



Environment and Social Systems Assessment

ENHANCING
TEACHERS
EFFECTIVENESS
IN BIHAR



THE WORLD BANK GROUP

Final Version
October 28, 2014

Contents

Contents.....	2
List of Acronyms.....	3
Executive Summary.....	4
1 Introduction	12
2 Program Description	15
3 ESSA – Objectives and Methodology	24
4 Existing Environmental and Social Management System and its Assessment	27
5 Program Environmental and Social Benefits, Risks and Impacts	44
6 Consultation.....	50
7 Recommended Remedial Measures to Strengthen Systems Performance.....	54
Annex 1: Core Principles used for Assessment/Analysis in ESSA.....	56
Annex 2: Existing Policy and Regulatory Framework References	60
Annex 3: Summary - Environment Management System Developed for the Bihar TE Program	62
Annex 4: Consultative Workshop on Draft ESSA – Environment Aspects	65
Annex 5: Consultative Workshop on Draft ESSA - Social Aspects	67

List of Acronyms

BSEIDC	Bihar State Education Infrastructure Development Corporation
BITE	Block Institute of Teacher Education
BRC	Block Resource Centre
CRC	Cluster Resource Centre
CTE	College of Teacher Education
D.El.Ed.	Diploma in Elementary Education
DIET	District Institute of Education & Training
DLIs	Disbursement-Linked indicators
EIA	Environmental Impact Assessment
ESSA	Environmental and Social System Assessment
GOB	Government of Bihar
IGNOU	Indira Gandhi National Open University
MHRD	Ministry of Human Resource Development
NCTE	National Council of Teacher Education
ODL	Open and Distance Learning
PMA	Project Management Agency
PforR	Program for Results
PRI	Panchayati Raj Institution
PTEC	Primary Teacher Education Centres
RET	Renewable Energy Technology
RtE Act	Right to Education Act
SCERT	State Council Educational Research and Training
SEEL	School and Elementary Education
SMF	Social Management Framework
SSA	Sarva Shiksha Abhiyan
TE	Teacher Education
TEIDI	Teacher Education Institution Development Index
TEMIS	Teacher Management Information System
TET	Teacher Eligibility Test
WB	World Bank

Executive Summary

Context

In 2009, the Government of India set an ambitious goal to improve access and quality to education through the Right of Children to Free and Compulsory Education (RTE) Act. The RTE prescribed strict standards and norms that all schools were required to meet. These reforms saw tremendous success in improving education inputs in Bihar. Under Sarva Shiksha Abhiyan (SSA) program, the main vehicle for RTE's implementation, Bihar has seen an increase in access rates and significant increase in comprehensive classroom infrastructure, reducing the Student Classroom ratio (SCR) from 79:1 to 65:1 from 2005 to 2013. However this vast expansion in the system led to significant challenges in teacher development, performance measurement, and management with which Bihar is still grappling. To devise an immediate solution to the critical issue of teacher shortages in the education sector, Bihar implemented an emergency hiring and training program. Teachers were hired on fixed term renewable contracts by local government bodies on a lower consolidated salary as compared to their permanent counterparts. A large number of the locally hired teachers were untrained at the time of their recruitment.

The Program

The Bihar – Enhancing Teacher Effectiveness Program is being supported under the World Bank's Program-for-Results (PforR) financing instrument. The proposed World Bank-financed Program aims to improve the effectiveness of elementary school teachers in Bihar, by supporting the state to develop a robust teacher education architecture to produce teachers who are effective, qualified, accountable and responsive. The Program is part of the Department of Education of the GOB's newly launched Mission Manav Vikas program which includes a wide-ranging set of reforms for the provision of quality education and improved learning outcomes for all elementary level children. The proposed Program will support all components of Bihar's teacher reform program, except those elements which the state can access under the centrally-sponsored Sarva Shiksha Abhiyan scheme. The World Bank's program will be implemented over five years from FY 2014-2019.

The Government of Bihar's Teacher Education Program includes the following five components:

- I. Developing high quality teacher education institutions for improved program delivery
- II. Certification of unqualified elementary school teachers and their continuous professional development
- III. Developing an effective teacher management system with a robust monitoring and evaluation mechanism
- IV. Improving accountability mechanisms at school level
- V. Improved financial and governance mechanisms

A hybrid operation, involving a large Program for Results (PforR) instrument plus a small Investment Project Financing (IPF) instrument to support technical assistance, has been chosen. This is because first and foremost, GOB has developed a comprehensive program for improving teacher quality. This program is effectively aligned with research evidence. However, this outcome-orientation will require considerable capacity building of the agencies implementing the program, especially in technical areas related to how to improve education quality and impact teacher behavior, built around a strong evidence base of what is actually happening in classrooms in Bihar. There is limited capacity in India to carry out this technical work, and to support the development of such capacities in Bihar.

The estimated funding envelop for the Program is US\$ 357 million (Table 3). This includes a commitment from Govt. of Bihar of US\$ 107 million (30% of the total cost) and the proposed Bank support of US\$ 250 million.

The primary beneficiaries of the program will be approximately 450,000 teachers in government elementary schools in Bihar who will benefit from a strengthened teacher education system, particularly the 90,200 unqualified teachers who will be certified with the D.El Ed. Diploma through the ODL program along with the new unqualified entrants. Among the current number of teachers in service, 41% are female teachers and out of the newly recruited teachers 50% are women in line with Bihar's policy to reserve 50% of all positions for women. Approximately 10,000 teacher educators who are already appointed or will be appointed as part of a wider GOB program will benefit directly.

The Program is designed to utilize and strengthen Govt. of Bihar's institutional structures for teacher education.

- a) The Department of Education of GOB will be the key implementation agency with the Directorate of Research and Training (DRT) under the department as the nodal agency for routing all implementation and fund flow mechanisms under the program. The Program will be implemented by the Directorate through BSEIDC, SCERT, DIET, and PTECs as the major executing and fund handling agencies.
- b) The BSEIDC will be the main procurement agency for all procurement activities under the program.
- c) The SCERT will oversee the academic architecture of the program covering curriculum and syllabus development; content and materials production; the development of teacher educators; capacity building of all major teacher training institutions like DIETS, BRCs and CRCs under the program and managing the ICT and ODL architecture for teacher training under the Program.
- d) A Program Management Unit (PMU) will be established to support BSEIDC, SCERT and the Directorate of Research and Training.

Environmental and Social Systems Assessment

An Environmental and Social Systems Assessment (ESSA) was undertaken by the Bank team for the Program as per the requirement set forth under Operational Policy 9.00. The aim of the ESSA was to review the capacity of existing government systems to plan and implement effective measures for environmental and social impact management of the

program, including determining if any measures would be required to strengthen them.

The ESSA has been undertaken to ensure consistency with six “core principles” outlined in the World Bank’s Operational Policy in order to effectively manage program risks and promote sustainable development.

The ESSA has benefited from various inputs, including a legal and regulatory analysis; field visit to Teacher Education Institutes - at various levels – State (SCERT), District (DIETs/PTECs), Block (BRCs) and Community (CRCs), to assess environmental and social conditions and institutional capacity; and meetings with government agencies, and other stakeholders. The World Bank Specialists have worked closely with Department of Education, Govt. of Bihar and the BSEIDC to prepare the Action Plan as a guide to identify and mitigate impacts and strengthen the management system.

The ESSA report considers consultation, stakeholder involvement and disclosure of information from two perspectives. First, the report describes the requirements of the Government and concerned Department/Implementation Agencies with respect to individual sub-projects and evaluates the extent to which the existing practices are effective and consistent with Bank policy expectations. These practices are described in the ESSA and its specific recommendations and support for improved performance by the Govt. of Bihar is provided for in the ESSA. Second, the ESSA itself has been the subject of state level public consultations held at Patna in July and October 2013. The consultations held provided more detailed information on the PforR process, the proposed Program, and key findings and recommendations of the ESSA. The ESSA was revised incorporating comments obtained from these consultation meetings. Over-all the participants showed support for the Program.

The ESSA report has been published on the website of the Department of Education, Government of Bihar.

Assessment against Core Principles laid out in OP 9.00

Core Principle 1: General Principle of Environmental and Social Management

OP 9.00: 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 relating to a program’s environmental and social effects.

Applicability/Summary

Core Principle 1 is considered in terms of environmental and social management for the education sector, as a key component of good service delivery. Specifically, since the program includes civil works related to construction/extension of new buildings/blocks within existing campuses, this becomes all the more relevant.

There is an adequate national regulatory framework and technical guidelines exist for environmental due diligence with respect to the potential impacts of the program. The assessed weaknesses are systemic and are related to insufficient staffing, weak coordination among the various implementers and inadequate attention to environmental concerns, particularly for the previously developed/old buildings and associated services. This can be overcome by the regulatory framework that already exists.

The Government of Bihar's legal and policy framework is deemed adequate to promote social sustainability. The reservation system in recruitment seeks to address long-standing inequality of access to teacher employment opportunities. This reservation system enjoys widespread political support. The TEMIS database enables the Department of Education to monitor the representation of disadvantaged groups in the teacher force, and the extent to which these groups have access to professional development opportunities and are promoted appropriately. The bottom up training needs analysis for teachers gives disadvantaged groups equal opportunities to express their preferences regarding their individual training needs; BRCs and CRCs are responsible for ensuring teachers attend planned training programs.

Core Principle 2: Natural Habitats and Physical Cultural Resources

OP 9.00: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.

