



INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

ENVIRONMENT AND SOCIAL SYSTEMS ASSESSMENT

FOR

PROPOSED LOAN IN THE AMOUNT OF US\$300 MILLION EQUIVALENT TO INDIA

FOR THE

**CHHATTISGARH: ACCELERATED LEARNING FOR A KNOWLEDGE-ECONOMY OPERATION
(CHALK) (P179249)**

DRAFT

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ABBREVIATIONS

| | |
|---------|--|
| BRC | Block Resource Centre |
| CRC | Cluster Resource Centre |
| CSS | Centrally Sponsored Scheme |
| CWSN | Children with Special Needs |
| DIET | District Institute of Education and Training |
| DoE | Department of Education |
| DoPI | Department of Public Instruction |
| DoTSC | Department of Tribal and Scheduled Caste |
| DPC | District Program Coordinator |
| DPEO | District Primary Education Officer |
| E&S | Environmental and Social |
| ECCE | Early Childhood Care and Education |
| ECE | Early Childhood Education |
| EHS | Environmental Health and Safety |
| EMF | Environmental Management Framework |
| EMIS | Education Management Information System |
| ESSA | Environmental and Social Systems Assessment |
| GoCG | Government of Chhattisgarh |
| Gol | Government of India |
| GP | Gram Panchayat |
| GRM | Grievance Redress Mechanism |
| ICC | Internal Complaints Committee |
| ICT | Information and Communications Technology |
| MDM | Mid-day meal |
| MHRD | Ministry of Human Resource Development |
| MoE | Ministry of Education |
| NAS | National Achievement Survey |
| NEP | National Education Policy |
| NGO | Non-governmental organizations |
| PESA | Panchayat (Extension to Scheduled Areas) Act, 1996 |
| P for R | Program for Results |
| PAP | Program Action Plan |
| PDO | Project Development Objective |
| PRI | Panchayati Raj Institution |
| PVTG | Particularly Vulnerable Tribal Group |
| PWD | Public Works Department |
| RES | Rural Engineering Services |
| RGSM | Rajiv Gandhi Shiksha Mission |

| | |
|--------|---|
| RMSA | Rashtriya Madhyamik Shiksha Abhiyan |
| RTE | Right to Education |
| RTI | Right to Information |
| SAGES | Swami Atmanand General English-Medium Schools |
| SAC | State Council for Educational Research and Training (SCERT) Assessment Cell |
| SC | Scheduled Caste |
| SCERT | State Council for Educational Research and Training |
| SDMC | School Development and Management Committee |
| SDP | School Development Plan |
| SEA | Sexual exploitation and abuse |
| SH | Sexual harassment |
| SIEMAT | State Institute of Education Management and Training |
| SIP | School Improvement Plan |
| SMC | School Management Committee |
| SoE | Schools of Excellence |
| SPD | State Project Director |
| SRGBV | School-Related Gender Based Violence |
| SS | Samagra Shiksha |
| SSA | Sarva Shiksha Abhiyan |
| ST | Scheduled Tribe |
| TaRL | Teaching at Right Level |
| TLM | Teaching Learning Material |
| WCD | Women and Child Development |

EXECUTIVE SUMMARY

E1. Introduction to the Program

(i) **Background:** The school education system in Chhattisgarh caters to the educational needs of about 6.03 million students, of which 4 million study in government-managed schools across the 48,547 government-managed and 431 government-aided schools. About 70 percent of the student studying in Government schools belongs to Scheduled Caste (SC) or Scheduled Tribe (ST) community. The Gross Enrolment Ratio steadily declines from elementary (95.5 percent for girls and 95.4 percent for boys) to senior secondary (59.1 percent for girls and 49.7 percent for boys) level of education, remaining consistently higher for girls. In particular, the relatively lower enrolment for adolescent boys is indicative of dropouts caused by early entry into the workforce, albeit mostly in low-paying jobs in the informal sector.

(ii) The State has been witnessing a significant fall in school enrolment at the senior secondary level since its capacity to provide free-of-cost education decreases. Most senior secondary schools only provide an arts-oriented education due to the lack of science and mathematics teachers or appropriate facilities. While 85 percent of students in private schools are enrolled in the science and commerce streams, the corresponding statistic for government-managed schools is less than 40 percent. A lack of subject teachers in government-managed schools has resulted in language teachers teaching Mathematics, English, and Sciences. The network of government-managed schools has 176,250 teachers with most of them lacking access to the in-service training opportunities required by them.

(iii) The Chhattisgarh - Accelerated Learning for a Knowledge-Economy (CHALK) operation aims to build human capital by accelerating recovery from the COVID pandemic-induced learning losses. Within the overarching government program, the Government of Chhattisgarh (GoCG) envisions the proposed operation to strengthen: (a) the capacity of the nodal educational institutions to improve in-service professional development support for teachers, (b) learning assessment systems and corresponding remedial education support for students, (c) community-led development and management of model, composite schools offering science and commerce education at the senior secondary level, and (d) school management via capacity building support for principals. The PforR Program will be supported by an Investment Project Financing (IPF) Component to engage technical experts that can provide capacity-building and implementation support for nodal institutions.

(iv) **Program Development Objective:** The Program development objective (PDO) of the CHALK program is 'to improve the quality of school education and enhance access to senior secondary education'.

(v) The key **PDO Indicators** includes improving - Quality of school education - (a) Increase in Grade 4⁴¹ SC, ST and OBC students at and above grade level proficiency in Language and Mathe (percentage); (b) Increase in school completion rate at the secondary level (percentage), of which males (percentage); and access to senior secondary education – (c) Increase in enrolment in senior secondary education under science and commerce streams (number), of which male (number).

(vi) **Result Areas:** The program has four result areas. **Result Area-1 (RA-1):** Improved quality of teacher-student interaction for school education; **Results Area-2 (RA-2):** Improved, centrally developed, and digitally enabled student diagnostic and assessment systems for primary, upper primary, and secondary levels of education; **Results Area-3 (RA-3):** Decentralized school development and management for efficient and effective operation; and **Results Area-4 (RA-4):** School leadership development.

E2. Environmental and Social Systems Assessment (ESSA)

(vii) An Environmental and Social Systems Assessment (ESSA) for the CHALK program has been completed in line with the World Bank's Guidance for conducting ESSA for PforR financing operations. The findings and recommendations of the ESSA are based on the review of relevant environmental and social (E&S) management systems of the Samagra Shiksha (SS) Program in Chhattisgarh.

(viii) **Methodology:** The ESSA process adopted a methodology in which, (a) the E&S effects, including indirect effects, of activities associated with the Program were identified/analyzed; (b) borrower's systems for managing identified E&S effects, including a review of practices and the performance track record was assessed; (c) borrower's systems - laws, regulations, standards, procedures, and implementation performance were compared against the core principles and key planning elements to identify any significant differences that could affect Program performance. Based on this, the ESSA has recommended measures to strengthen performance on specific operational aspects relevant to managing risks and enhancing benefits/sustainability of the Program.

(ix) It involved comprehensive review of secondary information followed with consultations with key staffs at Samagra Shiksha State Implementation Society (SS-SIS), Department of Tribal and Scheduled Caste (DoTSC), Public Works Department (PWD), Rural Engineering Services (RES), district and block level Department of School Education (DoSE) staff, local body representatives prog Gram Panchayat and Municipal corporations, School Principals and teachers, and with community members and beneficiaries across select districts, along with primary field visit to districts and schools in Chhattisgarh.

(x) **Environment and Social Risks/Impacts:** The overall E&S impacts of the CHALK Program are likely to be positive, owing to benefits from enhanced quality of school education with improved learning environment in schools, enhanced capacities of teachers, and enhanced access to senior secondary level science and commerce education especially in the relatively poor and backward blocks with higher proportion of scheduled caste (SC), scheduled tribe (ST) and coal mining blocks of the state.

(xi) The project does not anticipate any land acquisition and/or any land restriction, and where required will use government land. The proposed 300 composite schools for infrastructure works will use land and building within its existing campus for extension and upgradation of school infrastructure. In addition, the program supports minor repair and refurbishments of existing buildings based on their requirements in other primary and secondary schools which will be undertaken within its footprint with no extension. The key social risks and impacts of the program emerges from (i) weak institutional capacity especially to engage with community in planning, development, and day-to-day management of schools; (ii) No standard fire safety norms being used for the schools; (iii) lack of provisions for universal access to students and teachers; (iv) lack of mechanism for maintenance of various facilities and equipment leading to disruption in services; (v) lack of systematic need assessment and planning for infrastructure at school level; (vi) Over crowding of students in tribal hostels; (vii) lack of geographic and need based planning to ensure equity and access especially among tribal and backward areas; and (viii) need for strengthening grievance redress mechanism especially for system of escalation and consolidated monitoring and reporting.

(xii) On the Environment side, there is a need for (i) institutional capacity development for environmental aspects at the State, District, School, and Parent Committee Levels, (ii) training on environmental management, (iii) strengthening of guidelines and preparation of online tools to aid environmental monitoring and long-term maintenance of facilities, equipment, and school environment. Environmental risks and Impacts associated with location of school premises, air/noise pollution in mining areas, noise, dust and disposal of construction waste, resource utilization during

construction, improper disposal of solid waste, lack of proper e-waste management, water, sanitation, and hygiene (WASH) issues, lack of proper drinking water (borewells and Reverse Osmosis) not choosing correct tree species for air, noise pollution as per local biodiversity, and lack of integration of renewable energy in school design. **OHS and CHS** issues include fire and electric safety, possible traffic incidences with construction vehicles in school properties; inconveniences, and disruptions to school activities during construction period, possible health and safety issues for the students, teachers, workers, and the larger community visiting the schools.

(xiii) Further, school construction activities may generate issues such as: (i) uncontrolled construction activities that would result in affecting natural resources. Unplanned dumping of construction and demolition waste may clog natural water channels and may result in soil degradation. Untreated or poorly treated sewage may pollute surface water sources. Uncontrolled groundwater extraction may reduce water availability to existing users. (ii) weak institutional capacity for environmental and social activity implementation would result in not utilizing the bio-degradable waste and mismanagement of solid waste by not segregating the waste at the source and dumping it in or around the school campuses; (iii) lack of understanding of local geology while sourcing groundwater may result in a risk of non-potable water being made available to users. Further availability of potable drinking water may be affected by specific groundwater conditions and inappropriate and poorly maintained water treatment facilities; (iv) Ad hoc use of standard designs without understating the climatic conditions and not following green building guidelines would result in poorly designed classrooms lacking sufficient light and ventilation creating sick building syndrome. Paving the entire campus would result in a reduction in groundwater recharging and an increase in the heat island effect; (v) Absence of guidelines about plantation would result in the plantation of non-native, invasive flora in the school campus; (vi) in some school's the land may belong to the forest department and thus legal procedures may delay the actual construction (vii) lack construction safety guidelines may result in occupation health and safety concerns for the labors.

(xiv) Therefore, the overall E&S risk rating is 'moderate', given that most of the E&S effects of the Program are likely to be localized/site specific, reversible, predictable, and can be effectively mitigated by complying to existing environmental regulations/codes/standards/guidelines and by strengthening the existing E&S management systems, for which specific recommendations have been made.

(xv) **Assessment of borrower's capacity and systems:** Capacities and systems at Samagra Shiksha (SS-SIS), Public Works Department (PWD) and Rural Engineering Services (RES) were assessed. For the CHALK program, the most relevant ESSA core principles are those dealing with promoting environmental and social sustainability in the program design (including mitigation at infrastructure design and construction stages), public and workers safety and rights and interests of indigenous people (or Scheduled Tribes). The assessment benefited from the experience of implementing Environmental Management Frameworks (EMFs) developed under SSA (primary school) and RMSA (secondary school) programs of the MHRD (now Ministry of Education), both supported by the Bank. These EMFs, which include key environmental, health and safety actions, have been adopted under the Samagra Shiksha Framework (SSF) and remain relevant to interventions under CHALK program. The SSF requires school buildings/infrastructure to be environment-friendly and provide for clean/hygienic and safe learning environment in the campus.

(xvi) The Samagra Shiksha guidelines provide the institutional mechanism for school education program implementation along with detailed roles and responsibilities and that is being followed in the state. It also follows the process of consultations with various stakeholders, community mobilization and also aims create transparency and accountability in the program implementation at the school level through participation of community members and other stakeholders in SMC/SDMC. The Samagra Shiksha also identifies children of Scheduled Castes (SC), Scheduled Tribes (ST),

minorities, low-income households, and children with special needs (CWSN) children etc. and attempts to provide educational opportunity in an inclusive environment free from discrimination. The Right to Education (RTE) Act, 2009 further addresses gender and social equity within a framework that is holistic and systemic. However, the implementation at the state level requires strengthening in areas of incorporating infrastructure design measures in line and spirit with SSF and addressing universal access, fire safety, norms for minimum space for classrooms and hostels, and maintenance mechanisms for upkeep of facilities and equipment, along with strengthening community and stakeholder participation and building institutional capacity for transparency and accountability.

(xvii) The Public Works Department (PWD) has the capacity to undertake the school construction work, as they have experience in constructing and maintaining schools in Chhattisgarh. They have their own structural design and electric and mechanical teams, labs to test water portability and the ability to connect with other agencies, as needed, to meet any specific needs required by the individual clients. The Rural Engineering Services (RES) department has a presence in each district and works together with the district collectors. They have the capacity for all kinds of repair, maintenance, and small construction and upgradation work. Most SAGES schools to date have been built under the supervision of RES.

(xviii) Both departments, PWD and RES, would need capacity building in the following aspects: (i) Establishing a protocol to convey the requirements (which would include feedback from the existing users) of The Directorate of Information to the design and construction agency for comprehensive planning of the required buildings; (ii) Ensuring timely inputs of other departments viz. Public Health Engineering, Horticulture, Ground Water Board, etc. in the design process to make the design robust; (iii) Inclusion of design agencies and defining their scope to ensure the buildings are designed as per site conditions and on green building principles; (iv) Establishing in-house environmental and social expertise to ensure sustainability principles are followed in the design and operations of the schools; and (v) Preparing checklists and procedures to include environmental, social, health, and safety aspects in the supervision and monitoring mechanism.

(xix) **Summary of Identified Gaps:** The key environmental gaps identified includes (a) in Design: (i) there is guidance in SSF about school safety including fire safety, in practice, it has not been fully followed in the schools visited; (ii) lack of wholistic design approach results in buildings lacking climate responsive design, thermal comfort and safe / sustainable campus trees; (b) in Construction: (i) lack of early screening of E&S impacts and also limited awareness among the school management including SMCs/SDMCs about national/ state laws and revaluations about pollution; (ii) awareness about EHS and OHS provisions under the framework for civil construction is low among Principals, SMCs/ SDMCs, and among other stakeholders; (iii) limited involvement of SMC/ SDMC in planning and monitoring of any infrastructure work in schools; and (c) in Operation and Maintenance: (i) gaps observed in following any fire safety norms in the schools; also, awareness about SSF and School safety norms among many Sub-engineers supervising the school construction seems lacking; (ii) operation and maintenance Issues of efficient functioning of environmental infrastructure (water filtration, sanitary pad vending machine, solid waste management, cleaning of septic tanks, etc.).

(xx) The key social gaps identified includes (a) School Improvement Plans not being prepared to consolidate and spell out the requirement in a consolidated manner at the school level; (b) Features for universal access is missing in most schools visited; also, the SSF infrastructure design norms are not being followed properly including for universal access and school safety; (c) Planning for hostels require undertaking a needs assessment considering the local geographical situation, and local need and demand, especially for boosting retention of boys in secondary and higher secondary levels in remote pockets such as SC and ST areas and mining blocks.

(xxi) **Excluded Activities:** Activities causing high or substantial E&S risks and impacts are not financed under the current program, and they include: (a) Any land acquisition, physical relocation and/or involuntary resettlement impacts; (b) Activities that are not in compliance with Central and State environmental legislation; (c) Use of child or bonded or forced labor or labor involved in any hazardous activities; (d) Destruction or damage to any physical and cultural resources; (e) Construction within all protected/forest areas (including National Parks, Wildlife Sanctuaries, Wildlife Corridors) and, within Eco-Sensitive Zones for which final or draft notifications have been published by the Ministry of Environment, Forests and Climate Change, Government of India; (f) Construction or demolition in areas within 300m radius of Nation/ State protected monuments (including 100m from limit of the protected area – which is the prohibited area, and 200m Regulated area from the boundary or protected area or as declared by the Government); (g) Construction, renovation or dismantling works involving ‘asbestos containing material’; and (h) Use or generation of hazardous materials or chemicals beyond permissible levels, as specified in Schedule II of the Hazardous Waste Handling and Management Rules of 2016.

