, JICA*
11:10	**School Nutrition Program in Japan & Vietnam** *This session will examine the current school meal program in Japan and food and Nutrition Education (called "Shokuiku") in schools and its outcome. The presentation also introduces how this school meal program was contextualized in Vietnam. The participants from the ADs and states can get some ideas or tips to improve the current school meal program in India to achieve the zero undernutrition.*	Mr. Kei Kuriwaki *Senior Advisor, The Ajinomoto Foundation*
11:30	**Break**	

11:40	**Maternal and Child Health Handbook as a tool for a comprehensive home-based record** *This presentation is about optimal use of maternal and child health handbook. In Japan, the handbook is a tool for a comprehensive home-based record to create continuous approach across life course, cross-sectoral coordination, and synergy in maternal and child health nutrition. The presentation also shows how the local government in Japan contributes to the optimal use of the handbook, which will help the ADs to promote the MCH protection card in India.*	Ms. Keiko Osaki *Senior Advisor on Health, JICA*
12:00	**SESSION 2: Panel Discussion** **Contextualizing MCH and school meal in Indian situation** *The panel discussion will deliberate on how the best practices presented from Japan and Vietnam can be adapted into Indian context. Based on the presentations previously made, this session will explore/present initiatives that can be taken up in MCH and nutrition by national/state government as well as district administration. It will also discuss the use of ADP fund (challenge method fund) in implementing some aspects of the best practices presented.*	Panelists: Dr. Manohar Agnani Additional Secretary, Ministry of Health & Family Welfare Mr. Rakesh Ranjan *DDG (Evaluation), NITI Aayog* Mr. Ashwin Deshmukh *Head (Advisory), Piramal Swasthya* Ms. Varnali Deka *Deputy Commissioner, Aspirational District Goalpara* Facilitator: Mr. Jayakrishnan Bhaktavatsala
12:30	**Q&A Session**	
12:45	**CLOSING SESSION** **Vote of Thanks** **Closing announcement**	Mr. Katsuo Matsumoto *Chief Representative, JICA India*

Annex 3-3 Third Seminar program schedule

Japan-India SDG Seminar on Education

Enabling Access to Quality Education for All Children in India

Date: August 4, 2021

Time: 11:00 – 13:25 (IST)

Programme

Timing	Agenda	Speaker
11:00	**OPENING SESSION** Welcome & announcement Opening Remarks	Moderator: Ms.Yumiko Onishi, *Co-Team Leader, JICA* Mr. Rakesh Ranjan, *Mission Director, Aspirational Districts Programme, NITI Aayog*
	SESSION 1: IMPROVING SCHOOL CLIMATE	
11:05	**Education Guarantee Card – Intervention to address dropout rate amongst migrant workers in Maharashtra** *The Government of Maharashtra, in partnership with Tata Trust, has introduced digital Education Guarantee Card (EGC) to identify, enroll and track out of school migrant children of sugarcane cutter workers. Mr. Paresh will discuss the effort so far with EGC in Pune, and future scope in ensuring compliance with the Right to Education Act. Presentation will be followed by a brief Q&A session.*	Mr. Paresh JM *Program Manager, Tata Trust*
11:20	**Anandshala – Adaptation of Project U-Turn in Bihar** *School Dropout Prevention Programme (SDPP) in Samastipur, Bihar was conceived in line with USAID's RCT Project targeting the dropout problem. Mr. Nath will present the key aspects of the initiative – early warning system, enrichment activities and impact assessment. Presentation will be followed by a brief Q&A session.*	Mr. Amitav Nath *Associate Director, Quest Alliance*
11:40	**Three important principles and Japan's efforts to improve school toilets** *School sanitation is an important part of school education and critical in keeping children in school. Mr. Nakanishi will present the importance of clean school toilets and how Japanese schools have overcome the issues associated with school toilets over the last several decades. The transformation and efforts of Japanese schools can set an example to schools in India. Presentation will be followed by a brief Q&A session.*	Mr. Masato Nakanishi *Deputy Secretary General and Senior Researcher, Research Society on School Toilets*