Applicability/Summary

The provisions in Core Principle 2 are considered as part of the ESIA process analyzed under Core Principle 1. The analysis confirmed that Program investments would **neither impact nor convert critical natural habitats**. This Core Principle will **not be applicable to the Bihar TE program** and the PforR as long as no new TE institutes are constructed in hitherto unidentified sites. To ensure that this remains the case, appropriate clause/s will be introduced in the program's legal documents.

Core Principle 3: Public and Worker Safety

OP 9.00: Environmental and so OP 9.00: Environmental and social management procedures and processes are designed 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; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Applicability/Summary

The provisions in Core Principle 3 are considered as part of the ESIA process analyzed under Core Principle 1. Review found that **Core Principle 3 is applicable to the Program**, as there is physical infrastructure development involved in the Program. However, the issues pertaining to this Core Principle are considered low risk of appearing in the Program.

Program documentation specifies the environmental expectations involved in the proposed civil works activities to protect public and worker safety, no procurement of dangerous materials or pesticides is envisaged, and teacher education institutional infrastructure will not be carried out in areas prone to nature hazards.

Core Principle 4: Land Acquisition

OP 9.00: 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.

Applicability/Summary

Civil works will be carried out within existing campuses of institutions/available government land. In the absence of any land acquisition for construction, the risk of impacts on loss of land/asset/ formal and informal livelihood etc. from civil works are not likely. Based on experience in similar education projects there has been no relocation or other related impacts. Loss of access to natural resources is also a low risk, nor is there any risk of impacts on crops because involuntary land acquisition is not eligible for financing under this program (as specified in the legal agreements between the World Bank and the Governments of India and Bihar). The agreements between the Bank and the Government of Bihar also ensure that, where land is not free of encumbrances, it will not be used for program purposes. Hence, **this principle does not apply to the program.**

Core Principle 5: Indigenous Peoples and Vulnerable Groups

OP 9.00: Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.

Applicability/Summary

Resettlement and environmental degradation tend to disproportionately impact the poor and vulnerable groups, documented in operational documents for other Bank projects/programs. While the Program seeks to improve the conditions of the poor and vulnerable groups, if impacts are not well-managed it is possible that vulnerable groups could be negatively impacted.

With respect to other marginalized and vulnerable groups, the investments under this program targets all teachers as direct beneficiaries. Thus while considering the applicability of this Core Principle, the analysis found that it was relevant in terms of ensuring that vulnerable groups are included in the planning process and program prioritization; that vulnerable groups have access to program benefits; and that the needs of vulnerable groups are considered with respect to the Programs impacts.

The approach of the Government is to ensure that all vulnerable groups are consulted and benefit from Government programs and there are policies/programs to this effect.

The ESSA found that the Government of Bihar has recently introduced a comprehensive set of legislation to ensure social inclusion across SC, ST, minority and vulnerable populations. Though this specifically relates to reservation policies, it gives a sense of GoB's intentions of wanting to share the benefits of Government programs across all segments of the state population. The program design will ensure that all teachers from disadvantaged groups will have access to training to enable them to become qualified (and therefore, permanent) teachers.

The teacher professional development programs are designed to build the capacity of teachers to develop their own teaching and learning materials to respond to the specific needs of their children, including through the use of indigenous knowledge as developed by Indigenous Peoples. Capacity building is required at the SCERT especially to more effectively monitor the impact of the teacher programs on disadvantaged groups.

Core Principle 6: Social Conflict

OP 9.00: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Applicability/Summary

The Bihar TE program will not entail social conflict in fragile states, post-conflict areas or areas subject to territorial disputes, nor will the Program cause social conflict or impact distributional equity or associated cultural sensitivities.

As such, the ESSA did not consider the Program with regards to Core Principle 6 as this **Core principle and key element are not applicable to the** operation. It is important to note that distributional equity and cultural sensitivities are covered under the analysis of system with respect to the main considerations of Core Principle 5.

Overall Risk Assessment

Based on the findings of the Environment and Social System Assessment, the following table aggregates the risks anticipated from the program and proposes measures to mitigate those risks. These are included in the Program’s Integrated Risk Assessment.

Risk Description	Risk Management
Potential environmental and social impacts of Program are not identified, mitigated, and monitored	<p>The potential environment and social risks of the program are low, straight-forward and manageable, given the fact that the program does not entail any land acquisition.</p> <p>To streamline work procedures and the actual implementation of existing regulatory /codal provisions, a guidance manual has been prepared. Monitoring and supervision of due diligence measures related to environmental and social issues will be a part of the technical assistance component of the project.</p>

Risk Description	Risk Management
<i>Grievance Redressal Mechanisms:</i> There is a formalized complaint mechanism at the local (district) level but its effectiveness is hampered by lack of awareness	The program will carry out dissemination and awareness raising activities amongst teachers about the work of the grievance mechanisms. As necessary funds from the technical assistance component will be used.
<i>Staffing and skills mix</i> is insufficient to handle environmental and social management issues	The program will ensure that all necessary staffing is available with adequate skills. BSEIDC will appoint focal points for environmental/social monitoring and implementation of the environmental actions stated in the Program Action Plan. The program will be incentivized to provide adequate resources to environmental and social management as performance is a minimum condition to achieve program objectives. The TA component of the World Bank support will enable appropriate experts to be recruited.
<i>Involvement</i> with participatory decision making needs to be undertaken in spirit and not led by a single individual	Dissemination and awareness raising activities for environmental and social due diligence measures will be built into the Bihar TE Program.
Consultations are held for specific purposes such as thematic areas.	The program will undertake inclusive on-going consultations with stakeholders and a training program will be developed for implementers.

Key Program Actions – Environment

Based on the findings from the assessment exercise presented in the ESSA and consultations with key stakeholders, specific measures have been agreed with the Government/Department to strengthen principles of economy, efficiency, health and safety in creating and operating Teacher Training Institutes in the state, including those related to energy.

Key actions agreed to address environmental risks and gaps in the existing systems are:

- 1) Criteria to exclude certain interventions from the Program that may impact ecologically sensitive/ important/notified wetlands, and protected monuments;
- 2) A Program Action Plan that includes strengthening of the existing systems for improved environment/social management. This primarily includes the adoption of the manual on Environment Management System for Bihar TE Program and internal and third-party monitoring of the environmental/social performance of the Program

- 3) Capacity building to address environmental issues for monitoring and due diligence. The capacity building will start from the first month of implementation. The Department of Education and BSEIDC will be responsible for this.

Key Program Actions – Social

The key actions agreed with the Government of Bihar are:

1. Adoption of Program documentation for social management. This will be adopted by Program effectiveness. BDSEIC will be responsible for this.
2. Preparation on awareness of grievance procedures and dissemination of this information. The TA component resources can be used to support the development of these procedures. The dissemination phase will start within the first 6 months of project implementation. The Department of Education will be responsible for this; seeking the assistance of the BDSEIC for any procurement of technical assistance.
3. Capacity building to address social issues for monitoring and due diligence. The TA component resources can be used to support the development of these procedures. The capacity building will start from the first month of implementation. The Department of Education will be responsible for this; seeking the assistance of the BDSEIC for any procurement of technical assistance.

1 Introduction

Bihar is India's third most populous state, with 83 million people. Bihar's economic growth averaged 13 percent between 2005-06 and 2009-10; higher than the national growth rate of 8.2 percent. Since 2010 Bihar has witnessed improved governance climate, put services on the ground, particularly increased serviceable roads to 24,000 kms (from 385 km in 2005) and improved functioning of the public healthcare and schooling system. Bihar is mostly rural with 16 percent of state's GDP coming from agriculture. Bihar's 2009-10 rural poverty rates of 55.3 percent compared poorly with India's 33.8. Although 70 percent of the rural population earns its livelihood from agriculture and related work, nearly half of all households are landless or near landless. Bihar's infrastructure rates are among the worst in India—road density is only 111 kilometers per 100 sq. km of land against the national average of 360. Bihar faces acute energy shortage. The annual energy deficit from FY08 to FY13 was in the range of 13% and 21%.

On human development indicators, Bihar lags significantly. The state remains crucial to India's overall progress on making growth more inclusive. Only 63.8 percent of Bihar population is literate (male rate is 73.39 percent and female 53.33 percent). As per the 2014 figures released by the Integrated Child Development Services (ICDS), 50% of Bihar's children are still malnourished, topping all other states. Bihar's maternal mortality ratio remains low, with 261 women per 100,000 live births dying. Although access to primary school has improved dramatically, Bihar stands second from the bottom in the list of states in students' learning achievement both in Languages and Mathematic. This is a major concern since international evidence continuous to show that what matters for economic growth and long term employability are not only years of schooling completed but more importantly what is actually learned.

Sectoral and Institutional Context

In 2009, the Government of India set an ambitious goal to improve access and quality to education through the Right of Children to Free and Compulsory Education (RTE) Act. The RTE prescribed strict standards and norms that all schools were required to meet. Standards included (i) free elementary education to all children aged six to fourteen years, (ii) provision of appropriate infrastructure and learning material for all schools, and (iii) all States were required to ensure their schools maintained a pupil-teacher ratio (PTR) of 30:1 at primary level and 35:1 at upper primary level by 2015, with all teachers having minimum academic qualifications.

These reforms saw tremendous success in improving education inputs in Bihar. Previously Bihar was characterized by a severe lack of pedagogical resources and infrastructure in primary education, as evidenced by low attendance rates (77.8), substantial numbers of out of school children (181,086), low literacy levels (61.8%) and a very high PTR of 90:1, one of the highest in India. Under Sarva Shiksha Abhiyan (SSA) program, the main vehicle for RTE's implementation, Bihar has seen an increase in access rates and significant increase in comprehensive classroom infrastructure, reducing the Student Classroom ratio (SCR) from 79:1 to 65:1 from 2005 to 2013.