E3. Key Recommendations

(xxii) **Key Recommendations towards Strengthening Environmental and Social Systems: Key Recommendations towards Strengthening Environmental and Social Systems:** The key recommendations towards strengthen environmental and social systems and promoting sustainable practices under the current PforR includes: **(A) General:** (a) SS-SIS to recruit nodal officials/experts responsible for coordinating, guiding, supervising, implementation of key Environmental and Social actions; and (b) Screening for E&S risks and impacts for all civil works at composite schools to ensure avoid any adverse environmental and social impacts; **(B) environmental Systems:** (a) **in Design:** (i) Establish a mechanism to draw up from the school improvement Plan from user to convey the requirements (which would include feedback from the existing user) of The Directorate of Information to the design and construction agency for comprehensive planning of the required buildings; (ii) Ensuring timely inputs of other departments viz. Public Health Engineering, Horticulture, Ground Water Board etc. in the design process to make the design robust; (iii) Use of design architects to ensure the buildings are designed on green building principles; (iv) Appointment of an Environment officer in SS-SIS to supervise the E&S related works; and (iv) Creating green code for the building design to ensure sustainable resource utilization; (b) **in Construction:** (i) Preparing checklists and procedures to include environmental, social, health, and safety aspects in the supervision and monitoring mechanism. Identifying specific role and training of SMC/SDMC in EHS/ OHS aspects; and (c) **in Operation and Maintenance:** (i) Prepare environmental management guideline and monitoring mechanism for schools to ensure compliance with state and national laws for solid waste/ E-waste management, maintenance of septic tanks/ sewage treatment plants; functioning of water purification systems, and scientific disposal of sanitary pads; **(C) Social Systems:** (a) Institute mechanism of developing School Improvement Plan by the SMCs/SDMCs prior to initiating detailed DPR preparation for the composite school infrastructure creation; (b) School design to ensure universal access features and safety norms in line with SSF guideline and National Disaster Management guidelines for school safety; (c) Undertake need assessment for the hostel facilities based on secondary information available with SS-SIS, DoSE, and DoTSC; (d) Develop mechanism for enhanced capacity and participation of SMC/ SDMC in decision making for school improvement plan, and operation and maintenance of school infrastructure and facilities; (e) Strengthening grievance redress mechanism especially for system of escalation and consolidated monitoring and reporting.

(xxiii) **Program Action Plan:** The Program will ensure adequate resources are provided for timely and effective implementation of environmental and social measures and the key recommendations will be made a part of the Program Action Plan (PAP). A draft list of PAP actions is presented below.

| Action description | Responsibility | Timing | Completion Measurement |
|---|----------------|---|--|
| 1. Recruitment of Environment and Social Development Specialists in SS-SIS to supervise the E&S related works | DoSE/ SS-SIS | One time activity (After the signing of the Financial Agreement) | (1) SS-SIS has recruited (a) Environmental and (b) Social Development Specialists for the CHALK program |
| 2. Institute mechanism of developing School Improvement Plan by the SMCs/ SDMCs prior to initiating detailed DPR preparation for the composite school infrastructure creation. | DoSE/ SS-SIS | Development and Notification -One time (within 6 months of program effectiveness) Rest - Ongoing | (1) School Improvement Plan (SIP) template developed in line with SSF and notified. (2) Districts and block level staff, and proposed composite school staffs trained on SIP. (2) SIP is made mandatory for schools to be taken under CHALK program for composite school |
| 3. School design for composite schools to ensure universal access features and safety norms in line with SSF guideline and National Disaster Management guidelines for school safety. | DoSE/ SS-SIS | Development and Notification -One time (within 12 months of program effectiveness) | School design incorporates universal access features and school safety norms in line with SSF guideline and School Safety guideline of NDMA. |
| 4. Strengthening Grievance Redress Mechanism (GRM) for registering, screening, redressing, and monitoring of grievances, and periodic reporting on the same. | DoSE/ SS-SIS | One time activity (within 12 months of program effectiveness) | Strengthened GRM system functional and periodic reports being generated. |
| 5. Climate responsive, sustainable building design and maintenance through development of green code/ green building certification system for CHALK schools | DoSE/ SS-SIS | One time activity (within 12 months of program effectiveness) | School design compliant with green code/ certification system |
| 6. Training and capacity building for ESHS management in school education systems (covering teachers, SDMC, agencies involved in creation/ maintenance of required infrastructure) | DoSE/ SS-SIS | Periodic, starting within 6 months from program effectiveness | Preparation of training modules for different target groups and it's timely rollout |

1 INTRODUCTION TO THE PROGRAM

1.1 Background and Context

1. Chhattisgarh has a population of over 30 million of which more than 40 percent lives below poverty line. The share of Scheduled Caste (SC) and Scheduled Tribes (ST) in the State population is 12.8 percent and 30.6 percent respectively. The State is vulnerable to droughts and floods due to erratic monsoons and heat waves that can force extensions of the annual school summer break and reduce the number of days for instruction.

2. Chhattisgarh has 56,303 schools of which 48,547 (86.2 percent) are government-managed, 431 (0.76 percent) are private government-aided, and the remaining 13.04 percent are private schools. The State has a school enrolment of 6.03 million students, of which 4 million study in government-managed schools. More than 70 percent of them are SC or ST. The Gross Enrolment Ratio steadily declines from elementary (95.5 percent for girls and 95.4 percent for boys) to senior secondary (59.1 percent for girls and 49.7 percent for boys) level of education, remaining consistently higher for girls. In particular, the relatively lower enrolment for adolescent boys is indicative of dropouts caused by early entry into the workforce, albeit mostly in low-paying jobs in the informal sector.

3. The State has been witnessing a significant fall in school enrolment at the senior secondary level since its capacity to provide free-of-cost education decreases. As per the latest State records, 350,000+ students entering government-managed primary schooling are likely to reach the final year of secondary schooling with about 2 percent dropouts. However, only 225,000 students can transition to senior secondary schooling due to the non-availability of seats. Most senior secondary schools only provide an arts-oriented education due to the lack of science and mathematics teachers or appropriate facilities. While 85 percent of students in private schools are enrolled in the science and commerce streams, the corresponding statistic for government-managed schools is less than 40 percent. To address this issue, since 2020, the government has developed 176 schools offering science and commerce education. These schools have attracted about three times more applications than the number of seats available. Essential for ensuring access, fragmented school operations in sparsely populated areas with low enrolment have led to a high per-pupil expenditure and multi-grade teaching. Prioritizing the development of relatively large schools operating with a critical mass of teachers and students may allow respectable economies of scale, improve expenditure efficiency, and decrease the per pupil expenditure.

4. The network of government-managed schools has 176,250 teachers with most of them lacking access to the in-service training opportunities required by them. About 82,000 (47 percent) of them are teaching at the primary level (Grades 1 to 5), about 47,500 (27 percent) at the upper primary level (Grades 6 to 8), and 46,750 (27 percent) at the secondary (Grades 9 and 10) and senior secondary (Grades 11 and 12) levels. A lack of subject teachers in government-managed schools has resulted in language teachers teaching Mathematics, English, and Sciences. The State has limited fiscal space to hire new teachers despite an increasing availability of teachers in the market. In the interim, providing teachers with structured lesson plans has been identified as a priority by the State. The State has commenced working on a system that allows teachers to choose from a menu of training (including pedagogical aspects) enabling them to seek specific support. However, it needs technical support and manpower to deliver the volume of modules needed. Similar challenges exist in in-service professional development support for school principals and head teachers, impacting their ability to provide adequate academic and administrative leadership to school operations.

5. The Chhattisgarh Accelerated Learning for a Knowledge-Economy (CHALK) project aims to build human capital by accelerating recovery from the COVID pandemic-induced learning losses. Having recorded some of the lowest student learning levels in the National Achievement Survey (2021), Chhattisgarh has been one of the first states to adopt critical measures for addressing learning losses. CHALK will support these measures and positively impact marginalized communities (SCs, STs, and OBCs), which account for about 95 percent of enrolment in government-managed schools. CHALK will support the development of additional, community managed, model schools in ST blocks, SC blocks and coal mining affected blocks of the State. These blocks have a disproportionate concentration of the poor in the State.

1.2 Program Design

6. The Chhattisgarh - Accelerated Learning for a Knowledge-Economy (CHALK) operation aims to build human capital by accelerating recovery from the COVID pandemic-induced learning losses. Within the overarching government program, the GoCG envisions the proposed operation to strengthen: (a) the capacity of the nodal educational institutions to improve in-service professional development support for teachers, (b) learning assessment systems and corresponding remedial education support for students, (c) community-led development and management of model, composite schools offering science and commerce education at the senior secondary level, and (d) school management via capacity building support for principals. The PforR Program will be supported by an Investment Project Financing (IPF) Component to engage technical experts that can provide capacity-building and implementation support for nodal institutions.

7. Having recorded some of the lowest student learning levels in the National Achievement Survey (2021), Chhattisgarh has been one of the first states to adopt critical measures for addressing learning losses. CHALK will support these measures and positively impact marginalized communities (SCs, STs, and OBCs), which account for about 95 percent of enrolment in government-managed schools. CHALK will support the development of additional, community-managed, model schools in ST blocks, SC blocks and coal mining-affected blocks of the State. These blocks have a disproportionate concentration of the poor in the State.

8. **The Program Development Objective (PDO)** is ‘to improve the quality of school education and enhance access to senior secondary education’. The PDO indicators include: Quality of school education - (a) Increase in Grade 4 SC, ST and OBC students at and above grade level proficiency in Language and Mathematics (percentage); (b) Increase in school completion rate at the secondary level (percentage), of which males (percentage); and access to senior secondary education – (c) Increase in enrolment in senior secondary education under science and commerce streams (number), of which male (number).

1.2.1 Program Components

9. The CHALK Program has four Results Areas. The sub-sections below present the details of each Results Areas:

10. **Results Area 1 (RA-1) – Improved quality of teacher-student interaction for school education:** CHALK will support the SCERT to better respond to the in-service training needs and support materials (exemplar video lessons and digital content) required by teachers. For primary education, it will support the development and rollout of a short-term, multiyear, in-service training course to (a) facilitate a shift towards TaRL with priority to essential foundational level competencies, and (b) build teacher capacity to manage teaching in a multigrade-multilingual classroom. For upper primary and secondary education, it will support: (a) a shift towards need-based training where

teachers have the option to create customized annual training plans from a list of subject-specific and pedagogical modules developed based on insights from SLAS, and (b) the development and rollout of grade and subject-wise lesson plans.

11. **Results Area 2 (RA-2) – Improved, centrally developed, and digitally enabled student diagnostic and assessment systems** for primary, upper primary, and secondary levels of education. CHALK will support the SAC in (a) designing school-based formative and summative assessments with digitally enabled recording and analysis of student responses; and using the same to generate class and student-specific remedial education plans; and (b) in strengthening system-level assessments as tools for informing education policy and practice across the state.

12. **Results Area 3 (RA-3) – Decentralized school development and management for efficient and effective operation:** CHALK will facilitate a shift to a context-specific infrastructure development/refurbishment and management of schools via incentives for operating at economies of scale, greater operational efficiency, and better teacher effectiveness. Each model school will be: (a) large composite (Grades K to 12) school managed by a semi-autonomous school management society; (b) set up to operate with a critical mass of teachers, recruited flexibly to meet the school's needs, and a school principal appointed via a merit-based selection process; (c) providing science and commerce education at senior secondary level with associated facilities, including, science and ICT laboratories, smart classrooms, etc.; and (d) periodic school monitoring with parents participation to facilitate greater accountability, proper maintenance of facilities, and better utilization of resources. Under this, the operation will support:

1. GoCG's efforts to improve the operational efficiency and effectiveness of at least 600 schools, enhancing their capacity to provide improved quality education to a large number of students through better availability of teachers (especially subject teachers), strong school leadership and management, and adequate learning facilities.
2. Infrastructure development/refurbishment across 300 schools with a focus on improving the learning environment, providing facilities essential for supporting science and commerce education at the senior secondary level, setting up residential facilities for boys¹ in blocks with low population density and poor physical connectivity, and a set of critical management reforms (summarized below).
3. In addition, the state has identified up to 425 schools that have necessary infrastructure/facilities and can be strengthened to operate as model, composite schools through the set of management reforms (summarized below).

| Area of School Operation | Prevailing Landscape | Proposed Shift |
|-----------------------------------|---|--|
| Level of School Education Offered | Primary (Grades 1 to 5), or Elementary (Grades 1 to 8), Secondary (9 to 10), or Senior Secondary (Grades 9 to 12) | Composite School (Pre-primary to Grade 12) |
| Average Enrolment | 65 to 200 | 600 to 1,200 |
| Per Pupil Expenditure | US\$445 | US\$295 |
| School Principal | Seniority based promotion | Merit-based selection |

¹ Residential schools for girls are already available across the state and supported under the Kasturba Gandhi Balika Vidyalaya initiative under the centrally sponsored scheme for school education (Samagra Shiksha). These schools identify out of school-girls, enroll them in residential schools, provide them with bridge education, and intensive remedial education to bring them at par with grade level academic expectations. No such initiative is available for boys.

| Area of School Operation | Prevailing Landscape | Proposed Shift |
|--------------------------|--|---|
| Teacher Availability | Each teacher managing 2-3 grades; English, Science, and Mathematics teachers are not available as required | At least one teacher per grade; Subject specialized teachers; Senior faculty available to mentor teachers |
| School Management | Directly under the purview of the DoPI | Semi-autonomous society with greater autonomy for school level planning, budgeting and management |

4. CHALK will also support the development and roll out of a school performance evaluation (social audit) tool that will allow parents to periodically assess and provide feedback on the model, composite schools functioning. With each school being setup as a semi-autonomous society headed by the district level administration, this will help facilitate expedient response to any administrative and operational issues at the school. Environment and social aspects will be a focus area under the school. School safety, School Related Gender Based Violence (SRGBV), functionality of Grievance Redressal Mechanisms (GRM), maintenance of facilities, transparency in admissions processes, availability of teachers, etc. will all feature prominently in the tool. The operation will also support the state in subsequently developing a lighter version of the tool that would be relevant for a state-wide rollout to cover all government-managed schools.

13. **Results Area 4 (RA-4) – School leadership development:** CHALK will support the SIEMAT in providing in-service academic and administrative leadership training to school principals, helping them gain improved mastery in school leadership competencies, Disaster Risk Management (DRM), and SRGBV.

1.3 Government Program and Bank Financed Program (P Vs p)

14. The government Program comprises the *Samagra Shiksha* (SS) funding for quality interventions and the State budget that is predominantly earmarked for teacher salaries and student entitlements. SS funds interventions in areas such as foundational learning, teacher professional development, professional development support for teacher educators, remedial education support for students and other learning enhancement initiatives, learning assessments, technology enabled interventions (including strengthening of digital infrastructure in teacher education institutions, and schools), school-based vocational education, and special initiatives for out of schools children (especially residential schools for girls; SS does not currently support any investments in residential schools for boys). The state budget is mostly used to cover teacher salaries (including subsidies for government-aided private schools), school development and maintenance/operation, and scholarships and student entitlements (textbooks, uniforms, mid-day meals, etc.). About 84.8 percent of the total budget (SS and state budget) is used to pay salaries, and about 10 percent for student entitlements. This limits the funds available for improving the quality of school education and for investments in strengthening the network of government schools to enhance access to senior secondary education.

15. Within the overarching government program, the GoCG envisions the proposed operation to strengthen: (a) the capacity of the nodal educational institutions to improve in-service professional development support for teachers, (b) learning assessment systems and corresponding remedial education support for students, (c) community-led development and management of model, composite schools offering science and commerce education at the senior secondary level, and (d)

school management via capacity building support for principals. The mapping of the Government program and the boundary for the PforR Program are summarized below.

| | Government program | PforR Program | Reasons for non-alignment |
|---------------------|---|--|---|
| Objective | To facilitate post-COVID education recovery by strengthening teaching-learning and supporting the State in implementing the vision of NEP 2020 | To improve the quality of school education and enhance access to senior secondary education | The PDO provides greater outcome orientation and facilitates the measurability of results. It prioritizes results aimed at accelerating recovery from the learning losses caused by the COVID-19 pandemic. |
| Duration | July 2023 to December 2028 | | Not Applicable |
| Geographic coverage | All government-managed and government-aided schools | All government-managed schools | The PforR Program will only support government-managed schools where majority students are SC and ST |
| Results areas | RA-1: In-service teacher professional development RA-2: Improved student diagnostic & assessment RA-3: Universal access to elementary and improved access to secondary education (school construction, mid-day meal, student entitlements, and salaries) RA-4: School leadership development RA-5: pre-service professional development programs RA-6: Improved access to vocational education. | RA-1: Improved quality of teacher-student interaction RA-2: Improved student diagnostic and assessment systems RA-3: Decentralized School Development and Management for Efficient and Effective Operation RA-4: School leadership development | RA-1 expands the purview of support to teachers to cover in-service training and provision of resource materials RA-3 would restrict focus on a limited number of model schools, incentivizing system-level reforms to support community-led development and management of schools RA-5 of the Government Program is excluded given that Post-2024, pre-service training will be under the purview of the Department of Higher Education RA-6 of the Government program is excluded as the state has initiated a model wherein students can simultaneously pursue their school leaving certificate and a degree from an Industrial Training Institution. Support to the latter is covered under an existing Bank project - Skill Strengthening for Industrial Value Enhancement (P156867) |
| Financing | US\$ 8.285 billion | US\$ 503.1 million | |

1.4 Program expenditure framework and financing

16. CHALK will account for about 6.3 percent of the government program, and 43 percent of it will be financed via counterpart financing. Over the last three years, the government program has grown at a Compound Annual Growth Rate (CAGR) of about 4.6 percent. This should help sustain the operation's results. CHALK will enable the State to more than double its expenditure on quality-related aspects while using the government program to cover for teacher salaries. The community-led development of the model schools will foster greater expenditure efficiency through a reduction in the per pupil expenditure from US\$445 to US\$295 per annum resulting from economies of scale. This will help free up the State's annual incremental budget to sustain Program results. The table below summarizes the Program financing.

Table 1: Program Financing

| Source | Amount (\$ Million) | Percentage |
|--|---------------------|------------|
| Overall government program (excluding CHALK) | 8,285 | |
| Of which, the state budget | 8,003 | 97% |
| Of which, <i>Samagra Shiksha</i> | 282 | 3% |
| CHALK Program | 525.6 | |
| Counterpart funding (state budget and <i>Samagra Shiksha</i>) | 225.6 | 43% |
| International Bank for Reconstruction and Development (IBRD) | 277.5 | 53% |

IPF Component supporting CHALK Program

22.5

17. A preliminary expenditure framework highlighting the direct and implicit leverage for the CHALK operation, and results area-wise mapping of expected expenditures are summarized below².