12:05	**Water Access, Sanitation and Hygiene (WASH) measures at schools in Aspirational Districts**	Mr. Samir Kumar, *Joint Secretary, Department of Drinking Water and Sanitation*
12.20	**Saksham Bitiya Abhiyaan** *The lockdown has emphasized the need to re-evaluate the education system to make it more inclusive. There is an urgent need for a gender responsive education strategy that prioritises girls' education through learning opportunities, while keeping them safe whilst out of school. Mr Singh will present the key aspects of the Abhiyaan which aims to provide accessibility to education to ~3.3 million girls across 28 Aspirational districts.*	Mr. Manmohan Singh *Head, Aspirational District Collaborative, Piramal Education*
	SESSION 2: REENGINEERING TEACHING AND LEARNING PRACTICES	
12:30	**Implementational aspects of the National Education Policy (NEP) in School Education with focus on Foundational Literacy and Numeracy Skills**	Mr. Santosh Kumar Yadav, *Joint Secretary, Department of School Education & Literacy*
12:40	**Bodhi Vriksha – reading and books for young children in Bihar** *The 20-week programme aimed at creating interest towards books and reading, thereby achieving a discernible improvement in the children's reading skills. A representative from Bodhi Vriksha programme will discuss the innovative, creative, and interactive lessons designed for the programme, and key success factors. Presentation will be followed by a brief Q&A session.*	Mr. Kamal Nath Jha *State Head, Central Square Foundation*
12:55	**Nali Kali – a pathfinder for activity-based learning in India and beyond** *The Nali-Kali method involves graded learning material to improve learning outcomes, emphasizing on joyful learning. Mr. Patnaik, who has been working for more than two decades with Nali Kali, will touch upon the principles of Nali Kali, its contents and impact. Presentation will be followed by a brief Q&A session.*	Mr. Binay Patnaik *Senior Consultant, World Bank*
13:15	**CLOSING SESSION** **Way Forward** **Vote of Thanks** **Closing announcement**	Mr. Rakesh Ranjan, *Mission Director, Aspirational Districts Programme, NITI Aayog* Mr. Kengo Akamine, *Senior Representative, JICA India*

Annex 3-4 Fourth Forum program schedule

Japan-India SDGs Forum on Agriculture

Promoting Sustainable Agriculture for Rural Development

Date: October 21, 2021

Time: 11 am to 1 pm

Programme Schedule

Timing	Agenda	Speaker
11:00-11:05 (5 min)	**OPENING SESSION** Welcome announcement	Moderator: Ms. Yumiko Onishi, *Co-Team Leader, JICA Project*
11:05-11:15 (10 min)	Opening Remarks	Mr. Rakesh Ranjan, *Mission Director, Aspirational Districts Programme, NITI Aayog* Dr Neelam Patel *Senior Advisor, Agriculture & Allied sectors, NITI Aayog*
11:15-11:25 (10 min)	**SESSION 1: Presentations** **Key Issues in Agriculture Sector** *The session will give a backdrop of the forum, explaining the current challenges in Aspirational Districts.*	Dr. MS Umesh Babu *Agriculture Specialist, JICA Project*
11:25-11:42 (12 +5 min Q&A)	**SHEP: JICA initiative on working with small and marginal farmers** *Smallholder Horticulture Empowerment and Promotion (SHEP) is an agriculture extension approach developed by JICA to realize market-oriented agriculture. Originally implemented in Kenya, it was soon replicated in other countries. While SHEP treats farming as a business, it also empowers and motivates the farmers, transforming their attitude towards market to "grow to sell" from "grow and sell." JICA's SHEP expert will share details on interventions adopted and outcomes under the initiative.* *Five minutes Q&A will follow.*	Dr. Jiro Aikawa *Senior Advisor on Agriculture, JICA HQ*

11:42-12:00 (12 +5 min Q&A)	**One Village One Product: Promoting local development through agriculture** *One Village One Product (OVOP) is a set of local economic and social development activities made possible through the development of products and services taking advantage of local resources and uniqueness. Mr. Uchikawa will present the examples of JICA's OVOP projects from Latin America with particular focus on agri-products bringing in local economic development.* *Five minutes Q&A will follow.*	Mr. Uchikawa *Regional Advisor, JICA*
12:00-12:17 (12 +5 min Q&A)	**Tackling challenges of the Indian agricultural sector through a multi pronged strategy** *ITC works for farmer welfare both through its Agribusinesses and Social Investment Programme. With more than 100 years of engagement with Indian agrarian communities, ITC aims to nurture agri value chains and strongly believes that only farmer well being will ensure value chain sustainability. Mr Vardhan will present key interventions adopted by ITC focusing on a) Knowledge upgradation, b) Natural resource augmentation - water, soil & biodiversity, c) On- farm and off-farm livelihood diversification and d) Institutional support through farmer institutions leveraging Government programmes & schemes.* *Five minutes Q&A will follow.*	Mr Vijay Vardhan *General Manager - Operations; ITC (Social Investments)*
	SESSION 2: Panel Discussion	
12:17-12:42 (25 min)	**Leaping Forward: How to implement best practices in Aspirational Districts** *The panelists representing Indian agriculture scenes will discuss on how the efforts/initiatives presented in Session 1 can be replicated among Aspirational Districts.*	Panelists: Ms. Alaknanda Dayal *Joint Secretary, Ministry of Agriculture & Farmers welfare* Dr A V Bhavani Shankar *NABARD* Mr Sushant Gaurav *DM, Simdega, Jharkhand* Mr Deepak Meena *DM, Siddharthnagar, UP*
12:42-12:52 (10 min)	**Q&A Session**	Moderated by: Dr. MS Umesh Babu *Agriculture Specialist, JICA Project*

12:52-13:00 (8 min)	**CLOSING SESSION** **Vote of Thanks** **Closing Announcement**	Mr. Mitsunori Saito *Chief Representative, JICA India*

Total Time: 2 hours

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