Comparison of Statistics in Bihar: 2005-06 and 2012-13

Indicator	2005-06	2012-13
Total Enrolment (Primary)	1,12,33,588	1,40,31,263
Total Enrolment (Upper Primary)	21,63,453	52,61,688
Pupil Teacher ratio	65	53
% Primary Schools with PTR > 30	NA	83
% Single Teacher Schools	8.3	7
Gender parity Index (Primary)	0.80	0.99
Student Classroom Ratio	92	65
% SC to total enrolment	16.2 (Primary), 11.6 (Upper Primary)	19
No. of Elementary Schools (Govt. + Aided)	53,271	69,963

With a 200% increase in the number of teachers in primary school from 2006 to 2012, Bihar has managed to substantially reduce the PTR. However this vast expansion in the system led to significant challenges in teacher development, performance measurement, and management with which Bihar is still grappling. Continuous under-investments since the 1990s in teacher development from outdated training programs, poor infrastructure, and weak management and monitoring systems put the system to develop and manage teacher at high risk of delivering low quality teachers. International evidence continues to find that once children enter school, the single most important determinate of learning is teacher performance. For reduced PTRs to translate into improved learning outcomes, it is critical that robust systems for developing high quality teachers are in place.

Appropriate support mechanisms to improve classroom effectiveness/pedagogy: To devise an immediate solution to the critical issue of teacher shortages in the education sector, Bihar implemented an emergency hiring and training program. Teachers were hired on fixed term renewable contracts by local government bodies on a lower consolidated salary as compared to their permanent counterparts. Studies in Uttar Pradesh, Andhra Pradesh, Madhya Pradesh and in Kenya have found that locally hired teachers may be more effective than traditionally hired teachers in improving learning outcomes that regular teacher who are much more costly. However, a large number of the locally hired teachers were untrained at the time of their recruitment. Promoting quick accreditation for locally hired teachers, the state used Open and Distance Learning (ODL) to train them for two years while they were on the job. Due to their abbreviated training period, flattened salary trajectory and education background these teachers as well as the other teacher in the system, require continuous support to allow them to effectively teach the required material in the classroom.

Sustainable cost-effective system to increase the supply of quality teachers: The number of certified teachers in Bihar is still severely deficient of what is required for an effective learning environment. Bihar has a PTR of 50:1. Bihar has very few training institutions, and with the combined current training capability of all such institutions not more than 5,000 teachers can be trained each year. Bihar needs to train at least ten times more teachers each year. Through a very intensive process, teachers with adequate qualification have been selected to become teacher educators and their services being placed with teacher training institutions. However the increase in numbers cannot be achieved only through the traditional mode of teacher training. Increased use of ICT is beginning to address constraints to teacher training in a cost efficient manner. A system of quality assurance for the ODL programs is also needed to enable these programs to expand without sacrificing quality.

Governance: Through improved monitoring and decentralizing education decision making to the local level, Bihar has begun strengthening capacity at the district, block and school level. According to a recent study, Bihar experienced a 10% reduction in absenteeism rates during 2003 to 2010 as a result of improved governance arrangements. However, high rates of teacher absenteeism (20%) and low time on task still persist. Lack of information on teachers and teacher education institutions limit decision makers' ability to plan and project future school needs. In addition efforts to improve teacher management are constrained by lack of clear standards to benchmark teacher performance.

2 Program Description

The Bihar – Enhancing Teacher Effectiveness Program is being supported under the World Bank’s Program-for-Results (PforR) financing instrument, which innovatively links the disbursement of funds directly to the delivery of defined results. The proposed Program will support all components of Bihar’s teacher reform program, except those elements which the state can access under the centrally-sponsored *Sarva Shiksha Abhiyan* scheme. The World Bank’s program will be implemented over five years from FY 2014-2019. The program is expected to provide financial support as well as the transfer of knowledge, best practices and innovative solutions to achieve targeted outcomes and improve the quality of teacher education in Bihar.

Program Scope

The proposed World Bank-financed Program aims to improve the effectiveness of elementary school teachers in Bihar, by supporting the state to develop a robust teacher education architecture to produce teachers who are effective, qualified, accountable and responsive. The Program is part of the Department of Education of the GOB’s newly launched Mission Manav Vikas program which includes a wide-ranging set of reforms for the provision of quality education and improved learning outcomes for all elementary level children.

Boundaries of the program to be supported by the PforR: The Mission Manav Vikas program aims at improving the quality of elementary education in Bihar. The proposed Program supports a portion of the Mission Manav Vikas and aims at improving teacher effectiveness.

Program Boundaries

Item	GOB program	Program supported by PforR
Title	Mission <i>Manav Vikas</i>	Enhancing Teacher Effectiveness in Bihar
Objective	Improve the quality of elementary education in government schools in Bihar	Improve the effectiveness of elementary school teachers in Bihar
Interventions	<ul style="list-style-type: none"> a. To make improvement in learning outcomes b. To enable all children to improve language and mathematics learning c. To make teacher educators make a real difference to the classroom process d. To support teachers in schools very effectively e. To provide a complete learning environment for all children f. To make teacher training institutions vibrant and effective g. To make use of improved school infrastructure to support learning h. To undertake assessment of learning progress of children. i. To assess schools and teachers systematically. 	<ul style="list-style-type: none"> a. Enhancing the infrastructure of TE institutions with institutional strengthening and capacity building for enhanced TE delivery b. Supporting implementation of quality pre-service teacher training and continued professional development through use of open distance learning and ICT along with convergence with energy solutions for uninterrupted delivery c. Effective monitoring and evaluation of teacher management systems and monitoring of teacher performance for improving accountability at the school level d. Improved fiduciary and governance mechanisms. <p><i>The Program will not support activities funded under the centrally sponsored scheme of the Sarva Shiksha Abhiyan.</i></p>
Geographical Scope	The state of Bihar	The state of Bihar

The GOB Teacher Education Program includes the following five components:

Component I: Developing high quality teacher education institutions for improved program delivery: The immediate priority of the state is to strengthen institutional capacity to deliver both pre-service teacher education and continuing professional development, with an explicit focus on improving pedagogy. Academic/educational support structures like the State Council of Educational Research and Training (SCERT) at the state level, District Institutes of Education and Training (DIETs) /Primary Teacher Education Centers (PTECs) at the district level and Block Resource Centers (BRCs) / Cluster Resource Centers (CRCs) at the sub-district level will be strengthened to function as local learning centres.

The program will harness the potential of ICT in teacher education, including its use in teacher resource management and administration and the dissemination of a digital pool of learning resources. It will cover teacher capacity building, ongoing teacher support, establishment of a common platform or forum for Teacher Groups, and the deployment of tools for evaluation and assessment, lesson plans, and teaching. The SCERT, DIETs, and PTECs will coordinate and manage the activities of the 10,000 teacher educators expected to be operating at different levels across the state. BRCs and CRCs, the local learning centres, offer a full range of teacher education activities, including local group discussions, tutorials, remote teaching sessions and other contact sessions for collaboration between teachers and peer support.

Component II: Certification of unqualified elementary school teachers and their continuous professional development: This component includes two subcomponents:

Pre-service teacher education: The GOB has embarked on a large scale certification program (Diploma in Elementary Education- D. El. Ed.)² that will be delivered through open and distance learning (ODL) to certify approximately 40,000 newly teachers already in service and approximately 44,000 newly recruited teachers who are unqualified. Design of the curriculum for the D.El.Ed (ODL) is coordinated by the SCERT. This design focuses on implementation of an ICT-supported distance learning program based on the Bihar Curriculum Framework. The Contact sessions will take place in study centres (DIETs, PTECs, BRCs, and CRCs), that will be equipped with ICT facilities. Two key activities of the Government program are: (a) the establishment of high quality learning resources; and (b) the implementation of a robust, pre-emptive support strategy geared towards maximizing improved classroom practice.

Considering acute energy shortage in Bihar, the program has an organic convergence with the energy sector. The annual energy deficit in Bihar during the six-year period from FY08 to FY13 has been in the range of 13% and 21%, with 83% of households in the state without electricity. To address the possibility that this may adversely impact implementation of the GOB teacher education program, the Program will tap into the significant renewable energy sources available in Bihar through close multi-sectoral coordination with the energy sector. For example, solar panels will be installed in district-level teacher education institutions.

Continuous Professional Development (CPD) and Leadership Training: The state has 533 BRCs and more than 5,500 CRCs to provide on-site support for enhanced academic leadership and school management. The program will support teachers and BRC/CRC coordinators with opportunities for upgrading knowledge, research opportunities and

subject specific resources. The state encourages opportunities to offer teachers and teacher educators' internship opportunities with other states. This has been designed to include school based assessments, judging the quality of teaching and learning through classroom observation and lesson planning. The overarching goal of the state in using ICT for teaching and learning is to align pre-service teacher education and CPD in Bihar with an agreed set of teaching standards and an agreed performance management system.

Component III: Developing an effective teacher management system with a robust monitoring and evaluation mechanism: One of the key focuses of the Government program is to develop an effective teacher management system with a rigorous monitoring and evaluation mechanism. The mechanism will have the following: (a) school report cards; (b) measurement of institutional effectiveness; and (c) and monitoring teacher performance.

School Report Cards for monitoring school performance: There is an existing structure set up by the state administration for monitoring the implementation of education interventions from state to school level where functionaries are responsible for periodic visits to schools using monitoring checklists and for data collection. The state government is in the process of developing school report cards to be posted in schools to monitor the functioning of schools and teacher performance.