Table 2: Program Expenditure mapped onto the results areas

| # | Budget Line Item | Result Area | Government Budget (p) | WB Financing | PforR (P) | IPF |
|----|---|-------------|-----------------------|--------------|-----------|--------|
| 1 | Teacher, Teacher Educator, and BRC and CRC Salaries | | \$6,997.6 | | | |
| 2 | School Infrastructure and strengthening of Existing Schools | RA-3 | \$80.5 | \$242.5 | \$323.0 | |
| 3 | School Maintenance and Operation Cost | | \$88.0 | | | |
| 4 | Mid-day Meal | | \$357.6 | | | |
| 5 | Education Boards/Councils | | \$5.7 | | | |
| 6 | Scholarships, Transport Allowance, and Entitlements | | \$381.6 | | | |
| 7 | Support for Foundational Literacy and Numeracy | RA-1 | \$11.9 | \$2.5 | \$14.4 | \$4.0 |
| 8 | Grants and Aid to Private-Aided Schools | | \$192.0 | | | |
| 9 | Funds for Quality (Remedial Education/LEP, Innovation, and so on) | RA-1, RA-2 | \$21.5 | \$12.5 | \$34.0 | |
| 10 | Vocational Education | | \$7.2 | | | |
| 11 | Teacher Educators Professional Development | RA-1 | \$1.6 | \$12.5 | \$75.0 | \$7.0 |
| 12 | In-service Teacher Training and Head Teacher Training | RA-1 | \$1.0 | | | |
| 13 | TEI Infrastructure and Maintenance | RA-1 | \$59.9 | | | |
| 14 | Academic support through BRCs and CRCs | RA-4 | \$9.9 | \$2.0 | \$11.9 | \$2.0 |
| 15 | Community Mobilisation | RA-4 | \$2.7 | \$0.5 | \$3.2 | |
| 16 | Sports and Physical Activities | | \$6.0 | | | |
| 17 | Assessment at the National and State Level | RA-2 | \$12.3 | \$2.0 | \$14.3 | \$2.0 |
| 18 | Support for Inclusive Education | RA-1 | \$2.4 | \$0.5 | \$2.9 | |
| 19 | ICT And Digital Initiatives (including EMIS) | RA-4 | \$12.0 | \$0.0 | \$12.0 | \$5.5 |
| 20 | Project Management, Monitoring, and Evaluation | RA-3, RA-4 | \$10.0 | \$2.5 | \$12.5 | \$2.0 |
| 22 | Others | | \$23.7 | | | |
| | | | \$8,285.0 | \$277.5 | \$503.1 | \$22.5 |

18. The program is also supported through the IPF Technical Assistance Component which will (a) extend capacity-building support to nodal education institutions through the engagement of technical experts for (i) provision of in-service capacity-building support to teachers, (ii) developing resource materials for remedial education, and (iii) managing student learning assessments; (b) support the development of an Education Management Information System (EMIS), (c) support the engagement of a Project Management Consultant (PMC) and an Independent Verification Agency (IVA) for the validation of Program results.

19. **The Program Disbursement Linked Indicators (DLIs):** CHALK uses the Program for Results (PforR) instrument with a supporting IPF component/project. Under the PforR instrument, funds will be disbursed on the achievement of specific results, measured by Disbursement Linked Indicators (DLIs) summarized below. The IPF component will disburse against expenditure. The results to be delivered under the same have not been included in the DLIs. Apart from the three PDO indicators,

² The budget heads are based on the major heads of expenditure under the SS initiative. The list of budget heads is well-defined and has remained consistent over years. This allows for the state budget to be clearly collated and presented together with the SS budget/expenditure. Apart from contributing toward 40 percent of the SS budget, the state budget only funds teacher salaries (1), school maintenance and operational costs (3), education boards/councils (5), and scholarships (6).

results from seven intermediate outcome indicators have been included as DLI indicators. These have been selected based on the extent to which they signal the implementation of critical actions or realization of key output, and the perceived need to introduce a strong financial incentive to deliver the same.

| # | Disbursement Linked Indicator | Allocation (US\$ Million) | | | | | | |
|--------------|---|---------------------------|---------------|---------------|---------------|---------------|---------------|--------------|
| | | Prior Results | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Total |
| 1 | Increase in the percentage of Grade 4 SC, ST and OBC students at and above grade level proficiency in Language and Math | 0.00 | 10.00 | 0.00 | 8.00 | 0.00 | 8.00 | 26.00 |
| 2 | Increase in school completion rate at the secondary level | 0.00 | 0.00 | 5.00 | 0.00 | 5.00 | 0.00 | 10.00 |
| 3 | Increase in enrolment in senior secondary education under science and commerce streams | 0.00 | 12.00 | 0.00 | 6.00 | 0.00 | 6.00 | 24.00 |
| 4 | Improved teacher capacity to support the utilization of TaRL in the primary grades | 0.00 | 4.50 | 2.625 | 2.625 | 2.625 | 2.625 | 15.00 |
| 5 | Increase in access to need-based in-service teacher training for Grade 6 to Grade 10 teachers | 0.00 | 1.00 | 6.00 | 4.50 | 0.00 | 6.00 | 17.50 |
| 6 | Increase in use of diagnostic assessment tools for the provision of remedial support | 0.00 | 3.00 | 4.00 | 5.00 | 3.00 | 0.00 | 15.00 |
| 7 | Increase in the number of model composite schools offering science and commerce education at the senior secondary level | 50.00 | 22.50 | 35.50 | 22.50 | 19.50 | 0.00 | 150.00 |
| 8 | Improved academic and administrative leadership competencies of school principals and head teachers | 0.00 | 1.8 | 6.00 | 3.00 | 0.00 | 4.2 | 15.00 |
| 9 | School Governance DLI (Placeholder) | 0.00 | 2.50 | 2.50 | 0.00 | 0.00 | 0.00 | 5.00 |
| Total | | | 107.30 | 61.625 | 51.625 | 30.125 | 26.825 | 277.5 |

1.5 Geographic Scope and Profile

20. **Program Scope:** While the program will be support state-wide capacity building and institutional strengthening measures, it prioritises the development of additional, community managed, model schools in ST blocks, SC blocks and coal mining affected blocks of the State. These blocks have a disproportionate concentration of the poor in the State.

21. **Demography:** As per census 2011, the population of Chhattisgarh was about 25.5 million which is likely to be over 30 million by now. As per census 2011, the overall literacy rate has been 70.3 percent, with male literacy being 80.3 and female literacy being 60.2 percent lower than the national average of overall literacy being 74.04 percent, with 82.14 percent as male literacy and 65.46 percent as female literacy. The average literacy rate among SCs is 70.8 percent and for STs being 59.1 percent. The literacy rate among females in the ST category is abysmally low at 48 percent.

22. Chhattisgarh has one of the highest shares of Scheduled Tribe (ST) populations within a state, accounting for about 10 percent of the STs in India. Scheduled Tribes make up 30.62% of the population in the state. The tribal are an important part of the state population and mainly inhabit the dense forests of Bastar and other southern districts of the state and some pockets of norther districts in the state. They are primarily dependent on forest produce for their livelihood, and, at 51 percent

register among the highest poverty rates in the country. Scheduled caste (SC) account about 12.8 percent of the population in the state and varies across districts.

23. **Economy:** The pace of poverty reduction however has been slower than in other Low-Income States as 40 percent of the state population lives below the poverty line which is just double of country figure. poverty and malnutrition are concentrated in northern and southern tribal majority regions of the State. The state has lagged behind in growth as well. Most industrial development and primary sector growth are restricted to the central plain areas, while the northern and southern regions have the highest concentration of poverty. In addition, consumption inequality has increased, particularly in urban areas. About 80 percent of the State population is dependent on the agriculture sector which contributes only 17 percent to the State GSDP. The State is vulnerable to droughts and floods due to erratic monsoons and heat waves which further impacts growth. the State's rich biodiversity provides an opportunity for the State to facilitate sustainable growth across primary sub-sectors in an integrated manner. The three diverse agro-climatic zones in the state are the Central Plains, Northern Hills and Southern Bastar Plateau are enablers toward further diversification.



24. **Schedule-V Areas:** In Chhattisgarh, 13 district fully and 6 districts partially are notified under the Scheduled V area, where the “The Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996 or “PESA” is applicable for ensuring local self-governance through traditional *Gram Sabhas*.

25. **Left Wing Extremism (LWE) Areas:** As of 2018, 14 of the 27 districts in the State were affected by Left Wing Extremism (LWE) and 8 of them are amongst the 30 most affected districts in the country³. The LWE districts have high concentration of tribal population, with 49.3 per cent of the total population of these districts comprising STs. The ST population accounts for 17.9 per cent of the total population in the non-LWE districts and 30.6 per cent in the State as a whole. The STs constitute more than 75 per cent of the total population in the LWE districts like Bijapur, Dakshin Bastar, Dantewada, and Narayanpur.

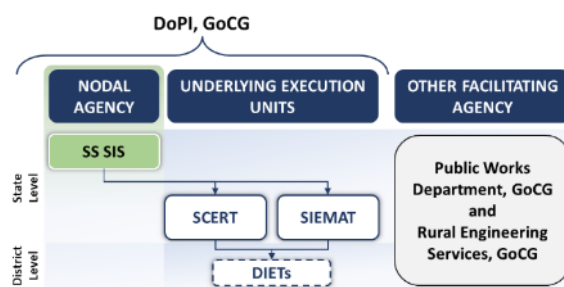
26. Although overall LWE-related violence has decreased in the country, Chhattisgarh remains at the heart of the conflict. Factors which had previously contributed to overall exclusion of these regions and furthered LWE are being addressed through the Government of India's multi-pronged strategy which aims to strengthen State service delivery, improve community participation and enable access to entitlements and State-led developmental initiatives. Chhattisgarh is like other resource rich economies: as a positive correlation between resource dependence and conflict occurs, conflict drives down other economic activity and increases economic dependence on the resource sectors. Addressing social unrest by diversifying economic opportunities is thus central to the development of the State⁴.

³ <https://mha.gov.in/MHA1/Par2017/pdfs/par2018-pdfs/ls-14032018/2121.pdf>

⁴ <https://www.mha.gov.in/en/divisionofmha/left-wing-extremism-division>

1.6 Program Implementing Agencies and Partners

27. The Directorate of Public Instruction (DoPI), under the Department of School Education (DoSE), Government of Chhattisgarh (GoCG) is responsible for the overall planning and management of school education. The State Implementation Society (SIS) for *Samagra Shiksha* (SS) works under the aegis of the DoPI, GoCG to manage interventions. The State Council of Education Research and Training (SCERT) is the nodal educational institution that works with



a network of District Institutes of Education and Training (DIETs) to manage teacher professional development, learning assessments, and remedial education. The State Institute of Education Management and Training (SIEMAT) is the nodal educational institution that provides in-service training support to school principals. The Public Works Department (PWD) and the Rural Engineering Service (RES), GoCG support the DoPI with any civil works. The SIS for SS, the SCERT, and the SIEMAT have experience of implementing Bank-supported centrally funded projects⁵. The CHALK operation will leverage the State's existing institutional arrangements for Program implementation. The SIS for SS will be the nodal implementing agency. It will be responsible for non-civil works procurement, overall financial management of the program, results monitoring and reporting, and overall coordination between the various implementing agencies/institutions. With the support its small engineering wing, the SIS for SS will also be responsible for overall coordination and monitoring of the environment and social aspects associated with the operation. The SCERT will be the implementing agencies for activities in the areas of teacher professional development (RA-1). A State Assessment Cell (SAC) housed at the SCERT be responsible for activities in the area of student learning assessments and corresponding remedial support (RA-2). SIEMAT will be responsible for the delivery of activities on school leadership and EMIS development (RA-4). The District Institutes of Education and Training (DIETs) and an underlying, decentralized network of block level centers and academic resource persons will support the SCERT and the SIEMAT to deliver activities at the district and sub-district levels as is the case under the existing structures and procedures. The SIS will be strengthened to house an umbrella society that will be responsible for managing the network of model composite schools. The Public Works Department (PWD) and the Rural Engineering Services (RES) of the GoCG will manage the construction/redevelopment of the large composite schools, and minor repair in the smaller schools clustered around the large composite schools under a hub and spoke model (RA-3).

1.7 Introduction to ESSA

28. This Environmental and Social Systems Assessment (ESSA) has been prepared by a World Bank ESSA Team for the proposed Chhattisgarh Accelerated Learning for a Knowledge-Economy (CHALK) operation, in accordance with the requirements of the World Bank Policy for Program-for-Results Financing. The PforR Policy requires that the Bank conducts a comprehensive ESSA to assess the degree to which the PforR Program promotes environmental and social sustainability and to ensure that effective measures are in place to identify, avoid, minimize, or mitigate any environmental, health, safety, and social impacts. Through the ESSA process, recommendations to enhance environmental and social management outcomes within the program are developed, which subsequently become a part of the overall Program Action Plan.

⁵ Secondary Education Project (P118445) and India: Elementary Education III (P144447)

29. The main objectives of this ESSA are to: (i) identify the Program's environmental, health, safety, and social effects; (ii) assess the legal and policy framework for environmental and social management, including a review of relevant legislation, rules, procedures, and institutional responsibilities that are being used by the Program; (iii) assess borrower's institutional capacity to manage the potential adverse environmental and social impacts; (iv) and to recommend specific actions to address gaps in the Program's environmental and social management system. The ESSA also describes the extent to which the applicable government environmental and social policies, legislations, program procedures and institutional systems are consistent with the six ESSA 'core principles' and recommends actions to address the gaps and enhance performance during Program implementation. These six core principles are listed below and further defined through corresponding Key Planning Elements in this report:

- 1) **Core Principle 1: Environmental and Social Management:** Environmental and social management procedures and processes are designed to: (a) promote environmental and social sustainability in Program design; (b) avoid, minimize, or mitigate against adverse impacts; and (c) promote informed decision making related to a Program's environmental and social effects
- 2) **Core Principle 2: Natural Habitats and Physical Cultural Resources:** Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate any adverse effects (on natural habitats and physical and cultural resources) resulting from the Program.
- 3) **Core Principle 3: Public and Worker Safety:** Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with: (a) construction and/or operations of facilities or other operational practices developed or promoted under the Program; and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials.
- 4) **Core Principle 4: Land Acquisition:** Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.
- 5) **Core Principle 5: Indigenous Peoples and Vulnerable Groups:** Due consideration is given to cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.
- 6) **Core Principle 6: Social Conflict:** Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

1.8 Methodology Adopted for ESSA

30. ESSA refers both to the process for evaluating the acceptability of a borrower's system for managing the Program's environmental and social (E&S) risks in the operational context, and to the final report that is an output of that process. The ESSA process is a multistep methodology in which the World Bank team analyses the E&S effects, including indirect and cumulative effects, of activities associated with the defined Program; analyses the borrower's systems for managing the identified E&S effects, including reviewing practices and the performance track record; compares the borrower's systems - laws, regulations, standards, procedures, and implementation performance against the core principles and key planning elements to identify any significant differences between them that could

affect Program performance; and recommends measures to address capacity and performance on policy issues and specific operational aspects relevant to managing the Program risks such as staff training, implementing institutional capacity building programs, developing and adopting internal operational guidelines.

31. The ESSA covered a comprehensive review of relevant existing information and data sources, complemented by consultations, interviews/ discussions with implementing agencies and key stakeholders to capture opinions, anecdotal evidence, functional knowledge, and concerns. It involved (a) a comprehensive review of government policies, legal frameworks, program documents, national guidelines for Samagra Shiksha and National Education Policy (NEP) 2020 and other relevant information and assessments of Government of India and Government of Chhattisgarh's environmental and social management systems (b) interviews and consultations were conducted with relevant experts and officials from Department of School Education (DoSE), GoCG including consultations and discussions with Samagra Shiksha state implementation society (SIS) team members looking after different aspects of the program on environmental and social systems and procedures including civil wing, inclusive education, and equity and gender teams. Consultations were also undertaken with Public Works Department (PWD) and Rural Engineering Services (RES) who are expected to undertake civil works under the proposed program, and Department of Tribal and Scheduled Caste (DoTSC). Field visits were made to *Swami Atmanand* General English-Medium Schools (SAGES) schools (both completed and under construction), proposed SAGES schools, tribal schools, and tribal girls' hostels in Raipur, Durg, Korba, and Dhamtari districts. Consultations were also undertaken with district and block-level officials of Samagra Shiksha, Assistant Engineers & Sub-Engineers of RES, and Assistant Commissioner DoTSC. The ESSA team also consulted community members and beneficiaries across selected districts of the State. Interviews were held with Block and Cluster Coordinators, School Principals and teachers, School Management Committees (SMC)/ School Management & Development Committee (SMDC), and Hostel superintendents, and tribal students living in the hostels, and in few cases with students and parents too. Consultations are also planned with non-governmental organizations (NGOs) in the state working on school education.

32. The draft ESSA will be shared with SS-SIS/ DOSE for their comments and feedback and will be further consulted with various stakeholders including civil society members through multi-stakeholder consultation workshop. The ESSA will be updated based on the feedback and suggestions from SS-SIS/DoSE and from the multi-stakeholder workshop. The updated ESSA will be made publicly available in accordance with the Bank's policy on Access to Information. The final ESSA will be disclosed prior to the Program negotiation.