Teacher Education Management Information System (TEMIS): In order to strengthen this monitoring mechanism, a TEMIS for enhanced teacher management and administration has been developed through technical assistance from the World Bank. TEMIS contains data on each teacher's personal history, educational and professional qualifications, current school posting, time of joining service, training status and expected retirement dates. The database includes records of all the 320,000 elementary teachers in the state and will later be expanded to include all teachers as they are recruited. The state is in the process of converting the TEMIS into a master data record to eventually serve as a teacher-focused human resource management information system (HRMIS) platform.

Measuring institutional effectiveness through the Teacher Education Institutional Development Index (TEIDI): The state has developed a TEIDI framework with technical assistance from the World Bank as a tool to assess the readiness of teacher education institutions to deliver quality teacher education programs and monitor accountability. The TEIDI will have a quantified and weighted checklist of indicators to measure institutional performance. The TEIDI aims to inform planning for effective decision-making at the state and institutional levels. It is expected to be operational by the end of the calendar year.

Monitoring teacher performance through teacher performance indicators: A lack of information on teachers and teacher education institutions limits decision makers' ability to plan and project future school needs. Efforts to improve teacher management are also constrained by a lack of clear standards for benchmarking teacher performance. The program will support development of a set of teacher standards and competencies to establish base-, mid- and end-line databases for teacher performance. Indicators will measure teacher performance in four key domains: (i) subject knowledge, (ii) teacher practices, (iii) teacher attendance, and (iv) time-on-task. These will be used to inform pre- and in-service professional development.

Component IV: Improving accountability mechanisms at school level.

Community participation and oversight through School Management Committees (SMCs) are critical for improving school quality. SMCs comprise of parents, members of the community, elected representatives of local bodies and school staff. They are mandated with ensuring the regularity of parent teacher meetings, monitoring student and teacher attendance, overseeing the use of school grants and the completion of minor civil works. GOB will support training and capacity building of SMCs helps them move beyond mere civil works monitoring towards social audit and monitoring teacher presence and, eventually, the improved performance schools through more effective school management. SMCs are also gradually being trained and empowered to monitor academic and quality aspects of education. Third party surveys will be conducted to better understand the functioning of SMCs. Survey findings will be used to strengthen monitoring mechanisms at the school level.

Component V: Improved financial and governance mechanisms. The program includes efforts to enhance the accountability and governance frameworks of state implementing agencies, such as the Directorate of Research and Training, SCERT and BSEIDC. Given BSEIDC large mandate for construction and longer term maintenance of infrastructure assets in the education sector, the Program will support the strengthening of its operational, corporate and fiduciary systems. Since BSEIDC is a corporate entity in need of improved capacity to fulfill its mandate, the state will support its adoption of corporate governance mechanisms for more robust and transparent functioning overall.

Choice of Instrument: Program for Results (PforR)

The Government of Bihar has a well-defined, clearly developed Government program, which will be supported through the use of government's system and procedures. A hybrid operation, involving a large Program for Results (PforR) instrument plus a small Investment Project Financing (IPF) instrument to support technical assistance, has been chosen because:

First and foremost, GOB has developed a comprehensive program for improving teacher quality. This program is effectively aligned with research evidence.

International research shows that good teachers are able to make a big difference in the learning outcomes of the children they teach. The challenge is that traditional measures of teacher quality – such as the amount of education they have – are not well-correlated with teacher effectiveness. In the context of this program, therefore, it is important that there is a focus on outputs and outcomes (for example, teacher behavior and performance) rather than inputs. This is true for the whole of GOB's own education reform program, of which this program supports a slice. Developing a culture of efficiency in service delivery through rewarding achievement of measurable results is especially important in state which is otherwise characterized by weak governance. The funding from the World Bank will be driven by the achievement of outcomes; and this approach will be institutionalized by the implementing agencies in other areas of their work (such as setting priorities for funding of teacher training institutions). All these considerations argue in favor of a PforR instrument.

However, this outcome-orientation will require considerable capacity building of the agencies implementing the program. This is especially the case in technical areas related to how to improve education quality and impact teacher behavior, built around a strong

evidence base of what is actually happening in classrooms in Bihar. There is limited capacity in India to carry out this technical work, and to support the development of such capacities in Bihar. These inputs will also be time-sensitive, at different phases of the program. However, there is little experience in Bihar is using their government systems for securing high quality (and expensive) technical assistance. For these reasons, GOB has requested a small technical assistance SIL so that these needed services can be secured in a robust and efficient manner.

Program Financing

Program costs and financing: The estimated funding envelop for the Program is US\$ 357 million (Table 3). This includes a commitment from Govt. of Bihar of US\$ 107 million (30% of the total cost) and the proposed Bank support of US\$ 250 million. All funding, regardless of its source, will flow through a distinct budget line item for the program within the demand for grant (Budget) of the Education Department. There will be no distinction between GoB funding and Bank support at the level of program implementation.

Program Costs and Financing

Item	Amount (US\$ million)	% of Total
Estimated Program Expenditures		
Institutional strengthening (repairs and renovation of SCERT, DIETs, PTECs and BRCs)	241	67%
ICT infrastructure	50	14%
D.El.Ed. course preparation and implementation (incl. ICT based modules) and CPD activities for teachers	24	7%
Training	17	5%
Program management, monitoring and evaluation *	25	7%
TOTAL estimated expenditures	357	100%
Program Funding Sources		
IDA *	250	70%
GoB	107	30%
TOTAL sources	357	100%

* This includes a TA support of USD 25 million which will finance this component and will disburse as an IPF.

The two components of the program- the P4R component and the TA will be governed by one loan agreement. The World Bank will provide flexibility to the state to ask for reallocation of funds from the TA component to the P4R if the state does need a portion of the funds for the TA.

Beneficiaries

The primary beneficiaries of the program will be approximately 450,000 teachers in government elementary schools in Bihar who will benefit from a strengthened teacher education system, particularly the 90,200 unqualified teachers who will be certified with the D.El Ed. Diploma through the ODL program along with the new unqualified entrants. Among the current number of teachers in service, 41% are female teachers and out of the newly recruited teachers 50% are women in line with Bihar's policy to reserve 50% of all positions for women. Approximately 10,000 teacher educators who are already appointed or will be appointed as part of a wider GOB program will benefit directly. The program will also benefit elementary school students (approximately 22.7 million) who will gain access to improved classroom teaching and learning.

Lastly, the program will support SMCs to better implement their tasks of improving the learning environment, teacher presence in schools, and overall school functioning.

Program Development Objective

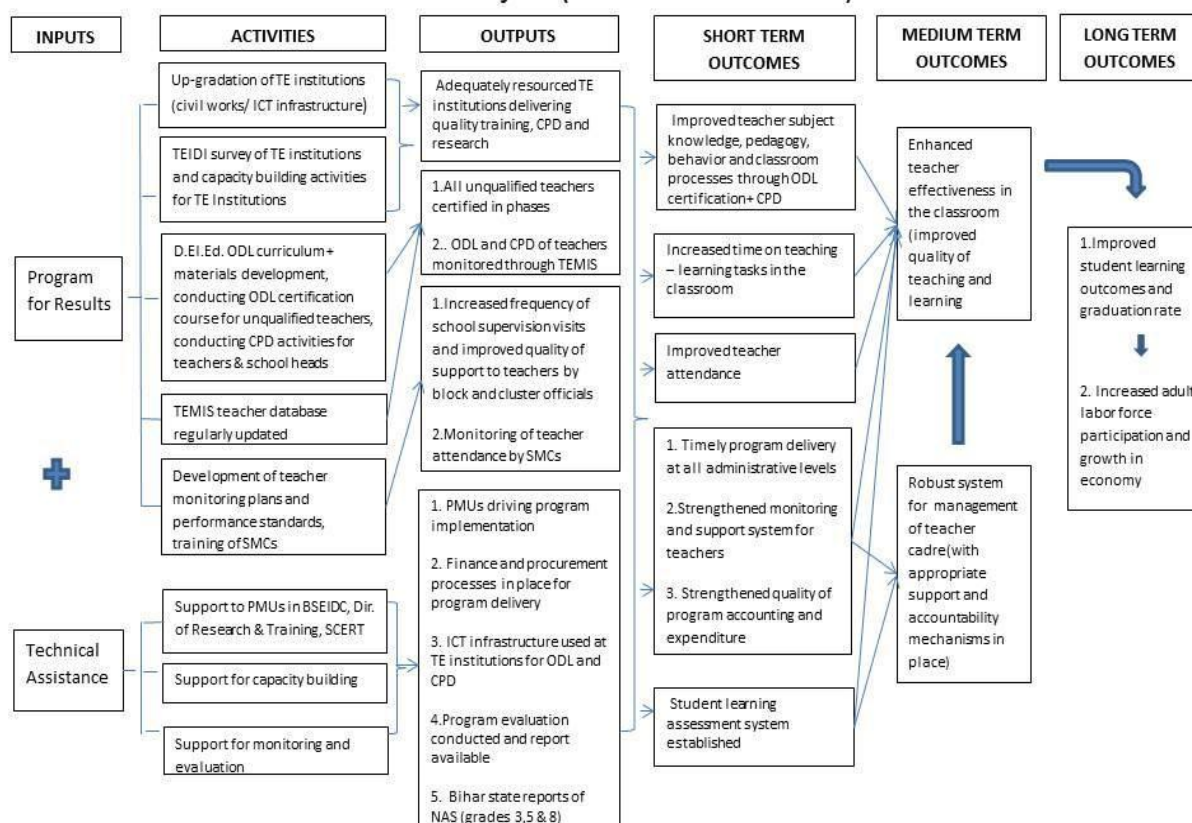
The development objective for the Program (hereinafter referred to as the "Program Development Objective" or "PDO") is *to improve effectiveness of elementary school teachers in Bihar.*

Program Key Results and Disbursement Linked Indicators

PDO level indicators: It has been agreed to use the PforR lending instrument to concentrate Bank financing in four key results indicators that will contribute to the achievement of the PDO. These are as follows:

1. 84,000 unqualified teachers enrolled in D.El Ed. certification program during program period
2. 90,200 additional qualified elementary teachers
3. Improved teacher scores on subject knowledge, pedagogy, and time on-task over measured baselines
4. 75% faculty positions filled in DIETs, CTEs and PTECs
5. Teacher attendance improved by 6 %age points
6. 450,000 beneficiaries (elementary school teachers) covered

Results Chain for 'Improving Effectiveness of Elementary School Teachers in Bihar' Project (2013-14 to 2017-18)



Disbursement linked Indicators (DLIs). There are six DLIs specific to the program interventions that will be used for disbursement. The costing of the DLIs is almost uniform to ensure that equal effort is made to achieve more challenging qualitative DLIs to bring about qualitative systemic improvement as for those on civil works and ICT infrastructure.

The DLIs focus on:

1. Ensuring requisite infrastructure of TE Institutions
2. Ensuring capacity enhancement of TE institutions for effective TE delivery
3. Ensuring certification of unqualified teachers and professional development of in-service teachers
4. Teacher management and performance effectively monitored and evaluated
5. Enhancing teacher accountability at school level
6. Strengthening procurement, financial accountability and corporate governance framework and systems in BSEIDC and incentivizing compliance with State Treasury Rules by DR&T.

Implementation Arrangements

The Program is designed to utilize and strengthen Govt. of Bihar's institutional structures for teacher education.

- a) The Department of Education of GOB will be the key implementation agency with the Directorate of Research and Training (DRT) under the department as the nodal agency for routing all implementation and fund flow mechanisms under the program. The Program will be implemented by the Directorate through BSEIDC, SCERT, DIET, and PTECs as the major executing and fund handling agencies.
- b) The BSEIDC will be the main procurement agency for all procurement activities under the program. Procurement components are expected to include civil works for infrastructure up-gradation, multi-media content development, ICT hardware procurement and consulting services. BSEIDC will receive substantive TA support to carry out these procurement activities.
- c) The SCERT will oversee the academic architecture of the program covering curriculum and syllabus development; content and materials production; the development of teacher educators; capacity building of all major teacher training institutions like DIETS, BRCs and CRCs under the program and managing the ICT and ODL architecture for teacher training under the Program.
- d) A Program Management Unit (PMU) will be established to support BSEIDC, SCERT and the Directorate of Research and Training. With the support of TA, the PMU will be established as an interim arrangement for the program period to facilitate the integration of technical interventions into the program design and the TA system overall. The PMU will be withdrawn as the Program closes.

3 ESSA – Objectives and Methodology

An Environmental and Social Systems Assessment (ESSA) was undertaken by the Bank team for the Program as per the requirement set forth under Operational Policy 9.00. The aim of the ESSA was to review the capacity of existing government systems to plan and implement effective measures for environmental and social impact management of the program, including determining if any measures would be required to strengthen them.

The ESSA has been undertaken to ensure consistency with six “core principles” outlined in the World Bank’s OP/BP 9.00 (applicable to Program-for-Results Financing) in order to effectively manage program risks and promote sustainable development. These six principles are:

1. Promote environmental and social sustainability in the Program design - avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the program’s environmental and social impacts.
2. Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the program.
3. Protect public and worker safety against the potential risks associated with:
 - (i) construction and/or operations of facilities or other operational practices under the program;
 - (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the program; and
 - (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.
4. Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assists the affected people in improving, or at the minimum restoring, their livelihoods and living standards.
5. Give due consideration to the cultural appropriateness of, and equitable access to, program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups.
6. Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Objectives of the ESSA

The specific objectives with which the ESSA was undertaken include the following:

1. Identify potential environmental and social benefits, risks and impacts applicable to the program interventions

2. Review the policy and legal framework related to management of environmental and social impacts of the program interventions
3. Assess the institutional capacity for environmental and social management system within the program system
4. Assess the program system performance with respect to the core principles of the PforR instrument and identify gaps, if any
5. Describe actions to be taken to fill the gaps that will be used as input/s to the Program Action Plan

Methodology

The use of P4R instrument for the operation builds on the increased reliance on borrower safeguard and oversight systems. The Environmental and Social Management System Assessment (ESSA) for the program examines Bihar's existing environmental and social management system from a legal, regulatory, and institutional perspective.

The assessment team used various approaches to review the environment and social systems that are relevant to the program. The ESSA analyzes the system for environmental and social management as relevant for the program vis-à-vis each of these principles. The gaps identified through the ESSA and subsequent actions to fill those gaps directly contribute to the Program's anticipated results to enhance institutional structures in education. The ESSA analysis presents a detailed description of the Program activities and the existing conditions on environmental and social management systems. The report presents Action Plan/recommendations that will be incorporated into the overall program.

More specifically, the process used was designed to assess the environmental and social management system that will be applied to Bihar Teacher Education Program. This included:

1. Analysis of the national and state systems for environmental and social management for planning and implementing programs in the education sector (particularly in context of the Teacher Education Institutes) for consistency with the standards outlined in OP/BP 9.00;
2. Identifying where there are procedural and policy gaps with OP/BP 9.00 as well as performance constraints, if any in carrying out environmental and social management processes; and
3. Developing a set of viable actions to strengthen the system and improve performance.

The ESSA Analysis has considered a Strengths-Weaknesses-Opportunities-and-Threats (SWOT) approach - the "weaknesses", or gaps with OP/BP 9.00, are considered on two levels: (i) the system as written in laws, regulation, procedures and applied in practice; and (ii) the capacity of Program institutions to effectively implement the system. It also included consultations with different stakeholders to analysis the key effects/impacts.

The ESSA has benefited from various inputs, including a legal and regulatory analysis; field visit to Teacher Education Institutes - at various levels - State (SCERT), District (DIETs/PTECs), Block (BRCs) and Community (CRCs), to assess environmental and social conditions and institutional capacity; and meetings with government agencies, and other stakeholders. The World Bank Specialists have worked closely with Department of Education, Govt. of Bihar and the BSEIDC to prepare the Action Plan as a guide to identify and mitigate impacts and strengthen the management system.

4 Existing Environmental and Social Management System and its Assessment

Assessment of Existing Environment, Health and Safety Management System

A detailed analysis on the review of the existing processes and the supporting institutions was also undertaken to assess the gaps existing in the current system with regard to environment, health and safety compliance. These are presented in the table here:

Findings from the Environmental Performance Review of Teacher's Training Institutes