2 POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS OF THE PROGRAM

2.1 Environmental Risks or Impacts and Benefits of the Program

33. Overall benefit of the CHALK program from environmental perspective is with respect to creation and sensitization of awareness related to environmental aspects (among students, teachers, and administrative staff of schools) and its addressal at various levels. Regular training programs on various aspects of environmental issues will create capacity building, which will ultimately help in achieving the objectives. This will result into creation of Green Schools /Sustainable Schools/Self-sustaining schools from various environmental aspects. The environmental risks or impacts of the program emerges mainly during construction phase and operation phase of schools. During construction phase due to various activities of construction (either as a whole new structure /expansion of existing structure/ rehabilitation and repair) may lead to various environmental risks & impacts in following aspects:

- a) Occupational Health & Safety issues- due to construction & upgradation activities in school premises
- b) Land and soil degradation – Soil degradation with respect to changes in the property of soil. Loss of top productive soil in the excavation process.
- c) Surface Hydrology – Surface water hydrology getting affected due to alteration in land cover.
- d) Use of water resources – Type and quantity of water resources and impact on competitive users.
- e) Water quality and pollution – Construction activity may lead to water pollution due to disposal of sediment load in surface water runoff.
- f) Ecology and Biodiversity – Surrounding ecology and biodiversity being affected (including trees, flora, fauna etc.)
- g) Solid waste generation and disposal (including Construction and Demolition waste) – unplanned disposal of C&D waste may cause land degradation and may clog natural water channels. Untreated disposal of MSW generated by labour will cause impacts on surrounding environment.
- h) Hazardous/Toxic waste – Release of hazardous/toxic materials during construction activities.
- i) Air pollution – Dust emissions due to construction activities and vehicular movement (transportation of raw materials)
- j) Noise pollution – Due to use of construction equipment.

34. During operation phase of school, following environmental impacts may happen:

- a) Sewage generation and management – Release of untreated/ partially treated Sewage would contaminate surrounding water resources and create unhealthy conditions.
- b) Solid waste generation – Unsegregated waste disposal will create unhealthy conditions in the surroundings and will add burden to the local body.
- c) Bio-medical waste generation – Unscientific disposal of sanitary pads will create unhealthy conditions in the surrounding.
- d) E-waste – Unplanned and local disposal electronic waste will degrade the surrounding environment.
- e) Energy consumption – Additional load of energy generation of the system.

35. Other environmental aspects, such as natural disasters due to floods, earthquakes, heatwaves and landslides would be important considerations to be made during construction phase of the project.

2.2 Social Risks or Impacts and Benefits of the Program

36. **Social Benefits:** The overall social effect of the program is positive with measures contributing to access to quality education and overall educational outcomes. The Samagra Shiksha program will have a positive outcome. It is an overarching programme for the school education sector extending from pre-school to class XII and aims to ensure inclusive and equitable quality education at all levels of school education. It envisages the 'school' as a continuum from pre-school, primary, upper primary, secondary to senior secondary levels with an emphasis on improving the quality of school education and to enhance the Learning Outcomes at all levels of schooling. The objectives of the Samagra Shiksha are:

- a) Provision of quality education and enhancing learning outcomes of students;
- b) Bridging Social and Gender Gaps in School education;
- c) Ensuring equity and inclusion at all levels of school education;
- d) Ensuring minimum standards in schooling provisions;
- e) Promoting Vocational education;
- f) Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009; and
- g) Strengthening and up-gradation of SCERTs/State Institutes of Education and DIET as nodal agencies for teacher training.

37. With community-led development and management of model, composite schools offering science and commerce education at the senior secondary level will have many social benefits such as enhanced community involvement and ownership in the school development and management, and by targeting science and commerce education which has been lacking provides better opportunities to students to pursue skill development in the technical and managerial fields for better employment in local industries. A lack of which makes the local youth mainly the male students' dropout in secondary and/or senior secondary schooling to join these industries as non-skilled labour force where schooling to a particular grade has no added advantage or incentive.

38. Supporting GoCG to bring in operational efficiency and effectiveness of at least 600 schools towards enhancing their capacity to provide improved quality education to a large number of students through better availability of teachers (especially subject teachers), strong school leadership and management, and adequate learning facilities will have positive impact on overall access to quality education in the state. This also includes support to infrastructure development/refurbishment across 300 schools to make them as composite schools targeted in blocks where most of the population is from the SC community, ST community, and/or coal mining blocks (at least 33 percent of schools) where the community primarily relies on the coal sector for employment/income will provide enhanced access to quality education in those areas as well as addressing equity issues.

39. The program also plans to support for development and roll out of a school performance evaluation (social audit) tool that will allow parents to periodically assess and provide feedback on the model, composite schools functioning. The school safety, School Related Gender Based Violence (SRGBV), functionality of Grievance Redressal Mechanisms (GRM), maintenance of facilities, transparencies in admissions processes, availability of teachers, etc. are expected to be a prominent feature in the tool along with focus on environmental and social aspects. With each school being setup as a semi-autonomous society headed by the district level administration, this will help facilitate expedient response to any administrative and operational issues at the school.

40. **Social Risks or Impacts:** While the project does not anticipate any land acquisition and/or any land restriction, and where required will use government land. Any land acquisition and/or involuntary resettlements are excluded from the program. The key social risks and impacts of the program emerges from (i) weak institutional capacity especially to engage with community in planning, development, and day-to-day management of schools; (ii) No standard fire safety norms being used for the schools including multiple entry-exit points and other fire safety provisions; (iii) lack of provisions for universal access to students and teachers – the interpretation of inclusive education is limited to catering to schemes for CWSN students and limited to infrastructure design and provisions in classrooms and schools; (iv) Poor or lack of mechanism for maintenance of various facilities and equipment such as water filters/ ROs, toilets, incinerators for pads, and IT equipment, among others leading to disruption in services and facilities; (v) lack of systematic planning towards addressing infrastructure and other needs - even though there are guidance supporting systematic planning such as developing School improvement plans etc.; (vi) Over crowding of students in tribal hostels; (vii) requirement of geographic and need based planning to ensure equity and access especially among tribal and backward areas; and (viii) Need for strengthening grievance redress mechanism especially towards mechanism of escalation and consolidated monitoring and reporting.

2.3 Indirect and Cumulative Impacts

41. Given the state has gaps in availability of seats in senior secondary schools only about 71 percent student transition from secondary to senior secondary schools. Also, given the gaps in teachers for Science and Mathematics for senior secondary schools, majority of the Government Senior secondary schools offer only Arts stream of education. The CHALK program aims to not only expand the senior secondary schools as part of composite schools but also support bridging the gaps of teachers for Science, Mathematics and Commerce. This will have overall positive impact on educational environment in the state as well as provide wider opportunities to students pursuing science and commerce streams. The SAGES school initiative with overwhelming response from students and parents has shown the demand for the same. This will also help students to pursue technical and vocational education for which there are demand in local industries within Chhattisgarh and expected to also reduce boys' dropouts in Secondary and Senior secondary schooling in the long run given wider opportunities in moving towards skilled and formal sector employment, and who currently dropout for early entry into the workforce, albeit mostly in low-paying jobs in the informal sector. Overall, this will help in creating skilled manpower within the state, which will further contribute to the growth of the state. Given that about 70 percent of the students in Government managed schools are from SC and/or ST, it is going to further benefit them.

3 ASSESSMENT OF ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM, CAPACITY AND PERFORMANCE

3.1 Assessment of Existing Systems

42. As mentioned earlier, the PforR Policy of the Bank requires the proposed Program to operate within an adequate environmental and social management system that can manage environmental and social effects (particularly adverse impacts and risks) identified during the ESSA process. This includes:

- a. an adequate legal and regulatory framework and institutional setting to guide environmental and social impact assessment and the management of environmental and social effects, and
- b. adequate institutional capacity to effectively implement the requirements of the system including staffing, resources and process and practices in place

43. This section assesses whether the program's environmental and social management systems are consistent with the core principles and key planning elements contained in the PforR Policy and whether the involved institutions have the requisite capacity to implement the requirements of these systems. Both elements (e.g., program systems and capacity) are necessary towards ensuring that the environmental and social effects identified in Chapter-2 of this document are effectively managed. Through the analysis, the ESSA team has identified some gaps, which can be addressed through actions recommended under Chapter-5 of this report.

44. A program system is constituted by the rules and "arrangements within a program for managing environmental and social effects⁶, "including institutional, organizational, and procedural considerations that are relevant to environmental and social management⁷" and that provide "authority" to those institutions involved in the program "to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the Program⁸." This includes existing laws, policies, rules, regulations, procedures, and implementing guidelines, etc. that are applicable to the program or the management of its environmental and social effects. It also includes inter-agency coordination arrangements if there are shared implementation responsibilities in practice⁹.

45. Program capacity is the "organizational capacity" of the institutions authorized to undertake environmental and social management actions to achieve effectively "environmental and social objectives against the range of environmental and social impacts that may be associated with the Program." This ESSA has examined the adequacy of such capacity by considering, among other things, the following factors:

- a. Adequacy of human resources (including in terms of training and experience), budget, and other implementation resources allocated to the institutions;
- b. Adequacy of institutional organization and the division of labor among institutions;

⁶ Drawn from Program-for-Results Financing: Interim Guidance Notes on Staff Assessments, "Chapter Four: Environmental and Social Systems Assessment Interim Guidance Note," Page 77, paragraph 1

⁷ Ibid, page 82, paragraph 12

⁸ Ibid., Page 77, paragraph 2, and page 82 paragraph 12.

⁹ Based "Chapter Four: Environmental and Social Systems Assessment Interim Guidance Note," Program-for-Results Financing: Interim Guidance Notes on Staff Assessments

- c. Effectiveness of inter-agency coordination arrangements where multiple agencies or jurisdictions are involved; and
46. The degree to which the institutions can demonstrate prior experience in effectively managing environmental and social effects in the context in projects or programs of similar type and magnitude.

3.2 Assessment of Institutional Capacity and Gaps

47. The School Education in Chhattisgarh is handled mainly by two departments namely the Department of Education and the Department of Tribal Welfare. In 2015, all the schools run by the Department of Tribal and Scheduled Caste (DoTSC) was transferred to DoSE, there are small number of schools that were supported by the Ministry of Tribal Affairs (MoTA), GoI remains under the management of Department of Tribal and Scheduled Caste (DoTSC) such as the Eklavya Schools. The proposed CHALK program supports only the schools run by the DoSE.

3.2.1 Implementation Arrangement for Samagra Shiksha Program

48. With the launch of the Government of India's Samagra Shiksha in 2018, the management structures for elementary and secondary level education as well as teacher education were integrated into a unified administrative mechanism, pooling together existing and additional personnel at both the national and sub-national levels.

49. **Management Structure at the State Level:** The Rajiv Gandhi Shiksha Mission (RGSM) set-up under the Societies Registration Act, under the administrative control of the Department of School Education (DoSE). GoCG is the State Implementation Society (SIS) for Samagra Shiksha and is the nodal agency for implementing the CHALK program. DoSE is further supported by the State Council of Education Research and Training (SCERT) which is the nodal educational institution that works with a network of District Institutes of Education and Training (DIETs) to manage teacher professional development, learning assessments, and remedial education under the aegis of DoSE. The State Institute of Education Management and Training (SIEMAT) is the nodal educational institution that provides in-service training support to school principals under the aegis of DoSE. The Public Works Department (PWD), GoCG and the Rural Engineering Service (RES), are the nodal agencies to support DoSE with any civil works for the CHALK program.

50. The SIS is accountable to the Governing Council headed by the Chief Minister, and its Executive Committee, chaired by the Chief Secretary of the State. Representation of School Education department, Department of Tribal and Scheduled Caste, Women and Child Development Department, and Finance and Planning Departments among others are the Governing Council members and also have representation in Executive Committee to resolve issues of coordination and convergence apart from facilitating better decision-making. The SIS, through the State Project Office and State Project Director (SPD), establishes linkages with district and sub-district level structures, NGOs, State Government, National Bureau of School Education, and other concerned stakeholders. It is also responsible for effective monitoring and training and capacity building of personnel. The SIS is underpinned by a high degree of inter-departmental convergence, including coordination with the SC and ST Department, Women and Child Development Department, Public Works Department (PWD), Rural Engineering Services (RES), and other departments.

51. **Implementation Arrangements at the District Level:** At the District level, the District Project Office (DPO) headed by District Project Officer (DPO)/ District Education Officer (DEO) is responsible for implementing and reviewing the progress of the program. It is chaired by the District Collector/Chief Executive Officer of the Zilla Parishad. The DEO, who also performs the duties of the District Project Coordinator, is responsible for preparing Annual Work Plans and Budgets (AWP&B),

liaising with the District Institute of Education and Training (DIETs) to jointly oversee the function of the Block Resource Centers (BRCs) and Cluster Resource Centers (CRCs), monitoring progress and status of project implementation, and ensuring regular trainings of teachers/school heads, members of the School Management Committee (SMC)/School Management and Development Committee (SMDC), and BRCs and CRCs.

52. **Implementation Arrangements at the Block Level Arrangements:** At the block level the administrative structure is headed by the Block Education Officer (BEO), who is responsible for facilitating the creation of a School Development Plan in coordination with the block/ cluster resource persons, SMCs/SMDCs, Principal, headmasters, teachers, etc. Additionally, the BEO is responsible for capacity building, academic supervision, and onsite support to field-level cadre, and monitoring and implementation of school education programs at the grassroots level. BRCs and CRCs provide academic support at the block and cluster levels, respectively.

53. **Implementation Arrangements at the School Level:** As per Samagra Shiksha Framework (SSF), the SMCs/SMDCs, comprising of members from the local authority, parents, and teachers, assist with school-level monitoring and implementation through community mobilization, preparing School Development Plans, conducting Social Audits, and monitoring attendance of students and teachers. However, in case of Chhattisgarh SMC/SDMC do exist, but their engagement with schools are limited and also have weak capacity.

54. However, similar to proposed composite schools under the program with semi-autonomous society headed by the district level administration, the state initiative of *Swami Atmanand* General English-Medium Schools (SAGES) school operate as semi-autonomous society headed by the District Collector, along with CEO Zilla Parishad, Commissioner Municipal Corporation, District Project Officer (DPO)/ District Education Officer (DEO), Assistant Commissioner Tribal Development, and School Principal, along with Assistant District Project Officer (DPO). This mechanism with school society headed by District Collector helps in close monitoring of the school operations as well as mobilising local resources from the other district funds and helps in coordination with other departments.

3.2.2 Planning and Execution of Civil Works for School Construction and Repair

55. While Samagra Shiksha in Chhattisgarh has a civil wing, its capacity is limited, and hence under the program it was proposed and agreed by the GoCG that works for Composite School which are generally of larger size (beyond 2 Crore INR) will be undertaken by the PWD, and all repair and renovation activities in other schools will be undertaken by the RES.

3.2.2.1 Samagra Shiksha – Civil Wing

56. The SIS-SS has a civil wing with very low capacity. It is headed by an Assistant Director, and supported by an Assistant Program Coordinator, and a Programmer cum Computer Operator. It also has posts for one Executive Engineer and one Sub Engineer (at present both vacant). Each district has sub engineer post out of which only 5 districts have the sub engineers in place. Which suggest very low capacity to properly plan and execute the required civil works under the program. However, their role as spelling the requirement to PWD and RES is important, and they can work in coordination with PWD and RES in monitoring, supervision, and future maintenance of the school.

3.2.2.2 Public Works Department (PWD), GoCG

57. The Public Works Department (PWD) is the principal agency of the GoCG responsible for design and execution of any large-scale construction activity including road, bridges, public buildings etc. The department is headed by Engineer-in-Chief (EIC) and each of the work areas area/ wings are

headed by a Chief Engineer (CE) level officer at the state level. PWD has 14 Circles/ Zones headed by Superintending Engineer (SE) level officer, and 53 major Divisions and each Division have 4 Sub-Divisions. Each division is headed by an Executive Engineer (EE) and Sub-Division by an Assistant Engineer (AE). In each Sub-division AE is further supported by 4-6 Sub-Engineer and further supported by Draftsman.

58. PWD has separate Architectural wing and Structural Engineering wing to design various civil engineering works, labs to test water portability and the ability to connect with other agencies, as needed, to meet any specific needs required by the individual clients (schools). They also hire local Architects on contract as and when needed. PWD generally do not take small works of less than 20 million INR (~250,000 USD). They do have good experience in school construction.

3.2.2.3 Rural Engineering Services (RES), GoCG

59. The RES department has a presence in each district and is essentially a working hand for the district collectors. They have the capacity for all kinds of repair, maintenance, and small construction work. Most SAGES schools to date have been built under the supervision of RES.

3.2.3 Summary of Institutional Capacity and Gaps

60. While the structure of implementing Samagra Shisha program is robust as per the SS national framework, it requires strengthening which the CHALK program aims through its IPF component supporting various consultancies including the project management consultant (PMC) at the SS-SIS. The gaps for SS Civil Wing, PWD and RES would be as follows:

- a) Identify possibilities to enhance effective communication and interaction with The Directorate of Information for comprehensive planning of the required buildings.
- b) Use systematic inputs from other departments viz. Public Health Engineering, Horticulture, Ground Water Board etc. in the design process to make the design robust.
- c) Use of standard designs and not hiring / involving architects or hiring an external agency to ensure the buildings are designed as per site conditions and on green building principles.
- d) Absence of in-house environmental and social expertise to ensure sustainable school development.
- e) Enhancing environmental, social, health and safety aspects/ protocols in the supervision and monitoring mechanism.

3.3 Legal and Regulatory System

61. India has specific policy, legal and regulatory provisions directly relevant to the activities being carried out under the program. ESSA has reviewed these national and state specific Guidance, laws and regulations relevant to managing the environmental and social effects of the proposed program. The key legislations that guide the program (a) National Education Policy 2020; and (b) Samagra Shiksha Framework 2022, In addition, there are number environmental and social laws, regulation, and guidance relevant to the program as listed in Annex-3.

62. The National Education Policy 2020 (NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, replaces the previous National Policy on Education, 1986, and outlines the vision of India's new education system, and is the overarching framework for the educational system in India, including the state of Chhattisgarh.

63. The legal/regulatory framework on social aspects ensures the following: (a) protection of the interest of SC and ST population, (b) non-discrimination based on religion, race, caste, and gender, (c)

transparency with the right to information, (d) the right to fair compensation in case of land acquisition. A comprehensive listing and assessment on environmental policies, laws and regulations, as applicable to the school education program is provided in Section 3 of Annexure 3.

64. Over-all, the provisions of the existing environmental and social legal/regulatory framework, including the stipulations to protect the interest of marginalized and vulnerable population such as the SCs and STs, are adequate though enabling institutional and technical capacity building is required for achieving full and more uniform compliance on the ground across districts and blocks of the state.

65. Various legal and regulatory framework with respect to environmental management helps in achieving objectives and outcome.

- a) The Environment (Protection) Act, 1986 and amended thereto
- b) EIA notification 2006 and amendments thereto
- c) Air (Prevention and Control of Pollution) Act, 1981 and amended thereto
- d) Water (Prevention and Control of Pollution) Act, 1974
- e) Noise Pollution (Regulation and Control Rules), 2000
- f) Hazardous Wastes (Management Handling and Trans Boundary Movement) Rules, 2016
- g) Solid Waste Management Rules, 2016
- h) E-waste Management Rules, 2016
- i) Bio-medical Waste Management Rules, 2016
- j) Plastic Waste Management Rules, 2016
- k) Construction & Demolition Waste Management Rules, 2016
- l) Forest Conservation Act, 1980
- m) Biodiversity Conservation Act, 2016

66. In addition to the above, following regulatory framework requires to be looked in from disaster, health, and safety perspective.

- a) Disaster Management Act, 2005
- b) The Occupational Safety, Health, and Working Conditions Code, 2020

3.4 Environmental and Social Management System Assessed Against Core Principles

3.4.1 Core Principle -1: Program E&S Management System

Program E&S management systems are designed to: (a) avoid, minimize, or mitigate adverse impacts; (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects

System and Capacity Assessment

67. The Samagra Shiksha guidelines for school education program detail out the institutional mechanisms for implementation of school education program along with detailed roles and responsibilities within the larger constitutional and legal framework of India.

68. Planning and implementation of the school education program in Chhattisgarh follows the RTE Act and the Samagra Shiksha Framework, which subsumes the following three: Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). The institutional mechanisms have been well established to meet the overall program requirements and there are detailed systems in place for each of its program component including civil and infrastructure development, gender, social inclusion and inclusive education for children with special needs.

69. The school infrastructure under Samagra Shiksha has been conceptualized with the overall developmental goal of raising the performance of the school education sector following a strategy of supporting interventions for school effectiveness and sustainable institutional capacity. Also, as per SSF, the essential documents required prior to any civil works as per revised SSF 2022 includes (a) Land availability certificate for new construction site; (b) Vertical extension over existing building proposed (if any) needs to be accompanied by detailed design calculation of the existing structure including the new extension, along with certificate from the structural engineer regarding the design is safe and design finalised as per relevant BIS code.

Management of Environment Aspects

70. While upgrading/ adding to existing school infrastructure, lack of wholistic planning is leading to design and efficiency lacunas. Similarly, use of green building principles while designing new schools will add sustainability aspects to the design. The department's involvement in supervising the construction needs to be enhanced. Standard Operation and Maintenance protocol would improve resource efficiency and hygiene performance. Key environmental aspects would be as follows.

- For management of environmental aspects, a position of Environmental Specialist requires to be established to ensure sustainability of the proposed program activities
- Developing green code for the design of the schools
- Establish "Green Cell" among students in schools to keep a check on implementation activities of program by various institutions.
- Regular training and capacity building which is suitable to involved engineers, teachers, and school staff on the provisions of environmental management systems.
- Inclusion of Environmental Management system, with a mechanism of regular monitoring report.

Management of Social Aspects

71. The process of planning for school infrastructure activities involves community through development of School Improvement Plan or School Development Plan in consultation with SMC/ SDMC, however, in practice this is lacking in many schools as in very few schools it was reported to be available among the schools visited by the bank E&S team across districts. Also, in many cases, it was found that there is gap in communication between them and the engineers designing and executing the infrastructure given no consolidated requirement being put up to the design engineers instead mentioned them verbally by the principals at different point of time which were often difficult to remember and chances of missing out is very high. Though mandated under the SSF, the involvement of SMC/SDMC in planning for any infrastructure creation is also observed to be weak in the schools visited.

72. Many of the SAGES schools completed and/or being planned, as well as those being proposed, lack in school safety norms including fire safety, and multiple entry-exit points etc., lack in universal access even though expected to fulfil the need of CWSN/specially abled students. Features for universal access was also found missing where construction of new units or extension or another floor being planned, even though the SSF guidelines mandates it and detail out the measures. Also, none of the schools visited had toilet units designed for CWSN students or have separate toilets for CWSN students.

Key Gaps Identified

73. The key gaps identified includes:

1. School Improvement Plans not being prepared to consolidate and spell out the requirement in a consolidated manner at the school level.
2. Limited involvement of SMC/ SDMC in planning and monitoring of any infrastructure work in schools.
3. While there is guidance in SSF about school safety including fire safety, in practice, it has not been fully followed in the schools visited. Also, the many of the sub-engineers met on school sites were unaware of the same.
4. Features for universal access is missing in most schools visited.

3.4.2 Core Principle -2: Natural Habitat and Physical and Cultural Resources

Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.

System and Capacity Assessment

74. Given the civil works under the CHALK program are to be undertaken within the school campus and/or the available land with the schools, any direct impacts to any physical and cultural resources are not anticipated. However, E&S screening and guidance to be provided to the contractor, to ensure that there are no indirect impacts due to releasing of wastewater, disposal of solid waste, and depletion of water resources.

75. National and State level laws and regulations exist for the regulation of activities in natural habitats, critical natural habitats, in the proximity of protected monuments, and for management of chance finds. Since program activities take place in existing school premises, such risks are though minimal; and restricted to any pollution or safety issue due to work/facilities provided impacting critical habitats, physical cultural resources or natural resources; or chance finds. There exist no guidelines under the program to specify measures for screening, early identification, exclusion of biodiversity and cultural resource areas to avoid such impacts, or to devise strategies to reduce, mitigate and manage risks and impacts. Also, in many cases, the school Management including Principals, SMC/ SDMC are not aware of existing legal/regulatory regime or the need to follow National/State/Local regulations and require capacity enhancement in this regard.

Key Gaps Identified

76. The key gaps identified include:

1. At present, there is limited capacity for early screening of E&S impacts and also limited awareness among the school management including SMCs/SDMCs about national/ state laws and revaluations about pollution.
2. Lack of coordination and hence inputs of other departments viz. Public Health Engineering, Horticulture, Ground Water Board etc. in the design process to make the design robust.

3.4.3 Core Principle -3: Public and Workers Safety

Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

System and Capacity Assessment

77. The assessment of program systems under this principle determined that the Samagra Shiksha Framework lays emphasis on environment, health and safety (EHS) aspects and encourages the application of relevant national codes and guidelines.

78. The Samagra Shiksha Framework specifies that environment, health and safety practices should be followed for design, planning, preparation and execution of improvements in school learning environment in accordance with: (a) National Building Code 2016, and (b) School Safety Policy Guidelines February 2016 issued by National Disaster Management Authority (NDMA). The Code on Occupational Safety, Health and Working Conditions, 2019 is applicable to civil works under the program. In addition, both national and state level guidance are provided for the COVID19 related occupational health and safety measures.

79. Even though the SSF and the School safety policy from NDMA provides for fire safety norms, in most schools visited by the E&S team also observed as no standard fire safety norms being used for the schools including multiple -entry exit points etc. and requires strengthening in the design of the composite schools.

80. In terms of program capacity, awareness among the in-house civil engineers, SMCs and schools on the public and worker safety needs to be further augmented. Construction safety was highlighted as an issue of concern during consultations with stakeholders. Also, training programs for civil engineers on disaster resistant construction and on climate resilient designs would be required as this was identified as an area where there are gaps, both in the guidelines and in practice on the ground.

Key Gaps Identified

81. The key gaps identified include:

1. Awareness about CHS and OHS provisions under the framework for civil construction is low among Principals, SMCs/ SDMCs, and among other stakeholders.
2. Gaps observed in following any fire safety norms in the schools. Also, awareness about SSF and School safety norms among many Sub-engineers supervising the school construction seems lacking.

3.4.4 Core Principle -4: Land Acquisition and Resettlement

Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.

System and Capacity Assessment

82. Discussions with SS-SIS as well as district level officials of DoSE suggests that most of the schools being proposed for upgradation to composite schools (such as SAGES schools) are reported to have enough land for expansion. These are similar to schools visited by the E&S team across districts suggesting having enough land for physical expansion of the schools. Also, in most cases there are boundary wall protecting the land as well as providing the basic security to school children from any outside intrusions. However, in some cases, there are no boundary walls or there may be some confusion about the ownership of land even though being used by the school for their playground etc. Often in such cases it may be belonging to another government department such as Forest or Revenue department and will be required to be transferred before being proposed for construction of schools on those areas. This may also be the case where in 2015, the schools run by the Department of Tribal and Scheduled Caste (DoTSC) were transferred to DoSE, however the hostels remained with the DoTSE, and the land ownership also remained with DoTSC especially where both schools and hostels were there.

83. While the system and capacity for land acquisition and resettlement exist within the Government of Chhattisgarh, no land acquisition, and/or land restriction, or displacement of title holders or non-title holders is anticipated under the CHALK program. Upgradation will be restricted to government land and will be monitored through the E&S screening checklist. And where required will use government land by following established mechanism of land transfer from one department to another. Also, given the civil works under the CHALK program are to be undertaken within the school premises/campus and within the available land with the schools it does not anticipate any requirement for additional land.

Key Gaps Identified

84. There are no specific gaps given established mechanism for land transfer from one department to another. However, E&S screening mechanism to be instituted during the planning phase of any new construction under the program to identify any adverse social risks and impact.

3.4.5 Core Principle- 5: Rights and Interests of Indigenous People

Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Scheduled Tribe people (Indigenous Peoples) and scheduled caste people, and to the needs or concerns of vulnerable groups.

System and Capacity Assessment

85. The Samagra Shiksha Framework and process adopted in Chhattisgarh clearly details out the range of consultations to be undertaken with various stakeholder and work with close involvement of community members in school education to fosters 'bottom-up approach' in effective planning and implementation of interventions, and also in effective monitoring and evaluation, and building ownership of the government programmes by the community. It follows the process of consultations

with various stakeholders, community mobilization and aims to create transparency and accountability in the program implementation at the school level through participation of community members and other stakeholders in SMC/ SDMC.

86. The Samagra Shiksha also identifies children of Scheduled Castes (SC), Scheduled Tribes (ST), minorities, low-income households, and children with special needs (CWSN) children etc. and attempts to provide educational opportunity in an inclusive environment free from discrimination. The Right to Education (RTE) Act, 2009 further addresses the gender and social equity within a framework that is holistic and systemic. The Samagra Shiksha Scheme envisages improvement quality of education, ensuring equity and inclusion at all levels of school education. The key parameters of the approach informing the following perspective includes:

- The Samagra Shiksha scheme envisages to improve quality of education, ensuring equity and inclusion at all levels of school education and mean not only equal opportunity, but also creation of conditions in which the disadvantaged sections of the society – children of SC, ST, Muslim minority, landless agricultural workers and children with special needs, transgender children etc. can avail of the opportunity in an inclusive environment free from discrimination.
- Gender is recognized as a critical cross-cutting equity issue and implies not only making efforts to enable girls to keep pace with boys but to bring about a basic change in the status of women.
- Access does not only confine to ensuring that school becomes accessible to all children within specified distance but implies aims to cater the educational needs of the traditionally excluded categories – the SC, ST and other sections of the most disadvantaged groups, the minority, girls in general, transgender children and children with special needs.
- Equity is seen as an integral part of the agenda on improving quality and therefore encompass issues pertaining to teacher training and education, curriculum, language, educational planning and management.

87. The Samagra Shiksha look at education of all children including CWSN in a continuum from pre-school to class XII by (a) Identification of children with disabilities at the school level and assessment of her/his educational needs; (b) Provision of aids and appliance and assistive devices, to the children with special needs as per requirement; (c) Removal of architectural barriers in schools so that students with disability have access to classrooms, laboratories, libraries and toilets in the school; (d) Supplying appropriate teaching learning materials, medical facilities, vocational training support, guidance and counselling services and therapeutic services; (e) General school teachers are sensitized and trained to teach and involve children with special needs in the general classroom; (f) CWSN will have access to support services through special educators, and establishment of resource rooms, vocational education, therapeutic services and counselling; and (g) Work in convergence with other line departments and intends to provide relevant holistic support for effective and appropriate services for education of CWSN.

88. However, the implementation at the state level requires strengthening in areas of incorporating infrastructure design measures in line and spirit with SSF and addressing universal access, fire safety, norms for minimum space for classrooms and hostels, and maintenance mechanisms for upkeep of facilities and equipment, along with strengthening community and stakeholder participation and building institutional capacity for transparency and accountability.

89. In many of the sparsely populated tribal areas, there is need for bringing students at a more central places for secondary education that requires hostel facilities, and which are also the preferred mode by the local community. While the state already has several hostel facilities for girls and boys, and largely being managed by the Department of Tribals and Scheduled Castes (DoTSC) except the KGBV hostels which are being managed by DoSE, it is important to undertake the need assessment

considering existing infrastructure and geographic situations towards addressing equity and inclusion and for enhanced learning outcomes. While the CHALK program already plans to focus SC, ST and coal mining area, it is important to undertake the need assessment and incorporate them into planning for schools and hostel infrastructure for their optimum utilization.

Key Gaps Identified

90. The key gaps identified include:

- The SSF infrastructure design norms are not being followed properly including for universal access. Also, the school safety norms to be incorporated as part of infrastructure design.
- Planning for hostels requires undertaking need assessment considering the local geographical situation, and local need and demand, especially for boosting retention of boys in secondary and higher secondary levels in remote pockets such as SC and ST areas and mining blocks.

3.4.6 Core Principle- 6: Social Conflict

Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

System and Capacity Assessment

91. Chhattisgarh has about a third of the population being scheduled tribe (ST) with 13 districts fully and 6 districts partially notified under the Scheduled V areas, some of it are sparsely populated forested areas. Also, some of these districts are affected by the Left-Wing Extremism (LWE), however, over the past few years LWE areas have been shrinking, and there has been more community demands for health and education facilities.

92. Over the last decade, about 700 odd school buildings were destroyed by the LWE, as these being the only public buildings available in the remote areas which the police and paramilitary forces often use them for camping or patrolling purposes. This led to a situation wherein many of the villages in those areas do not having any functioning schools. The government has adopted a policy of merging and shifting of some of those schools to safer places. Also, given that walking long stretches through the dense forests to reach their schools were not preferred, and on the other hand, there are security concerns as there are chances of the children getting kidnapped or even caught in the crossfire between the security forces and LWE groups. This led to GoCG establish a number of portacabins schools and hostels, that is, portable cabins/ prefabricated structures¹⁰, which function as make-shift residential schools in the worst-affected LWE districts. The mandate of a porta-cabin is to be able to take students beyond a distance of eight kilometres to ensure admission into school for children from the conflict-affected remote areas where schools are not functioning effectively. Porta-cabins have been established in the LWE districts like Sukma, Bijapur, Dantewada, and Narayanpur under the Rajeev Gandhi Shiksha Mission. In some of them, additional infrastructure has also been provided under the corporate social responsibility (CSR) programme.

93. While there are multiple barriers to the education of the tribal population. These barriers pertain to their socio-economic conditions; economic deprivations; their inhibitions in mixing with the

¹⁰ 'Portable Cabins' were made of material that's long lasting, durable, fireproof, waterproof and can be easily rebuilt. Often made out of bamboo-based structures over the cement-concrete plinth as foundation. These were made in educational clusters and not in interior areas so that there is no objection to laying cement plinths. By this it also ensures that teachers would not be required to go to remote areas, which might affect their attendance, and for better monitoring of educational outcomes.

mainstream society; and also, the lack of access to schools and basic facilities in their areas. In the LWE districts, this further adds to the existing problem of a high drop-out rate at the secondary level, due to the lack of a sufficient number of secondary schools in those areas/villages.

94. The preference for various interventions under Samagra Shiksha is also given to LWE districts among Educationally Backward Blocks (EBBs) and Special Focus Districts (SFDs) and the aspirational districts as per SSF. Over the period of time with shrinking of LWE areas, and more community demand on opening of the schools, GoCG has been able to restore 380 of the 700 schools that were destroyed. Also, exclusion of any groups in terms of caste, religion, and/ or geography by the program activities is not expected. The program and its activities are quite inclusive in nature and does not exacerbate any conflicts.

3.5 Grievance Redressal Mechanism

95. The DoSE has a functional GRM system and has multiple ways to register grievances and get redressal. This includes:

- Using Right to Information (RTI) Act to get information and resolution of grievances as mandated under the Act.
- Using the provision under the Right to Education (RTE) Act 2009 to get information and resolution of grievances from DoSE. To this effect, DoSE also has an online portal <https://eduportal.cg.nic.in/RTE/Grievance/registration.aspx#> for necessary public information as well as registering grievances and also has a national help line number (011-411-32689) for seeking any support. Based on complaint received, resolution by the specific designated authority gets into action and take necessary measures including delegation for resolution and further information to complainant.
- In line with RTE, anyone can give written complaint to Block, District, or State offices. Based on the complaint, another officer (generally Senior to the unit under investigation) is deputed for verification and detail assessment of the complaint. Based on that the DEO of the respective district takes necessary actions and/or punishment. While the system works very well but given that these grievances are registered and resolved at the local level, their record are kept locally and there is no mechanism of consolidating them and reporting back to DoPI/ DoSE.
- In addition, anyone can register grievances through State portal of redressal of public grievances (<https://janshikayat.cg.nic.in/>) which then directs the grievances to respective departments/ directorates for resolution.