Sl. No.	P4R requirement	Existing System Description	Assessment
Organization & Program Structure			
1	Program procedure will operate within adequate legal and regulatory framework to guide environmental and social impact assessment	<p>The National Council for Teacher Education (NCTE), a statutory body of Government of India, has laid down norms in 2009 for teachers training institutes.</p> <p>Construction and/or up gradation of teachers training Institute does not fall under any legal and regulatory obligation to carry out environmental impact assessment or seek a clearance.</p> <p>However, the country level environmental protection framework would apply to such development. The NCTE norms also lays down norms for environment protection but the these are not very illustrative in nature causing difficulty for the implementing authority i.e. Director (Research & Training) to implement the same.</p>	<p>Even though there is no specific requirement for undertaking environmental assessment, the provisions for environmental protection in India stated in various laws pertaining to building construction and safety (these includes acts, rules and Indian Standard codes on area required; class room and workshop sizes, sanitation, water supply, fire safety, earthquake resistance etc.) would apply.</p> <p>Moreover, there are directives in the NCTE Norms for protection of environment. These norms detail out of all the facilities required for a training institute (as per its level) and also EHS requirements based on the number of students/users of the facility.</p> <p>Hence, the program can operate within this existing legal framework, which is largely covering all key areas pertaining to building's environment, including health and safety aspects therein.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
		<p>The Director (Research & Training) under the Department of Education, Government of Bihar is sole agency mandated to develop and monitor the program.</p> <p>Even though compliance to basic environmental issues is undertaken by the Directorate, monitoring is not carried out systematically as comprehensive indicators have not been developed.</p>	<p>However, there is a requirement for bringing together the various existing requirements/guidelines in a way that its application can be ensured more effectively and monitoring can be carried out systematically. Some procedures need to be clarified/better so that the measures for environmental protection can be applied more systematically.</p> <p>Since the Director (Research & Training) is the sole authority for development and operation of the program there are considerable opportunities for comprehensive monitoring of the program at all stages of the program and taking corrective action.</p>
	<p>The implementing agency adequately staffed, in terms of skills, qualifications, and number of personnel for program administration, planning, and design, implementation, and monitoring functions</p>	<p>The Directorate (Research & Training) under the Department of Education, Government of Bihar is a dedicated agency mandated to undertake the development and operation of the program - primarily the technical aspects related to planning curriculum and training to deliver the curriculum developed etc.</p> <p>Since development of the infrastructure requires quite different skill sets, BSEIDC was created by the Government of Bihar to look into the aspects and expertise required for building planning, design, construction and major maintenance.</p>	<p>Even though the organizations i.e. Directorate (Research & Training) and BSEIDC have defined roles, the environmental responsibilities within the organizations are not very clearly defined and are shared between the different personnel. Since these are shared responsibilities, fixing accountability is difficult.</p> <p>Also, the environmental inputs into planning and design are always evenly applied. Several buildings were designed and constructed a few decades back and therefore are not always in meeting current needs and facilities.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
		<p>Technical manpower is available in these organizations but the environmental responsibilities during the planning, designing and monitoring are shared and are not very clearly defined. Since both these organization are promoted by the Government of Bihar budgetary and infrastructure required are provided through exiting funding mechanism of the government.</p>	<p>In BSEIDC, which primarily looks into the development of new infrastructure, including planning for environmental protection, there are no dedicated personnel to look into the environmental aspects.</p> <p>Architects and engineers are available in its staffing set-up but inputs for environmental planning, designing and monitoring are not always focused/consistent. Therefore, while BSEIDC has the mandate, basic man- power and recent experience in building educational institutions, to improve efficiency there is requirement to develop in-house capacity at BSEIDC to promote efficiency and consistent application in environmental planning, designing and monitoring of buildings, including its infrastructure/facilities.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
2	<p>Incorporation of recognized elements of environmental and social assessment good practices including</p> <ul style="list-style-type: none"> ▪ Early screening of potential effects ▪ Consideration of strategic, technical and site alternatives 	<p>The building infrastructure development (repair, construction or extension of a block) envisaged under this program would be undertaken within existing campuses on land already under the possession of the Department of Education. No new sites would be acquired for the Program.</p> <p>BSEIDC undertakes site specific planning and investigations and develops plans for building of the infrastructure. The site visits carried out by BSEIDC to the respective institutes are primarily intended for familiarization with site conditions and for undertaking studies for design.</p> <p>No systematic screening process for identification and assessment of environmental or social issues is usually carried out.</p> <p>The development of the environmental safeguards is also limited to adherence to the NCTE norms and no comprehensive site assessment is carried out.</p>	<p>The present process does not include systematic site screening and comprehensive assessment of potential environmental issues at the campus level. As a result, integration of environmental concerns in planning is not very robust. There is thus a requirement of defining/consolidating work processes so as to integrate both the environmental screening, assessment (scoping) and planning appropriate to the scope and scale of development.</p> <p>The proposed approach would ensure cross-cutting engineering, environment, health and safety issues are considered in the planning and decision making process.</p> <p>Since no land will be acquired for this Program, there is no need for screening for land or any related social effects, such as asset infrastructure, livelihoods, etc.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
	<ul style="list-style-type: none"> • Explicit assessment of potential induced, cumulative and trans-boundary impacts • Identification of measures to mitigate adverse environmental and social impacts that cannot be otherwise avoided or minimized 	<p>The civil works inside training institute campuses would not be large scale developments and would be primarily single or double storied building/s. Each administrative unit i.e. district or block would have one such infrastructure i.e., DIET or BRC respectively. The cumulative impacts are thus not envisaged as the scale and extent of impacts would neither be significant or large scale or unprecedented.</p> <p>Preliminary mitigation measures to prevent environmental pollution e.g. toilets, septic tank, drains are planned and implemented but gaps have been observed during the planning and implementation.</p>	<p>A reengineering of the work procedures needs to be carried out to ensure that the mitigations measures are planned and implemented taking into consideration the local considerations/requirements so that the building and associated assets are sustainable.</p> <p>No cumulative social effects or impacts are anticipated for this Program.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
	<ul style="list-style-type: none"> • Clear articulation of institutional responsibilities and resource to support implementation of plans • Responsiveness and accountability through stakeholder consultation, timely dissemination of program information and responsive grievance redress measures. 	<p>BSEIDC is responsible for the entire construction work which covers site assessment, design, construction and handover. The Principal of the concerned institute takes the possession of the constructed building and related assets/equipment.</p> <p>The maintenance of these institutes during the operation stage is carried out by the Director (Research & Training). Even though organization responsibilities are well defined the effectiveness of the process is in question as the Director (Research & Training) does not have the required skills to undertake maintenance job. For major repairs, BSEIDC takes over the function.</p> <p>Even though during the site assessment and handover, the BSEIDC consults with individual training institutes their participation in the entire process is limited. However, entire process of communication is carried out on an ad hoc basis. In case of planning and operation the Principal of the institute can send forward the requirement of the institute or can also express his grievance, if any to the Director (Research & Training).</p>	<p>The overall institutional responsibilities are well defined but clear articulation of responsibilities of each of the staff positions is required for ensuring environmental management requirements are integrated into the work processes whether related to the planning, construction or operation of an infrastructure facility, in a more coherent and systematic way.</p> <p>Even though communication between the stakeholders takes place, most of it is undertaken in an ad hoc manner. There is a requirement for developing a structured stakeholder consultation mechanism for timely dissemination of program and other related information.</p> <p>The absence of a formal system of communicating requirement/s to the Director (Research & Training) and the system to adequately assess and respond to these is needed.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
		<p>Training programs are developed and designed following a consultative Training Needs Analysis, through which each teacher identifies their needs. These needs are then aggregated to formulate local (block, cluster and district) level plans, with overall State plans being prepared to set overall priorities and to secure resources from State and national funding sources. This bottom-up planning process takes place annually. The new TEMIS database also tracks professional development achievements of all elementary teachers, as well as containing comprehensive information about the social categories of teachers.</p>	<p>The Training Needs Analysis process is strongly participatory and consultative, with the process focused on the professional needs of teachers (rather than their social status). Allocated funds usually are adequate to implement the plans; but weaknesses in implementation capacity mean that often not all resources are utilized. The process for determining where the resources are actually spent is not fully transparent.</p> <p>The new TEMIS database is comprehensive and offers the opportunity to track the comparative success of teachers from disadvantaged groups in accessing professional development opportunities. Training on data analysis is needed for staff in the SCERT to carry out this analysis.</p>
	<p>Do monitoring arrangements specifically include all relevant aspects of environmental management?</p> <p>What monitoring processes can be utilized as a means to enhance validity and credibility?</p> <p>Is there a need to formulate program-specific quantitative or qualitative monitoring indicators?</p>	<p>The monitoring of the program implementation is carried out by Director (Research & Training). Specific metrics have been developed for monitoring but these do not adequately covers environmental, health and safety aspects.</p> <p>In the case of construction, the entire process of monitoring is carried out by BSEIDC. BSEIDC undertakes regular monitoring of the process of construction, including concurrent monitoring through its field teams. However, the monitoring does not include any systematic coverage on environmental aspects.</p>	<p>Even though a process of monitoring exists at both Director (Research & Training) and BSEIDC there is requirement for strengthening the present monitoring process to enhance its validity and credibility.</p> <p>The monitoring indicators also do not include any systematic coverage of environmental or social aspects and so there is a need to develop indicators by which the environmental and social effects can be monitored and managed as necessary.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
Environmental Considerations			
3	<p>Avoid, minimize or mitigate potential adverse impacts on natural habitats physical cultural, archeological, paleontological, historical, architectural and religious properties property. Do Program manuals or construction contracts establish "chance find" procedures to take effect whenever Program activities result in discovery of, or disturbance to, physical cultural resources?</p>	<p>The project is not envisaged in or near any sensitive natural habitat nor is the scale of development large. Hence, no adverse impacts on natural habitats are envisaged.</p> <p>Presence of historical property was observed at a couple of sites. The present program scope in terms of civil works does not envisage demolition of the property to construct the new infrastructure or any other impact due to minor works in other buildings within the same campus.</p>	<p>The scope of work under the Program avoids impacts on cultural/historical properties. Since there are possibilities to find such properties in Bihar, procedures for having chance finds will be defined in the work procedure the protection of cultural/historical and architectural properties.</p>
4	<p>Promotion of community, individual and worker safety through the safe design, construction, operation and maintenance of physical infrastructure</p>	<p>The entire designing and construction work for new infrastructure or renovation of existing infrastructure for Teacher's Training is entrusted to Bihar State Infrastructure Development Corporation Ltd (BSEIDC). Qualified professionals (engineer and architects) from BSEIDC are involved in the designing and construction work. Safety and emergency aspects are also considered in design of the training institute.</p>	<p>Even though the planning and designing is carried out by qualified personnel in BSEIDC, there is not coverage/focus on environmental aspects. The EHS aspects need to be integrated into all the activities i.e. planning, designing and construction.</p> <p>The contract documents should also have specific provisions for the EHS conditions.</p> <p>During operation phase, primary responsibility for maintenance is left to the individual institutes under Director (Research & Training). These institutions do not have any technical personnel capable of assessing the maintenance requirement of assets.</p>

Sl. No.	P4R requirement	Existing System Description	Assessment
		<p>In case of renovation of existing structure, the structural safety aspects for pre-existing civil works are taken into consideration.</p> <p>Construction work is outsourced from qualified contractors. Even though the design considers some of the aspects of environmental health & safety (EHS), there is some scope to strengthen these aspects in the contract.</p> <p>BSEIDC is also involved in supervising construction work. Though this construction supervision covers quality aspect and physical progress of the work, it does not adequately consider health, environment and safety aspects.</p> <p>Operation and maintenance of physical infrastructure is carried by the Director (Research and Training) and the respective teachers training institutes. There is lack of qualified manpower at the institute level to undertake the technical activities associated with maintenance.</p> <p>Moreover, no illustrative maintenance plan is available to guide individual institute in carrying out assessment of assets and accordingly plan for maintenance. It has been observed that largely the maintenance work is performed based on the availability of fund and may not always address aspects of preventive maintenance.</p>	

Sl. No.	P4R requirement	Existing System Description	Assessment
5	<p>Measures to avoid, minimize or mitigate community, individual and worker risks when program activities are located within the prone to natural hazards.</p> <p>As relevant, does the Program include measures to ensure that people or the environment would not be put at increased risk due to natural hazards such as flooding, severe weather or climatic events, or other disasters?</p>	<p>Natural hazard dimensions are being considered for designing of the facility. Soil testing and high flood level (HFL) are studied for construction of facility.</p>	<p>It would be necessary to ensure that measures taken in design to reduce risk due to natural hazards such as flooding, severe weather or climatic events are monitored more closely and data management/record keeping on structural designs is systematized. This is specifically applicable to new blocks that will be constructed under the program.</p>

Assessment of Existing Social Management System

The assessment reveals that a number of Social Management Systems already exist for the teacher education program in the State. They are designed to mitigate and redress any grievances of participating stakeholders, which may occur during the course of program implementation.