96. Besides above, the SMC/ SDMC forum at the school level and to the School Principal also provides the mechanism of registering grievances related to specific school which are generally get resolved locally. Some schools visited maintain the records of the complaints while many don't have very good system of tracking, recording and reporting grievances.

97. The CHALK program Results Area 3 further aims to strengthen the grievance redress mechanism along with mechanism of Social Audit.

3.6 Gender Equality and Gender Based Violence

98. In Chhattisgarh, the educational outcomes for girls are observed to be better than for boys. Since boys are lagging in schooling and learning and are far more likely to drop out of school largely from the SC and ST community living in tribal and coal mining areas to join local industries as non-skilled labour force where schooling to a particular grade has no added advantage or incentive. CHALK plans to support the development and management of model schools with residential facilities where necessary for boys. Accessible, free-of-cost secondary and senior secondary education seems to be a possible solution to the problem. It could help increase the number of boys completing their secondary and senior secondary education.

99. According to National Family and Health Survey-5 (2019-20), while about 47 percent of all women in the age 15-49 years, compared with 84 percent of men, were employed in the last one year preceding the survey. A large majority (91%) of employed women work in non-agricultural occupations, compared with 51 percent of employed men. Also, eighty percent of women have a bank account that they themselves operate. This is particularly high among women who have 12 or more years of schooling (90%). Women participation in household decision making is also high (81%), and about 58 percent of women have money that they can decide how to use.

100. Gender-based violence can also be seen to be having a decreasing trend. In Chhattisgarh, about 20 percent of ever-married women have experienced spousal physical or sexual violence in 2019-20 against 35 percent during 2015-16.

101. Given that the CHALK program plans to support setting up of hostel facilities for boys across several schools, along with on-campus safety, SRGBV is also planned to be addressed through (a) providing teachers with access to annual training on SRGBV, and (ii) including SRGBV related aspects in the school social audit tool that is proposed under RA-3.

4 CONSULTATIONS WITH KEY STAKEHOLDERS AND DISCLOSURE

4.1 Stakeholder consultation

102. **During Preparation:** The stakeholder consultations were undertaken with both primary and secondary stakeholders in the states. It included (a) Field visits to schools in Raipur, Durg, Korba, and Dhamtari districts covering the central industrial district, northern coal mining districts, and the forested tribal districts in southern districts of Chhattisgarh during November and December 2022 period; and (b) consultations, interviews/ discussions with SS-SIS, PWD, RES and the Department of Tribal and Scheduled Caste, and other stakeholders both at the state level as well as at the district level to capture opinions, anecdotal evidence, functional knowledge, and concerns in managing environmental and social risks and impacts; and (c) Consultations were also undertaken with Principals and teachers of schools, SMCs/ SDMCs including with community members and PRI/ ULB members and parents in districts during the field visit; and (d) Hostel superintendents and students. Consultations are also being planned to be undertaken with non-governmental organizations (NGOs) in the state working on school education in Chhattisgarh.

| Districts Visited | Schools and Hostel Visited | Consultation/ Discussions held with |
|-------------------|--|--|
| Raipur | <ul style="list-style-type: none"> Government Higher Secondary School, Goganv (Raipur) (Hindi Medium) – Proposed SAGES School Pt. R D Tiwai Government School, Raipur (English Medium) – 1st SAGES School | DPO, ADPO, DEO, and BEOs Sub-Engineers of RES/ Municipal corporation (where available) Principals and Teachers SMC/ SDMC members including PRI/ ULB members, community members, and parents |
| Durg | <ul style="list-style-type: none"> Government Higher Secondary School, Pahanda (Patan, Durg) (Hindi Medium) – Proposed SAGES School Government Higher Secondary School, Jamul – Proposed SAGES School SAGES English Medium School, Risali | DPO, ADPO, DEO, and BEOs Sub-Engineers of RES/ Municipal corporation (where available) Principals and Teachers SMC/ SDMC members including PRI/ ULB members, community members, and parents |
| Korba | <ul style="list-style-type: none"> Swami Atmanand Government School, Hardi Bazar Adivasi Girls Hostel, Hardi Bazar Government Higher Secondary School, Hardi Bazar – Proposed SAGES school | DPO, ADPO, DEO, and BEOs Sub-Engineers of RES/ Municipal corporation (where available) Principals and Teachers SMC/ SDMC members including PRI/ ULB members, community members, and parents Hostel Superintendent and students |
| Dhamtari | <ul style="list-style-type: none"> Higher Secondary Girls School and hostel, Dugli Government Shringi Rishi Excellent English Medium School, Nagri Model Adivasi Residential School, Dhamtari | DPO, ADPO, DEO, and BEOs Sub-Engineers of RES/ Municipal corporation (where available) Principals and Teachers SMC/ SDMC members including PRI/ ULB members, community members, and parents Hostel Superintendent and students |



Government Higher Secondary School, Goganv



Pt. R D Tiwai Government School, Raipur



Government Higher Secondary School, Jamul



SAGES English Medium School, Risali



SAGES School, Hardi Bazar



Adivasi Girls Hostel, Hardi Bazar



Model Adivasi Residential School, Dhamtari



Government Shringi Rishi School, Nagri

103. The draft ESSA will be further shared with DoSE/ SS-SIS for their review and feedback. Following which a Multistakeholder consultations is being planned with NGOs/ Civil society members, and with DoSE, and with state implementing agencies such as SS-SIS (along with SCERT, SIEMAT, and other institutions), PWD, RES along with other key stakeholders such as representatives from Department of Tribal and Scheduled Caste, department of Women and Child, State pollution control board etc. among others.

104. **During Implementation:** The IPF TA component will support the implementation of the PforR operation. Regular stakeholder engagement is embedded in the program design and will be critical for both the development of strategies and action plans to meet the PDO and its implementation of the same. Various stakeholders such as other government departments including Directorates within DoSE, Department of Tribal and Scheduled Caste, Women and Child Development departments, PWD, RES, Urban local bodies (ULBs), Panchayati Raj Institutions (PRIs), NGOs, academic institutions, SMCs/SDMCs, others as required – will be engaged and consulted throughout the implementation of the IPF activities following ESS10 provisions. Active efforts will be made in the design and implementation of TA activities and their outcomes. The modes and frequency of engagement will be determined by the needs of the program. Information about the project will be made available to stakeholders through DoSE websites and other means of communication and already established mechanisms of sharing information and seeking feedback. The DoSE will submit a bi-annual report on the implementation of TA activities to the Bank and will also contain the stakeholder engagement activities undertaken during the reporting period and their outcomes.

105. The Samagra Shiksha Framework follows the process of consultations with various stakeholders, community mobilization and aims to create transparency and accountability in the program implementation at the school level through participation of community members and other stakeholders in SMC/ SDMC.

4.2 Summary of Multi-stakeholder consultation workshop

106. A multi-stakeholder workshop is tentatively planned to be organized during Appraisal in Raipur covering participants from all stakeholders' groups including representative from DoSE and all its Directorates including SS-SIS, SCERT, SIEMAT, etc., other departments such as Department of Tribal and Scheduled Caste (DoTSC), WCD, PWD, RES, State pollution control board,, NGOs, and other civil society organization, and academia to seek their feedback and suggestions. The final ESSA report will be prepared considering the suggestions and feedback during multi-stakeholder workshop.

4.3 Disclosure of ESSA

107. The draft ESSA will be disclosed in country via the DoSE, GoCG websites and on the World Bank's external website, prior to appraisal of the program, to serve as the basis for discussion and receipt of further feedback and comments. The draft ESSA will be further revised based on feedback and comments, including from the multi-stakeholder workshop. The Final ESSA report will be redisclosed on the World Bank's external website and the DoSE, GoCG website before negotiations.

5 RECOMMENDATIONS AND ACTIONS

5.1 Exclusion of High-Risk Activities

108. The CHALK program will not finance any activities that will cause high or substantial E&S risks and impacts including activities that involve:

- a. Any land acquisition, physical relocation and/or involuntary resettlement impacts.
- b. Activities that are not in compliance with Central and State environmental legislation.
- c. Use of child or bonded or forced labor or labor involved in any hazardous activities.
- d. Destruction or damage to any physical and cultural resources.
- e. Construction within all protected/forest areas (including National Parks, Wildlife Sanctuaries, Wildlife Corridors) and, within Eco-Sensitive Zones for which final or draft notifications have been published by the Ministry of Environment, Forests and Climate Change, Government of India;
- f. Construction or demolition in areas within 300m radius of Nation/ State protected monuments (including 100m from limit of the protected area – which is the prohibited area, and 200m Regulated area from the boundary or protected area or as declared by the Government)¹¹
- g. within 100-meter radius of protected monuments identified by the Archaeological Survey of India or Chhattisgarh State Archaeology Department;
- h. Construction, renovation or dismantling works involving ‘asbestos containing material’;
- i. Use or generation of hazardous materials or chemicals beyond permissible levels, as specified in Schedule II of the Hazardous Waste Handling and Management Rules of 2016

5.2 Summary of Identified Gaps and Recommendations

109. The key gaps identified are as follows.

Environment Systems:

In Design

1. While there is guidance in SSF about school safety including fire safety, in practice, it has not been fully followed in the schools visited.
2. Lack of wholistic design approach results in buildings lacking climate responsive design, thermal comfort and safe / sustainable campus trees.

In Construction

¹¹ Refer The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010(10 of 2010) on grant of permission within Regulated area: “If the competent authority, after grant of the permission under sub-section (4) and during the carrying out of the repair or renovation work or re-construction of building or construction referred to in that sub-section, is of the opinion (on the basis of material in his possession or otherwise) that such repair or renovation work or re-construction of building or construction is likely to have an adverse impact on the preservation, safety, security or access to the monument considerably, it may refer the same to the Authority for its recommendations and if so recommended, withdraw the permission granted under subsection (4) if so required”.

3. Lack of early screening of E&S impacts and also limited awareness among the school management including SMCs/SDMCs about national/ state laws and revaluations about pollution.
4. Awareness about EHS and OHS provisions under the framework for civil construction is low among Principals, SMCs/ SDMCs, and among other stakeholders.
5. Limited involvement of SMC/ SDMC in planning and monitoring of any infrastructure work in schools.

In Operation and Maintenance

6. Gaps observed in following any fire safety norms in the schools. Also, awareness about SSF and School safety norms among many Sub-engineers supervising the school construction seems lacking.
7. Operation and Maintenance Issues of efficient functioning of environmental infrastructure (water filtration, sanitary pad vending machine, solid waste management, cleaning of septic tanks, etc.)

Social Systems:

1. School Improvement Plans not being prepared to consolidate and spell out the requirement in a consolidated manner at the school level.
2. Features for universal access is missing in most schools visited.
3. The SSF infrastructure design norms are not being followed properly including for universal access. Also, the school safety norms to be incorporated as part of infrastructure design.
4. Planning for hostels require undertaking a needs assessment considering the local geographical situation, and local need and demand, especially for boosting retention of boys in secondary and higher secondary levels in remote pockets such as SC and ST areas and mining blocks.

5.3 Summary of Recommendations and Actions

110. The key recommendations to strengthen systems for managing adverse environment and social impacts and promoting sustainable practices under the current PforR are as follows.

A. Common:

1. The SS-SIS to recruit nodal officials/experts responsible for coordinating, guiding, supervising, implementation of key Environmental and Social actions.
2. Screening for E&S risks and impacts for all civil works at composite schools to ensure avoid any adverse environmental and social impacts.

B. Environment Systems:

(a) In Design

- (i) Establish a mechanism to draw up from the school improvement Plan from user to convey the requirements (which would include feedback from the existing user) of the DoSE/ SS-SIS to the design and construction agency for comprehensive planning of the required buildings.
 - (ii) Ensuring timely inputs of other departments viz. Public Health Engineering, Horticulture, Ground Water Board etc. in the design process to make the design robust.
-

- (iii) Use of design architects to ensure the buildings are designed on green building principles.
- (iv) Appointment of an Environment officer in SS-SIS to supervise the E&S related works.
- (v) Creating green code for the building design to ensure sustainable resource utilization.

(b) In Construction

- (i) Preparing checklists and procedures to include environmental, social, health, and safety aspects in the supervision and monitoring mechanism. Identifying specific role and training of SMC/SDMC in EHS/ OHS aspects.

(c) In Operation and Maintenance

- (i) Prepare environmental management guideline and monitoring mechanism for schools to ensure compliance with state and national laws for following aspects.
 - a. Solid waste/ E Waste management
 - b. Maintenance of Septic Tanks/ Sewage Treatment Plants
 - c. Functioning of water purification systems
 - d. Scientific Disposal of Sanitary Pads

Social Systems:

- (ii) Institute mechanism of developing School Improvement Plan by the SMCs/SDMCs prior to initiating detailed DPR preparation for the composite school infrastructure creation.
- (iii) School design to ensure universal access features and safety norms in line with SSF guideline and National Disaster Management guidelines for school safety.
- (iv) Undertake need assessment for the hostel facilities based on secondary information available with SS-SIS, DoSE, and DoTSC.
- (v) Develop mechanism for enhanced capacity and participation of SMC/ SDMC in decision making for school improvement plan, and operation and maintenance of school infrastructure and facilities.
- (vi) Strengthening grievance redress mechanism especially for system of escalation and consolidated monitoring and reporting.

5.4 Measures for Inclusion in the Program Action Plan

111. From the recommendations made above, the following actions are being proposed for inclusion in the Program Action Plan towards addressing key/critical identified gaps between the Program systems and PforR core principles.

| Action description | Responsibility | Timing | Completion Measurement |
|---|----------------|---|---|
| 1. Recruitment of Environment and Social Development Specialists in SS-SIS to supervise the E&S related works | DoSE/ SS-SIS | One time activity (After the signing of the Financial Agreement) | (3) SS-SIS has recruited (a) Environmental and (b) Social Development Specialists for the CHALK program |

| Action description | Responsibility | Timing | Completion Measurement |
|---|----------------|--|--|
| 2. Institute mechanism of developing School Improvement Plan by the SMCs/ SDMCs prior to initiating detailed DPR preparation for the composite school infrastructure creation. | DoSE/ SS-SIS | Development and Notification - One time (within 6 months of program effectiveness) Rest - Ongoing | (3) School Improvement Plan (SIP) template developed in line with SSF and notified. (4) Districts and block level staff, and proposed composite school staffs trained on SIP. (4) SIP is made mandatory for schools to be taken under CHALK program for composite school |
| 3. School design for composite schools to ensure universal access features and safety norms in line with SSF guideline and National Disaster Management guidelines for school safety. | DoSE/ SS-SIS | Development and Notification - One time (within 12 months of program effectiveness) | School design incorporates universal access features and school safety norms in line with SSF guideline and School Safety guideline of NDMA. |
| 4. Strengthening Grievance Redress Mechanism (GRM) for registering, screening, redressing, and monitoring of grievances, and periodic reporting on the same. | DoSE/ SS-SIS | One time activity (within 12 months of program effectiveness) | Strengthened GRM system functional and periodic reports being generated. |
| 5. Climate responsive, sustainable building design and maintenance through development of green code/ green building certification system for CHALK schools | DoSE/ SS-SIS | One time activity (within 12 months of program effectiveness) | School design compliant with green code/ certification system |
| 6. Training on building capacity for ESHS management in school education systems (covering teachers, SDMC, agencies involved in creation/ maintenance of required infrastructure) | DoSE/ SS-SIS | Periodic, starting within 6 months from program effectiveness | Preparation of training modules for different target groups and it's timely rollout |

ANNEXURES

Annexure-1: List of Documents Reviewed

1. Census of India, 2011
 2. Samagra Shiksha Framework for Implementation 2022. Available at https://samagra.education.gov.in/docs/ss_implementation.pdf
 3. National Disaster Management Guidelines for School Safety Policy by NDMA 2016. Available at https://www.education.gov.in/en/sites/upload_files/mhrd/files/upload_document/Guidelines_feb.pdf
 4. Status of and Barriers to School Education in Chhattisgarh: A Study of Bastar and Sukma Districts. New Education Group – Foundation for Innovation and Research in Education, New Delhi. 2018. Available at <https://www.negfire.org/downloads/publications/2018/status-of-and-barriers-to-school-education-in-chhattisgarh-May-2018.pdf>
 5. Report on Status of Secondary Education in Chhattisgarh, 2017. Tata Institute of Social Sciences, Mumbai in association with Tata Trust. Available at <https://clix.tiss.edu/wp-content/uploads/2017/09/Chhattisgarh-Report-.pdf>
- Secondary and Higher Secondary Education Status (Chhattisgarh). February 2022. Tata Institute of Social Sciences, Mumbai. Available at <https://clix.tiss.edu/wp-content/uploads/2022/06/CG-Education-Status-Final-Report-1.pdf>
7. Developing Inclusive Schools. National Council of Educational Research and Training (NCEART). Available at <https://ncert.nic.in/degsn/pdf/INDEX%20FINAL%20FOR%20WEBSITE.pdf>
 8. News Article - Chhattisgarh builds strong educational foundation for kids in Naxal-hit areas with portable cabins that double up as schools. Available at <https://yourstory.com/2018/08/chhattisgarh-naxal-hit-areas-portable-cabins-double-schools>
 9. Chhattisgarh RTE Rules Notification. Available at <https://righttoeducation.in/sites/default/files/Chhattisgarh%20RTE%20Rules%20Notified%20English.pdf>

Annexure-2: List of Individual/Officials Consulted During ESSA Preparation**DoSE/ Samagra Shiksha - SIS**

Mr. N. K. Dugga, SPD, Samgra Shiksha
Mr. Sanjeev Srivastava, Joint Director, Samgra Shiksha
Mr. M. Sudish, Assistant Director, Samgra Shiksha
Mr. H. P. Sharma, Assistant Director – Civil Wing, Samgra Shiksha
Mr. Raj Kishore Tiwari, Assistant Director, Samgra Shiksha
Mrs Pusha Nishad, Assistant Director – Gender, Equity and KGBV, Samgra Shiksha
Mrs Seema Gauraha, Assistant Director - Inclusive Education, Samgra Shiksha
Mr. Y.P Hardayal, Assistant Director, Samgra Shiksha
Mr. Karan Chandrakar, Assistant Program Coordinator, Samgra Shiksha
Mr. Shailendra Verma, MIS Incharge, Samgra Shiksha
Mr. Mukesh Mishra, Programmer, Samgra Shiksha

Department of Tribal and Scheduled Caste

Mr. Pragyan Seth, Commissioner, DoTSC
Dr. Reshma Khan, Assistant Commissioner, Tribal Development Department, Dhamtari

Public Works Department (PWD)

Mr, B. K. Lall, Finance Controller, PWD
Mr. Pradeep Parvate, SE, PWD
Mr. Rajeev Nashirine, EE, PWD
Mr. Vishal Trivedi, SDO, PWD
Mr. Baghel – SE, Design Department, PWD

Rural Engineering Service (RES)

Mr. Ram Sagar, CE, RES
Mr. Larjol Miji, JDF, RES
MR. Suresh Tandon – AE, RES
Mr. Anthony Tikey, Assistant Engineer, RES
Mr. Shivkumar Sinha - Sub Divisional Officer, RES

District, Block and Schools

Mr. Patale, DEO Raipur
Mr. Mr. Abhay Jaiswal, DEO, Durg
Mr. D. K. Kaushik, DEO, Korba

Mr. G. S. Bharadwaj, District Education Officer, Korba

Mr. Brijesh Bajpai – District Education Officer, Education Department, DEO, Dhamtari

Mr. Surendra Pandey, District Project Coordinator, Samgra Shiksha, Durg

Mr. Amit Ghosh, Assistant Project Coordinator, Samgra Shiksha, Durg

BRCCs and CRCCs from Raipur, Durg, Korba and Dhamtari

Mrs. Uttara Dhruv, Principal, School teachers, and SMC members at Govt Higher Secondary School, Goganv, Raipur

Dr. Rakesh Gupta, Principal, and School teachers at Pt. R D Tiwai Government School, Raipur

Mr. Pandey, Principal, School teachers, and SMC members at Govt. Higher Secondary School, Pahanda, Durg

Mrs. Annapurna Gupta, Principal, School teachers, and SMC members at Government Higher Secondary School, Hardi Bazar, Korba

Hostel Superintendent and students at Adivasi Girls Hostel, Hardi Bazar, Korba

Mr. P. Ramesh, Principal, School teachers, and SDMC members at SAGES Risali, Korba

Principal, School teachers, and SDMC members at Higher Secondary Girls School and hostel, Dugli, Dhamtari

Principal, School teachers, Architect, Sub-Engineer and Contractor at Government Shringi Rishi Excellent English Medium School, Nagri, Dhamtari

Hostel Superintendent at Model Adivasi Residential School, Dhamtari

Mr. Bhupen Verma, Sub-Engineers, RES

Principal, Swami Atmanand Govt. English School, Hardibazar, Korba

Mr. Rupendra Sahu – Range Officer, Forest Department

Mr. Satish Prakash Sing – Block Education Officer, Education Department

Mr. Rajesh Kumar Bais – Principal, State Higher Secondary School – Kukrel, Nagri, Dharamtari

Annexure-3: Review of Applicable Legal and Regulatory Framework

The Government of India and the state government have enacted a range of laws, regulations, and procedures relevant to managing the environmental and social effects of the proposed Program. The following criteria were used to select the relevant legislation that best describes the country's system for managing the Program's effects:

- i. environmental and social policies,
- ii. environmental and social protection laws, and
- iii. laws, regulations, or guidelines in the relevant sectors and subsectors that provide relevant rules or norms for environmental and social management

I. RELEVANT NATIONAL AND STATE POLICIES AND PROGRAMS

National Education Policy 2020: The Union Cabinet on 29th July 2020 approves the new National Education Policy (NEP 2020) which aims to address many growing developmental challenges for the country. The NEP, after a gap of 34 years, has put in place a slew of systematic education reforms - both in school education and higher education sector. The Policy proposes the revision and revamping of all aspects of the current education structure, including its regulation and governance, to forge a new education system that is on par with the aspirational objectives of 21st century education. The New Policy also renamed the Ministry of Human Resource Development (MHRD) as the Ministry of Education in a bid to bring the focus back on education and learning.

The foundational principles of NEP 2020 are Access, Equity, Quality, Affordability, and Accountability. The Policy believes that the education system should develop good human beings with rational thinking, compassion, empathy, courage, resilience, scientific temper, creative imagination, and ethical values. The fundamental principles of the Policy are:

- Recognizing, Identifying, and Strengthening the unique capabilities of each student
 - Promoting each student's holistic development in both academic and non-academic spheres
 - Achieving Foundational Literacy and Numeracy in all students by Grade 3
 - Flexibility for learners to choose their learning trajectories and programs, and thereby choose their paths as per their talents and interests
 - No hard separations between arts and sciences, curricular and extra-curricular activities, vocational and academic streams, among others to eliminate harmful hierarchies and silos in areas of learning
 - Multi-disciplinary and a holistic education across the sciences, social sciences, arts, humanities, and sports to ensure the unity and integrity of all knowledge
 - Promotion of Multilingualism and the Power of Language in learning and teaching
 - Life Skills such as communication, teamwork, cooperation, and resilience
 - Regular Formative Assessment for learning instead of summative assessment
 - Full Equity and Inclusion as the basis of all educational decisions
 - Teachers and Faculty as the heart of the learning process
 - 'Light but Tight' regulatory framework to promote integrity, transparency and resource efficiency of the educational system
-

- Encouraging innovation and out-of-the-box ideas through Autonomy, Good Governance and Empowerment

The NEP 2020 paves for numerous significant changes in the Indian education system. The changes and objectives of NEP 2020 with respect to school education are as follows:

- The current '10+2' structure covering ages 6-18 to be replaced by a new Pedagogical and Curricular Structure of '5+3+3+4' corresponding to ages 3-18
- Instead of annual examinations every year, students will now only attend exams in Class 3, 5 and 8
- Class 10 and 12 Board Exams will be conducted as usual, but the exams will be made easier by allowing students to take exams twice a year. The exam will have two parts, Objective and Descriptive
- Universal standards of learning and regulations in public and private schools
- Vocational Education and coding will be introduced from Class 6
- Mother tongue or regional language to be the medium of instruction at least up to Class 5 and preferably till Class 8
- Report cards will be a 360-degree Holistic Progress Card that will give a comprehensive report on skills and capabilities instead of just marks and grades
- Focus on the curriculum to core concepts
- Universalization of education from Early Childhood Care Education (ECCE) to Secondary Level
- Achieving 100% Gross Enrolment Ratio (GER) in school education by 2030
- New National Curriculum Framework for Early Childhood Educator (ECE), schools, teachers and adult students
- Open Schooling System to bring two crores 'Out of School Children' back into the mainstream
- Deployment of counsellors and social workers to improve student's mental health
- Midday Meal Scheme to be extended to include breakfasts

In addition, the NEP 2020 provides for a series of reforms in the higher education sector, teacher's education, establishment of nation level institutions supporting the NEP objectives, setting up Gender Inclusion Fund, for improving and providing education for female and transgender children, and Increasing the education expenditure from the current 4.6% to 6% of the GDP at the earliest.

Samagra Shiksha: Samagra Shiksha - an overarching programme for the school education sector extending from pre-school to class 12 has been, therefore, prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes. It subsumes the three erstwhile Schemes of Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). The vision of the Scheme is to ensure inclusive and equitable quality education from pre-school to senior secondary stage in accordance with the Sustainable Development Goal (SDG) for Education. This sector-wide development programme/scheme would also help harmonise the implementation mechanisms and transaction costs at all levels, particularly in using state, district and sub-district level systems and resources, besides envisaging one comprehensive strategic plan for development of school education at the district level. The shift in the focus is from project objectives to improving systems level performance and schooling outcomes which will be the emphasis of the combined Scheme along-with incentivizing States towards improving quality of education. The revised Samagra Shiksha scheme 2022 has taken care of the core principles of NEP 2020 that are related to access, equity, quality, affordability and

accountability, and as many as 86 recommendations of NEP are included in Samagra Shiksha. Samagra Shiksha in its new form reinforces the commitment to provide a safe, equitable, inclusive and stimulating learning environment with a wide range of learning experiences, good physical infrastructure and availability of appropriate resources conducive to learning to all children as envisaged by the National Education Policy 2020.

The major objectives of the Scheme are supporting State and UTs in implementing the recommendations of the National Education Policy 2020 (NEP 2020); support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009; focus on Early Childhood Care and Education; emphasis on Foundational Literacy and Numeracy; thrust on holistic, integrated, inclusive and activity based curriculum and pedagogy; provision of quality education and enhancing learning outcomes of students; bridging social and gender gaps in school education; ensuring equity and inclusion at all levels of school education; strengthening and up-gradation of State Councils for Educational Research and Training (SCERTs)/State Institutes of Education and District Institutes for Education and Training (DIET) as a nodal agency for teacher training; ensuring safe, secure and conducive learning environment and minimum standards in schooling provisions; and promoting vocational education.

The Right of Children to Free and Compulsory Education (Amendment) Act, 2009 (and Amendment, 2019): According to the Act, the State shall provide free and compulsory education to all children of the age of six to fourteen in such a manner as the State may by law determine. Accordingly, the Government of India passed the Right of Children to Free and Compulsory Education (RTE) Act, 2009, and enforced it as a fundamental right under Article 21-A. It was introduced to provide education to every child enabling them to have a better future. Right to Education concentrates on the following:

1. Right to Education Act is justiciable
2. Creating inclusive spaces for all
3. Monitoring compliance of RTE norms
4. Improving learning outcomes to minimize detention
5. Ensuring all-round development of children
6. No tolerance against discrimination and harassment
7. Quantity and Quality of teachers
8. Special provisions for special cases
9. The benchmark mandates
10. Compulsory and free education to all

The act mandates 25% reservation for disadvantaged sections of the society where disadvantaged groups including SCs and STs, socially backward class, and differently abled. It also makes provisions for a non-admitted child to be admitted to an age appropriate class. It lays down the norms and standards related to (a) Pupil Teacher Ratios (PTRs), (b) Buildings and infrastructure, (c) School-working days, and (d) Teacher-working hours. It had a clause for “No Detention Policy” which has been removed under The Right of Children to Free and Compulsory Education (Amendment) Act, 2019. It also provides for prohibition of deployment of teachers for non-educational work, other than decennial census, elections to local authority, state legislatures and parliament, and disaster relief. It provides for the appointment of teachers with the requisite entry and academic qualifications. It prohibits physical punishment and mental harassment, screening procedures for admission of children, capitation fee, private tuition by teachers, and running of schools without recognition. It focuses on making the child free of fear, trauma and anxiety through a system of child friendly and child centred learning.

II. RELEVANT SOCIAL POLICIES, LAWS AND REGULATIONS

A brief summary of social laws, regulations and policies that are relevant to the proposed Program is mentioned in table below.

Relevant Social Policies, Laws and Regulations

| Sl. No. | Applicable Act/ Regulation/ Policy | Objective and Provisions | Relevance to the Program and key Findings |
|---------|---|---|--|
| 1 | The Constitution of India (especially, Articles 15,16 and 46) | The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the Scheduled Castes and the Scheduled Tribes and also directs the state to protect them from social injustice and all forms of exploitation. | Relevant to the overall Program |
| 2 | Articles 38, 41 and 46 of the Constitution | State to secure a social order for the promotion of welfare of the people through Right to work, to education and to public assistance in certain cases, Promotion of educational and economic interests of Scheduled Castes and other weaker sections. | These are very relevant because the focus is to minimize the inequalities in opportunities and promotion of educational and economic interests of the weaker sections of the people. |
| 3 | Right to Information Act, 2005 | Provides a practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out (a) obligations of public authorities with respect to provision of information; (b) requires designating of a Public Information Officer; (c) process for any citizen to obtain information/disposal of request, etc.; and (d) provides for institutions such as Central Information Commission/State Information Commission | Relevant as all documents pertaining to the Program requires be disclosed to public. |
| 4 | Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act 1989 and | To prevent atrocities against scheduled castes and scheduled tribes. The objectives of the Act clearly emphasised the intention of the government to deliver justice to these communities through proactive efforts to enable them to live in society with dignity and | This law promotes equity by safeguarding the rights of SC and STs, |

| Sl. No. | Applicable Act/ Regulation/ Policy | Objective and Provisions | Relevance to the Program and key Findings |
|---------|---|---|--|
| | further Amendments 2018. | self-esteem and without fear or violence or suppression from the dominant castes. With the reported misuse of the Act, In August, 2018, the parliament of India passed the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Amendment Bill, 2018, to bypass the ruling of the Supreme Court of India laying down procedures for arrests under the Act. | so is relevant to the program. |
| 5 | Fifth Scheduled Areas as in the Constitution of India | In the Scheduled Areas, involvement of tribal councils and communities, incorporating their views and culture specific needs will enhance their participation in the Program. Under the provisions of Fifth Scheduled Areas, the State should set up a Tribes Advisory Council (TAC) to advise the State Government on matters of welfare and development of the Scheduled Tribes in the State. | Applicable as Chhattisgarh has Schedule V areas. |
| 6 | Minimum wages Act, 1948 | This act ensures minimum wages that must be paid to skilled and unskilled labours. The employer shall pay to every employee engaged in scheduled employment under him, wages at the rate not less than the minimum wages fixed by such notification for that class of employee without any deductions except authorized. | Applicable to the overall Program |
| 7 | The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 | An act that aims at providing a sense of security at the workplace that improves women's participation in work and results in their economic empowerment. It requires an employer to set up an "Internal Complaints Committee" (ICC) and the Government to set up a 'Local Complaints Committee' (LCC) at the district level to investigate complaints regarding sexual harassment at workplace and for inquiring into the complaint in a time bound manner. The ICC need to set up by every organization and its branches with more than 10 employees. | Relevant and applicable to all institutions under the project. |
| 8 | National Disaster Management Guidelines – School Safety Policy 2016 | National Disaster Management- School Safety Policy 2016 guidelines have been formulated by the National Disaster Management Authority (NDMA) with a vision of safety of school children. The Hon'ble Supreme Court has directed all the States to prepare an action plan | Applicable to the overall Program |

| Sl. No. | Applicable Act/ Regulation/ Policy | Objective and Provisions | Relevance to the Program and key Findings |
|---------|------------------------------------|---|---|
| | | <p>along with timeframe for implementation of the guidelines. This policy is statutory in nature.</p> <p>With the view of building capacities for disaster resilience, Chhattisgarh State Disaster Management Authority conducts various programs at institutional levels. Chhattisgarh School Safety Programme is a capacity building programme which aims at strengthening of the capacity of school community and it further builds a disaster safety culture among the most vulnerable section of the society, that is, children.</p> | |

III. RELEVANT ENVIRONMENT POLICIES, LAWS AND REGULATIONS

Below is a review of selected policies, laws, and regulations under relevant for environmental management under the Program.

1. The Constitution of India

Article 48-A of the Constitution of India lays down a directive principle noting that the state shall endeavor to protect and improve the natural environment. Article 51-A of the Constitution declares it a fundamental duty of every citizen of India to protect and improve the natural environment and to have compassion for living creatures. The right to live in a healthy environment has been considered as a part of fundamental right to life under Article 21 of the Constitution.

2. National Environment Policy of India

This policy aims at mainstreaming environmental concerns into all developmental activities. The objectives of the policy include conservation of critical environmental resources, integration of environmental concerns in economic and social development, efficiency in environmental resource use, etc. The policy outlines a range of strategies that aim at: conservation of existing environmental resources through regulatory reforms; emphasis on education, information, capacity building; inter-sectoral collaboration; etc.

3. Relevant Environmental and Education Sector Laws

Environmental Laws

The Environment (Protection) Act 1986: The objective of the Act is to provide for the protection and improvement of the environment. The regulations under the Act that are of relevance to the Program are the following (paras 10 to 13).

Environmental Impact Assessment Notification 2006 and Amendments: There is no specific requirement of environmental assessment for construction of educational institutions (and hostels) with built-up area less than 20,000 sq.m. The works to be supported under the program are expected

to be much smaller than this (for example, the recommended plinth area of a 100-student capacity hostel for girls is about 20,800 sq.ft or about 1,930 sq.m.). The following regulations apply to larger buildings.

- ☐ In case of educational institutions (and hostels) with built-up area $\geq 20,000$ sq.m. to $< 1,50,000$ sq.m., local bodies such as Municipalities, Development Authorities and District Panchayats are required to ensure compliance with environmental conditions before granting occupation certificate/completion certificate. The environmental conditions cover the areas of topography and natural drainage; water conservation; waste management; energy; air quality and noise; green cover; topsoil preservation and reuse; and, transport.
- ☐ In case of educational institutions (and hostels) with built-up area $\geq 1,50,000$ sq.m. and/or covering an area ≥ 50 ha, prior environmental clearance is required from the State Environmental Impact Assessment Authority (SEIAA). An Environment Assessment Report and public consultation are required.

Coastal Regulation Zone (CRZ) Notification 2019: This notification is of relevance to three of the program states with a coastline: Kerala, Maharashtra, Odisha. Construction activities are prohibited in the CRZ-I (Ecologically Sensitive Areas) and CRZ-IV (area covered between Low Tide Line and 12 Nautical Miles seaward). Clearance for projects/activities located in CRZ-I and CRZ-IV can only be given by the central Ministry of Environment, Forest and Climate Change (MOEFCC). The powers for clearances for CRZ-II (urban areas) and CRZ-III (rural areas) is with the state level Coastal Zone Management Authority (CZMA). Construction of schools is permitted in CRZ-II on the landward side of existing structures. Construction of schools is permitted in the No Development Zone of CRZ-III only on approval of the CZMA.