1. The GoBs social management system offers an extensive academic amenities (prerequisites), monitoring and support mechanism designed and implemented, under Mission Manav Vikas, to enable school children to attain the education levels appropriate to their grades. A wide-ranging provision of infrastructure development, training and capacity building process is underway.
2. Some of the important features of Mission Manav Vikas which are directly relevant to the teacher education program are: (i) A sizeable number of teachers, who have passed the Teacher Eligibility Test (TET), are being recruited to bring the reduce the pupil-teacher ratio (PTR) in schools closer to the norm of 30:1; (ii) more classrooms are being constructed to reduce the number of multi-grade classrooms; (iii) not only Niyojit teachers are being provided appropriate training, but its results are also triangulated to ensure that they are suitably trained; (iv) every TEI has been given responsibility to supervise at least 10 schools.

The institute will continue to provide guidance and sustained support to the designated schools to improve its academic performance; and (v) all Cluster Resource Centres (CRCs) in the state have been provided the service of CRC Coordinators (CRCCs). These CRCCs will be trained by teacher educators. In return, CRCCs will provide academic support to schools and their teachers. In this way, the state of teacher performance is critically contingent on the monitoring and support system that emanates from SCERT and culminates in appropriately-educated school children.

3. Bihar Reservation of Vacancies in Posts and Services (for Scheduled Castes, Scheduled Tribes and other Backward Classes) Act of 1991 prescribes a reservation for disadvantaged social groups during the direct recruitment (i.e., recruitment of new people in open competition) of teachers. The Act states that all appointments to services and posts in an establishment (e.g., a school) which are to be filled by direct recruitment shall be regulated in the following manner: "(1) The available vacancies shall be filled up: - ... (b) from reserved category - 50%. (2) The vacancies from different categories of reserved candidates from amongst the 50% reserved category shall, subject to other provisions of this Act, be as follows:- (a) Scheduled Castes - 16%, (b) Scheduled Tribes - 1%, (c) Extremely Backward Class - 18%, (d) Other Backward Class -12%, (e) Economically Backward Women - 3%,; Total - 50%".
4. In a further attempt to ensure socially-disadvantaged groups get access to teaching positions, the State Government introduced Block Institutes of Teacher Education (BITEs) in blocks with sizeable scheduled caste, scheduled tribe and minority populations. It is urgently felt that a special consideration is required for such districts to shore up pre-service teacher training facilities that will encourage eligible persons from these segments to join and serve the rank of school teachers. In addition, these training institutions will be additionally sensitive to the ethos of inclusive education and other pedagogic parameters that are essential to prepare teachers for schools that are overwhelmingly attended by children from marginalized population. Also, the step to establish BITEs in these regions will overcome the scarcity of local teachers who are aware of the dialect/language of communities and their customs and beliefs. Thus far there are only 4 BITEs operational in Bihar.
5. The National Policy on Empowerment of Women (2001) highlights the principle of gender equality as enshrined in the Constitution, the efforts made within the framework of a democratic polity, laws, development policies, plans and programs to achieve women's advancement in different spheres and the commitment of the State to secure equal rights of women as evident in the form of ratification to international conventions like Convention on Elimination of All Forms of Discrimination Against Women (1993).
6. The "Mahadalits" in Bihar are the most deprived sections among Scheduled Castes and to address the educational needs and social upliftment of the Mahadalits, the Government of Bihar has initiated 19 different schemes; (http://www.mahadalitmission.org/docs/data/BMVM_YOJNA_en.pdf)
7. The 'Process of Redressal of Grievances under RTE' of the Department of Education (Government of Bihar). Under its provisions, any person can approach Shiksha Samiti of Gram Panchayat and Panchayat Samiti —both Gram Panchayat and Panchayat Samiti are designated local authorities under this provision—with his/her grievances regarding RTE. Local authorities (Gram Panchayat and Panchayat Samiti) will redress

the grievance within seven days or they will forward it to the appropriate authorities, including School Administrations, Block Education Officers and District Education Officers. In case the aggrieved person is not satisfied with decisions of these authorities, s/he may contest the decision at different levels of appellate authorities, from Block Education Officer and District Education Officer to State Project Director, Bihar Education Project. The appellate authorities are required to pronounce their decision within 30 days. If the appealing party is not satisfied with the decision, they can then turn to the State Commission for the Protection of Child Rights directly for the redress of their grievances. Also part of the 'Process of Redressal of Grievances under RTE' is a Shiksha Samvad programme at block and district level to be organized every second Saturday of the month between 10.00 and 13.00 pm. The purpose of Shiksha Samvad programme is twofold. It has been instituted to redress stakeholders' grievances and also serves to provide information about different aspects of RTE. A second level of GRM exists consisting of appellate body at the district level called the *Shikshak Niyojan Pradhikar*, which serve to redress grievances about recruitment and service conditions of *Panchayat, Prakhanda, Nagar Panchayat, Nagar Parishad and Nagar Nigam Niyojit* teachers. The body is served by two members (presiding officers). One of the members is a retired judge and the other a senior officer from the Govt. of Bihar. This appellate body is the final dispute resolution authority that is decentralized out of the purview or interference from central executive authorities in the government.

8. Systems to promote social accountability: School Management Committees (SMCs) are responsible for academic and non-academic activities of schools. SMCs consist of a mix of stakeholders at the school level, including parents; representatives from SC and disabled persons; women are required to fill 50% of the positions on the SMC. Under social accountability mechanism for teachers' attendance and classroom performance, SMC members will be instrumental in ensuring quality education for school children. SMCs are also responsible for oversight of civil works at the school level.

Capacity and Performance Assessment

9. *ST/SC/Minority groups*: The establishment of BITEs, which now exist in four Blocks only, needs to be expanded to include all Blocks with a sizeable minority, scheduled caste and scheduled tribe populations. BITEs have the potential to enthuse local youths, especially from SC/ST and Minority communities, to contribute to the meaningful education for the children from their communities. Moreover, this will also surmount the persistent problem of dearth of local teachers who are conversant in local dialect and customs/beliefs.

10. There are a number of CRC and BRC positions which need to be filled, so that these institutions can adequately fulfill their role in supporting teachers in school to perform more effectively.

11. The system of job reservation has been assisting the SC, ST, EBC, OBC and women from marginalized communities immensely but the poorest and most marginalized of these communities are still not employed in proportion as teachers to their numbers in the general population. The fundamental problem is the lack of the required level of educational attainment (at least higher education) and qualifications in these populations.

12. *Gender:* Though women are elected for SMCs there is frequent but anecdotal evidence that the husband of elected woman wields real power and not the incumbent. There is a need for comprehensive and vigorous training for women elected members to bring message home about their power, and the necessity of their participation in the administrative process thus removing all kinds of proxy arrangements.

13. *Grievance procedures:* While the objectives of the Shiksha Samvad are very laudable, there is a need to improve Shiksha Samvad performance levels as is clear from the existing gaps. Many are not aware of the full import of Shiksha Samvad aims and possibilities. There is hardly any awareness programme or campaign to drive home the message and objectives of Shiksha Samvad. Another vital problem is the irregular meetings of Shiksha Samvad. As its significance is not appreciated by stakeholders – owing to unawareness – the regularity and frequency of its meetings suffer.

Assessment against Core Principles laid out in OP 9.00

Core Principle 1: General Principle of Environmental and Social Management

OP 9.00: 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 relating to a program’s environmental and social effects.

BP 9.00: Program procedures will:

- Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the program level.
- Incorporate recognized elements of environmental and social assessment good practice, including (a) early screening of potential effects; (b) consideration of strategic, technical, and site alternatives (including the “no action” alternative); (c) explicit assessment of potential induced, cumulative, and trans-boundary impacts; (d) identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized; (e) clear articulation of institutional responsibilities and resources to support implementation of plans; and (f) responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and responsive grievance redress measures.

Applicability/Summary

Core Principle 1 is considered in terms of environmental and social management for the education sector, as a key component of good service delivery. Specifically, since the program includes civil works related to construction/extension of new buildings/blocks within existing campuses, this becomes all the more relevant.

There is an adequate national regulatory framework and technical guidelines exist for environmental due diligence with respect to the potential impacts of the program. exists.

The assessed weaknesses are systemic and are related to insufficient staffing, weak coordination among the various implementers and inadequate attention to environmental concerns, particularly for the previously developed/old buildings and associated services. This can be overcome by the regulatory framework that already

The Government of Bihar's legal and policy framework is deemed adequate to promote social sustainability. The reservation system in recruitment seeks to address long-standing inequality of access to teacher employment opportunities. This reservation system enjoys widespread political support.

The TEMIS database enables the Department of Education to monitor the representation of disadvantaged groups in the teacher force, and the extent to which these groups have access to professional development opportunities and are promoted appropriately. The bottom up training needs analysis for teachers gives disadvantaged groups equal opportunities to express their preferences regarding their individual training needs; BRCs and CRCs are responsible for ensuring teachers attend planned training programs.