Eco Sensitive Zone Notifications: Areas around National Parks and Wildlife Sanctuaries are notified as ESZs for the purpose of regulating activities in the proximity of the protected areas. The activities that are regulated include felling of trees, erection of electrical cables, widening of roads, etc. The notifications are relevant in case of construction works in the notified ESZs: Himachal Pradesh (7 ESZs), Madhya Pradesh (18 ESZs), Maharashtra (20 ESZs), Odisha (7 ESZs) and Rajasthan (8 ESZs).

Water (Prevention and Control of Pollution) Act 1972: This Act provides for prevention, control and abatement of water pollution and the maintenance or restoration of the wholesomeness of water. It is applicable to the discharge of sullage, sewerage and drainage of water from educational institutions.

Air (Prevention and Control of Pollution) Act 1981: This Act provides for the prevention, control and abatement of air pollution. It is applicable to educational institutions during construction and renovation of infrastructure.

The Noise Pollution (Regulation and Control) Rules 2000: This Act regulates and controls noise producing and generating sources in order to maintain ambient air quality standards in respect of noise. Sound emitting construction equipment is not to be used or operated during night times in residential areas and silence zones. It is applicable for construction, demolition and renovation of educational infrastructure and to equipment such as diesel generators.

Construction and Demolition Waste Management Rules 2016: The generator of construction and demolition waste is responsible for collection, segregation, storage of construction and demolition waste generated as directed or notified by the local authority. In the context of the program, the generator, who is the Contractor for the civil work, needs to ensure that: there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or public or drains; and that the waste is stored and disposed separately.

Hazardous and other Wastes (Management and Transboundary Movement) Rules 2016: These rules set out the procedures to be followed for safe handling, storage, transport and disposal of hazardous waste. Persons working in the site need to be provided with appropriate training, equipment and information necessary to ensure their safety. Such waste needs to be disposed in a secure landfill at the Common Hazardous Waste Treatment and Storage and Disposal facility. This is applicable to any activity generating hazardous wastes in the program – such as civil works involving demolition of existing structures containing asbestos roofs or pipes to make way for new construction.

Solid Waste management Rules 2016: Every waste generator is responsible for segregation and storage of biodegradable, degradable and hazardous wastes and handling them over to authorized waste collectors as per the directions of the local authorities. This is applicable to all educational institutions supported under the program.

E-Waste (Management) Rules 2016: Educational institutions that are bulk consumers of electrical and electronic equipment are required to ensure that e-waste generated by them is channelized through authorized collection centers or service providers to authorized dismantlers or recyclers, relevant records are maintained and annual returns are filed to the State Pollution Control Board.

Notification for use of fly ash 2003 and subsequent amendments: As per this notification, fly ash needs to be used in construction works located within 300 km of coal or lignite based thermal power stations (for example, fly ash bricks).

Food Safety and Standards Act 2006: This Act requires all food business operators to be registered/licensed and follow basic hygiene and safety requirements. It is relevant to all educational institutions and hostels with food services.

Insecticides Act 1968: This Act governs the use of registered insecticides and non-use of banned insecticides. It is relevant to all educational institutions and hostels that undertake pest control operations.

Forest (Conservation) Act 1980: This Act requires prior approval of the Central Government for use of any forest land for non-forest purposes including construction of buildings. In Left Wing Extremism (LWE) affected districts, general approval is accorded for diversion of up to 40 ha of forest land for the creation of critical public utility infrastructure including schools. This Act is relevant in case of construction activity on land that is designated as ‘forest land’ and/or is in ‘protected areas’. It is especially relevant in the case of Himachal Pradesh where all vacant land is treated as forest land for which forest clearance is required.

Wildlife (Protection) Act 1972: This Act prohibits destruction, exploitation or removal of any wildlife and provides for protection to listed species of flora and fauna. It is relevant in case of construction activity on land that is designated as ‘protected area’ for wildlife conservation.

Wetland (Conservation and Management) Rules 2017: This Act empowers the state governments to constitute State Wetland Authorities and notify wetlands for conservation. The rules prohibit activities such as encroachment of wetlands, setting up of industries, storage or disposal of hazardous substances and construction and demolition waste, solid waste dumping, discharge of untreated wastes and effluents, etc., in wetlands.

The Ancient Monuments and Archaeological Sites and Remains Act 2010: This Act prohibits construction in a radius of 100 m from a protected monument and regulates construction in a radius of >100 m to 300 m from a protected monument. Permission of the National Monuments Authority needs to be taken in case of repair/ renovation in the prohibited area or construction/ reconstruction/

repair/ renovation in the regulated area. It is applicable in case of infrastructure development works in proximity of ancient monuments and archeological sites and remains.

Code on Occupational Safety, Health and Working Conditions Bill 2019: This code on occupational safety, health and working conditions applies to all establishments with 10 or more workers and includes building and construction workers. It is applicable to all infrastructure works supported under the program.

4. Relevant Environmental and Education Sector Policies

Environmental Policies

National Policy on Safety, Health and Environment at Workplace 2009: The policy provides an action program that includes enforcement, national standards, compliance, awareness, occupational safety and health development. It emphasizes that awareness generation on occupational safety needs to be done by suitably incorporating teaching inputs on safety, health and environment at workplace in schools, technical and vocational courses. This is especially relevant to the vocational education component under the program.

National Policy on Disaster Management 2009: The policy focuses on prevention, mitigation, preparedness and response. It describes the institutional and financial arrangements, capacity development, knowledge management, etc.

National Disaster Management Guidelines – School Safety Policy 2016: This policy issued by the National Disaster management Authority details the various activities that need to be undertaken at the state, district and local levels for school safety including planning, preparation of school disaster management plans, implementation of safety actions (structural and non-structural measures), capacity building of stakeholders, monitoring of risk, etc. It also details the roles and responsibilities of the various stakeholders to ensure school safety at national, state and local levels.

Education Sector Policies

Samagra Shiksha Integrated Scheme for School Education Framework for Implementation: The framework recommends the preparation of a master plan and base document for the school infrastructure along with its phase-wise development. It specifies that the National Building Code 2016 should be a reference for all States and UTs for design and planning of schools. It also stresses on compliance with the Guidelines on School Safety Policy 2016 and with the Harmonized Guidelines and Space Standards for Barrier Free Built Environment for Persons with Disability and Elderly Persons 2016. Most importantly, the framework specifies that “while planning and design of schools and also in construction, it should be ensured that measures to strengthen the environment, health and safety practices are included in accordance with the guidelines contained in EMF-SS issued by MHRD and School Safety Policy Guidelines February 2016 issued by NDMA”.

The framework emphasizes that the provision of proper classrooms, adequate and functional toilets and drinking water facility is mandatory. It specifies that all school buildings constructed under the scheme will have provision of rainwater harvesting system. The framework also recommends inclusion of renewable energy options for electrification of schools including requirements for SCERTs and DIETs have also been specified in the framework.

The framework specifies that the civil works cost shall include: (a) construction of school building conforming to RTE norms (b) eco-friendly construction of all school buildings (c) design of buildings as per NBC 2016, confirming with earthquake resilience and basic fire safety, and in compliance with

NDMA guidelines on school safety (d) adaptation of existing building environment to conform to RTE norms (e) retro-fitting of existing building towards hazard resistance (f) reconstruction of dilapidated school buildings which are beyond major repairs and declared unsafe by the competent engineers (g) reconstruction of dysfunctional toilets and safe drinking water facilities (h) interventions required to be undertaken under Swachh Vidyalaya. The framework further lists detailed norms for infrastructure development and maintenance. The scheme also provides for annual maintenance and repair of existing school building, toilets and other facilities for upkeep and maintenance and to be used for promoting Swachh Bharat Campaign.

The framework details the Swachh Vidyalaya (Clean Schools) Initiative which focuses on construction and maintenance of toilets for boys and girls in government schools. The framework prescribes that a minimum of 10% of the composite school grant should be used for activities related to Swachhta Action Plan (primarily operation and maintenance of water and sanitation facilities). A Swachhta Action Plan (SAP) or Cleanliness Action Plan based on credible analysis of the existing situation, gap assessment and prioritization of interventions is to be prepared. The self-assessment format of the Swachh Vidyalaya Puraskar (SVP) or Clean School Award is recommended for the purpose.

The framework provides for vocationalisation of school education through the introduction of vocational courses from classes 9 to 12. The selection of vocational courses is to be based on an assessment of skill needs and mapping of local job opportunities. The framework lists 17 trades that have been approved for vocationalisation of secondary education for girls to avoid gender stereotyping. These are: agriculture, apparel made-ups and home furnishings, automobile, beauty & wellness, BFSI, construction, electronics, healthcare, IT & ITeS, logistics, media/entertainment, multi-skill, physical education and sports, retail, security, telecom, travel and tourism, gems and jewelry designing. The curriculum will comprise modules on vocational skills and employability skills. The skills modules include 'green skills.'

The framework prescribes safety precautions for pre-schools covering the following aspects: safe location and boundary wall, adequate space, non-sharp furniture and toys, non-toxic paints on play materials, protective caps for electric outlets, safe storage of detergents and flammable materials, procedures for dealing with emergencies, facilities for children with special needs.

Environmental Management Framework for Secondary Schools: This framework document, first drafted in 2011, provides guidelines for safe and sustainable school buildings. The guidelines cover the following aspects: (a) sustainable school design (b) site selection and preservation (c) use of site features, site planning and landscape design (d) energy efficient building envelope (e) construction material (f) indoor air quality (g) lighting (h) ventilation (i) water (j) energy (k) solid waste (l) barrier free environment (m) safety (n) construction safety (o) administration during operation phase.

The EMF also describes the institutional arrangements for its implementation. These arrangements include: (i) environmental experts are to be part of the Technical Support Group that will guide the Project Approval Board regarding appraisal and decisions pertaining to environment, health and safety issues in the programme (ii) designated official in the Department of School Education and Literacy to coordinate on all issues related to environmental safeguards pertaining to the programme (iii) an environment expert is to be appointed by the State Project Office to coordinate with district and sub-district organizations and help in preparing plans and bids that integrate environment, health and safety requirements. The EMF also describes the monitoring and evaluation arrangements which include an audit of its implementation.

5. Environmental and Education Sector Regulations, Procedures, and Guidelines

Environment Sector Regulations, Procedures, and Guidelines

National Building Code 2016 and relevant standards of the Bureau of Indian Standards (BIS): The BIS codes that are relevant to the program activities are: IS 1893 (criteria for earthquake resistant design of structure), IS 4326 (practice for earthquake resistant design and construction of building), IS 13828 (guidelines for improving earthquake resistance of low strength masonry buildings), IS 13920 (ductile detailing of reinforced concrete structure subject to seismic forces), IS 456 (structural design of buildings), IS 14435 (code of practice of fire safety in educational institutions), IS 2440 (guide for day light of building), IS 4963 (recommendation of building and facilities for physically handicapped), IS 7662 (recommendation on orientation of buildings), IS 8827 (recommendation for basic requirements of school buildings). In addition, there is the IS 15498 (guidelines for improving the cyclonic resistance of low rise houses and other buildings/structures), IS 14458 (guidelines for retaining wall for hill areas), IS 14680 (guidelines for landslide control) and IS 14804 (guidelines for siting, design and selection of materials for residential buildings in hilly areas).

Energy Conservation Building Code, 2017: This code provides minimum requirements for the energy-efficient design and construction of buildings. The code is applicable to buildings or building complexes that have a connected load of 100 kW or greater or a contract demand of 120 kVA or greater. Buildings with 1000 sq. m. or more of conditioned area are likely to fall under the mentioned load conditions. It is highly unlikely that the school buildings supported under the program would trigger this criterion.

Guidelines for Management of Sanitary Waste, 2018: These guidelines issued by the Central Pollution Control Board (CPCB) provide waste management options for disposal of sanitary napkins in schools, hostels, etc. The range of disposal options include low-cost locally made incinerators for pads with high cellulose content without super absorbent polymers; electric incinerators for bulk amount of napkin waste; deep burial for compostable sanitary pads; pit burning for cotton cloth.

Indian Standard Safety Requirements for Toys IS 9873: The part 1 of this Standard specifies the safety aspects related to mechanical and physical properties; the part 2 specifies flammability requirements; the part 3 specifies maximum acceptable levels for migration of the elements antimony, arsenic, barium, cadmium, chromium, lead, mercury, selenium and phthalates from toys.

Harmonized Guidelines and Space Standards for Barrier Free Built Environment for Persons with Disability and Elderly Persons 2016: These guidelines issued by the Ministry of Urban Development specify universal design elements within building premises, signage, level changes, access to toilet facilities, fire evacuation needs, etc. The guidelines also include an 'access audit checklist'.

Education Sector Regulations, Procedures, and Guidelines

Guidelines on Safety and Security of Children 2014: These guidelines issued by the Department of School Education and Literacy, MHRD cover the preventive institutional mechanisms and procedures that should be put in place in the schooling system along with the relief and redressal strategies in case of any safety and security incidents. The aspects covered by the guidelines include: (a) location of new schools away from hazardous locations such as highways, unmanned railway crossings, water bodies, etc. (b) provision of boundary wall or fencing with plantation (c) ensuring safety of approach road (d) physically sound, all-weather buildings that are resistant to earthquakes, fire and are safe from floods, and are free from inflammable and toxic materials (e) provision of drinking water and clean toilets with waste disposal (f) separate kitchen shed (g) fire safety (h) emergency exits (i) electrical safety (j) restriction on access to construction sites on school campuses (k) adequate ventilation (l) safe fittings. The guidelines emphasize the preparation of School Disaster Management Plans, teacher training, monitoring by School Management Committees (SMC) and by the state. The guidelines do not cover climate change and extreme weather-related hazards. They also do not specify safety measures relevant to hazardous wastes.

Guidelines on Food Safety and Hygiene for School Level Kitchens 2015: These guidelines issued by the Department of School Education and Literacy, MHRD focus on inter alia the safety aspects of food storage, preparation, waste disposal, personal hygiene, fire safety. The guidelines also cover pest management – pesticides are generally not to be used, but when unavoidable, prescribed safety practices must be followed. The guidelines, however, do not prohibit the use of any hazardous pesticide. The guidelines also do not prohibit the use of fuel wood for cooking – but encourage the use of smokeless stoves and ventilation.

Standard Operating Procedures (SOPs) – Sustaining Water, Sanitation and Hygiene in Schools: These SOPs issued by the Department of School Education and Literacy, MHRD (now MoE) cover the following aspects: safe handling of drinking water, sanitation and hygiene, food hygiene, waste management, menstrual health management, roles and responsibilities of parents and community, operation and maintenance (daily, monthly seasonal, annual).

Annexure-4: Environmental and Social Screening Checklist

General Information

| | |
|---|--|
| 1. Location of the sub-project | |
| • School D.I.S.E Code: | |
| • District | |
| • Block | |
| • Town/Village | |
| • Category of the school | |
| 2. Implementing Agency Details (sub-project level) | |
| • Name of the Department/Agency | |
| • Name of the designated contact person | |
| • Designation | |
| • Contact Number | |
| • E-mail Id | |

Part A: Environment Screening

| Question | Yes | No | Details |
|--|-----|----|------------------------------------|
| 1. Is the sub-project located in whole or part within a radius of 500 mts. from any of the following environmentally sensitive areas? | | | |
| a. National Park | | | If yes, mention name and distance. |
| b. Wildlife/Bird Sanctuary | | | If yes, mention name and distance. |
| c. Wildlife Reserve | | | If yes, mention name and distance. |
| d. Wetland | | | If yes, mention name and distance. |
| e. Natural Lake | | | If yes, mention name and distance. |
| f. World Heritage Sites | | | If yes, mention name and distance. |
| g. Archaeological monuments/sites (under ASI's central/state list) | | | If yes, mention name and distance. |
| h. Reservoirs/Dams | | | If yes, mention name and distance. |
| i. Reserved/Protected Forest | | | If yes, mention name and distance |
| j. Migratory Route of Wild Animals/Birds | | | If yes, mention name and distance |
| k. Area with threatened/rare/endangered fauna (outside protected areas) | | | If yes, mention name and distance |
| l. Area with threatened/rare/endangered flora (outside protected areas) | | | If yes, mention name and distance |

| | | | |
|---|--|--|--|
| m. Habitat of migratory birds (outside protected areas) | | | If yes, mention name and distance |
| n. Historic Places (not listed under ASI – central or state list) | | | If yes, mention name and distance |
| o. Regionally Important Religious Places | | | If yes, mention name and distance |
| p. Public Water Supply Areas from Rivers/Surface Water Bodies/ Ground Water Sources | | | If yes, mention name and distance |
| q. Will the sub-project require any tree cutting? | | | If yes, how many and of which species? |

Part B: Social Screening

| Sl. No | Questions | Yes | No | Details |
|--------|--|-----|----|---------------------------|
| 1 | Does the subproject require additional land for upgradation/ expansion and/ or new construction through land acquisition or direct purchase and/or restrictions on land use? | | | If yes, give full details |
| 2 | Does the subproject require additional land for upgradation/ expansion through transfer from another government department? | | | If yes, give full details |
| 3 | Does the subproject require any informal/ illegal occupants' removal? | | | If yes, give full details |
| 4 | Are there any CPRs in the school compound that will get affected? | | | If yes, give full details |
| 5 | Are there any places of worship in the school compound that will get affected? | | | |
| 6 | What are the alternative arrangements for conducting classes during repair and renovations? | | | |