Core Principle 2: Natural Habitats and Physical Cultural Resources

OP 9.00: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.

BP 9.00: As relevant, the program to be supported:

- Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.
- Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.
- Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects.

Applicability/Summary

The provisions in Core Principle 2 are considered as part of the ESSA process analyzed under Core Principle 1. The analysis confirmed that Program investments would **neither impact nor convert critical natural habitats**. This Core Principle will **not be applicable to the Bihar TE program** and the PforR as long as no new TE institutes are constructed in hitherto unidentified sites. To ensure that this remains the case, appropriate clause/s will be introduced in the program's legal documents.

Core Principle 3: Public and Worker Safety

OP 9.00: Environmental and social management procedures and processes are designed 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; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

BP 9.00:

- Promotes community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections, or remedial works incorporated as needed.
- Promotes use of recognized good in the production, management, storage, transport, and disposal of hazardous materials generated through program construction or operations; and promotes use of integrated pest management practices to manage or reduce pests or disease vectors; and provides training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with international guidelines and conventions.
- Includes measures to avoid, minimize, or mitigate community, individual, and worker risks when program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.

Applicability/Summary

The provisions in Core Principle 3 are considered as part of the ESIA process analyzed under Core Principle 1. Review found that **Core Principle 3 is applicable to the Program**, as there is physical infrastructure development involved in the Program. However, the issues pertaining to this Core Principle are considered low risk of appearing in the Program. Program documentation specifies the environmental expectations involved in the proposed civil works activities to protect public and worker safety, no procurement of dangerous materials or pesticides is envisaged, and teacher education institutional infrastructure will not be carried out in areas prone to nature hazards.

Core Principle 4: Land Acquisition

OP 9.00: 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.

BP 9.00: As relevant, the program to be supported:

- Avoids or minimizes land acquisition and related adverse impacts;
- Identifies and addresses economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may lack full legal rights to assets or resources they use or occupy;

- Provides compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land or restricting access;
- Provides supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment); and
- Restores or replaces public infrastructure and community services that may be adversely affected.

Applicability/Summary

Civil works will be carried out within existing campuses of institutions/available government land. In the absence of any land acquisition for construction, the risk of impacts on loss of land/asset/ formal and informal livelihood etc. from civil works are not likely. Based on experience in similar education projects there has been no relocation or other related impacts. Loss of access to natural resources is also a low risk, nor is there any risk of impacts on crops because involuntary land acquisition is not eligible for financing under this program (as specified in the legal agreements between the World Bank and the Governments of India and Bihar). The agreements between the Bank and the Government of Bihar also ensure that, where land is not free of encumbrances, it will not be used for program purposes. Hence, **this principle does not apply to the program.**

Core Principle 5: Indigenous Peoples and Vulnerable Groups

OP 9.00: Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.

BP 9.00:

- Undertakes free, prior, and informed consultations if Indigenous Peoples are potentially affected (positively or negatively) to determine whether there is broad community support for the program.
- Ensures that Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples.
- Gives attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups. If necessary, special measures are taken to promote equitable access to program benefits.

Applicability/Summary

Resettlement and environmental degradation tend to disproportionately impact the poor and vulnerable groups, documented in operational documents for other Bank projects/programs. While the Program seeks to improve the conditions of the poor and vulnerable groups, if impacts are not well-managed it is possible that vulnerable groups could be negatively impacted.

With respect to other marginalized and vulnerable groups, the investments under this program targets all teachers as direct beneficiaries. Thus while considering the applicability of this Core Principle, the analysis found that it was relevant in terms of ensuring that vulnerable groups are included in the planning process and program prioritization; that vulnerable groups have access to program benefits; and that the needs of vulnerable groups are considered with respect to the Programs impacts. The approach of the Government is to ensure that all vulnerable groups are consulted and benefit from Government programs and there are policies/programs to this effect.

The ESSA found that the Government of Bihar has recently introduced a comprehensive set of legislation to ensure social inclusion across SC, ST, minority and vulnerable populations. Though this specifically relates to reservation policies, it gives a sense of GoB's intentions of wanting to share the benefits of Government programs across all segments of the state population. The program design will ensure that all teachers from disadvantaged groups will have access to training to enable them to become qualified (and therefore, permanent) teachers. The teacher professional development programs are designed to build the capacity of teachers to develop their own teaching and learning materials to respond to the specific needs of their children, including through the use of indigenous knowledge as developed by Indigenous Peoples. Capacity building is required at the SCERT especially to more effectively monitor the impact of the teacher programs on disadvantaged groups.

Core Principle 6: Social Conflict

OP 9.00: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

BP 9.00: Considers conflict risks, including distributional equity and cultural sensitivities.

The Bihar TE program will not entail social conflict in fragile states, post-conflict areas or areas subject to territorial disputes, nor will the Program cause social conflict or impact distributional equity or associated cultural sensitivities.

As such, the ESSA did not consider the Program with regards to Core Principle 6 as this **core principle and key element are not applicable to the** operation. It is important to note that distributional equity and cultural sensitivities are covered under the analysis of system with respect to the main considerations of Core Principle 5.

5 Program Environmental and Social Benefits, Risks and Impacts

This section presents the environmental and social benefits, risks and impacts/effects of the Program. The risks have been identified using the Environmental and Social Risk Screening Format included in OP 9.00 that determined the boundary of assessment.

Potential Environmental Benefits, Risks and Impacts

The Bihar Teacher Education Program focuses on improving service delivery and strengthening systems and will finance physical constructions or civil works. However, such works will be carried out within existing campuses of Teacher Education Institutes requiring no new acquisition of land. Primarily, the works envisaged include repairs/refurbishments and/or creation of blocks. The anticipated adverse environmental and social effects of such a program are therefore not expected to be hugely significant or detrimental. The ESSA is intended to also facilitate the Government of Bihar and implementing agencies in overcoming the deficiencies with regard to environment, health and safety aspects in Teacher Education Institutes and introduce systemic improvements including planning, design, implementation and operation of such facilities.

The program activities are not expected to have significant adverse environmental footprint but provide an opportunity to enhance systems with regard to ensuring safe, clean and sustainable surroundings in teacher education/training institutes, which is recognized as a basic prerequisite for ensuring a conducive learning and teaching environment.

In this context, the broad environmental goals of such a program would be to:

- a. Create a safe/hazard free training environment with easy accessibility
- b. Conserve energy and natural resources, including sustainable use of locally sourced materials, water harvesting and energy efficient lighting
- c. Provide reliable availability of power for unhindered delivery of training through use of ICT equipment (as envisaged for Program's success)
- d. Improve indoor air quality and avoid exposure to toxic materials
- e. Provide barrier free access for physically challenged
- f. Create a healthy learning and teaching environment with a focus on safe/potable water supply and sanitation
- g. Employ sustainable green practices such as waste management efforts and recycling

The key environmental risks associated with the program are specifically related to 'environmental health concerns' of trainees (teachers) and their trainers/instructors in the following scenarios:

- a. Inadequate water supply and sanitation facilities, which are not only a health hazard, but also affect attendance, retention and educational performance and thereby impacting/affecting the over-all Program outcome.
- b. Location of teacher education institute is in flood prone areas.
- c. Unsafe building materials such as low cost chemical (lead) paints are used in the buildings.
- d. Adequate potable water is not available
- e. Poor indoor air quality and insufficient ventilation in classrooms
- f. Lack of barrier free access and facilities for physically challenged
- g. Disaster/fire safety and emergency response arrangements in institutes.
- h. Improper solid and waste water disposal arrangements
- i. Lack of timely/preventive maintenance of buildings and associated facilities

Inadequate water supply and sanitation facilities in educational institutes have been a persistent problem over decades in the State contributing to poor learning environment and underperformance. More so, most of the buildings and campuses were created a long time back and little attention has been paid to "maintenance" of assets. Lack of adequate and preventive maintenance has put a heavy burden on existing buildings and associated infrastructure, which already were suffering from improper planning and had design deficiencies. Many new classrooms/rooms/blocks were built in adhoc manner with no or little consideration for systematic planning standards.

A secure/safe and well planned institute (with better sanitation, water supply and waste management arrangements) would contribute to better learning and teaching environment.

Clean Energy Initiative: Considering acute energy shortage in Bihar, the program requires convergence with the energy sector to ensure that training delivery (which involves of ICT equipment) is not hindered, which otherwise will also affect the final intended results/outcome. The annual energy deficit in Bihar during the 6-year period from FY-08 to FY-13 has been in the range of 13% and 21%. During the same period, the peak deficit in Bihar has been in the range of 14% to 34% with large areas not having access to grid supply. Around 83% of the households are un-electrified in the state. To address possibility that this may adversely impact implementation, the program will tap into the significant renewable energy sources available in Bihar through close coordination with the energy sector.

The proposed technical design is based on solar grid hybrid with storage and manual switchover facility for DG set option. It also addresses and mitigates certain critical issues unique to the local conditions in the state. This includes threat of theft and vandalism, lack of training and knowledge about Solar PV for the field education department staff. The training needs are proposed to be addressed through involvement of the project developer in the annual maintenance contract (AMC). A quantitative assessment of daily energy requirement of ICT loads in the given conditions spills out a varying daily energy requirement for various categories of institutions from 5.3 kWh for a BRC/CRC, 23.8 kWh for a DIET/ PTTEC, and 32.6 kWh for SCERT.

A total solar PV capacity of 607 kW is estimated for the project pilot phase which will cover SCERT and 150 additional sites. The capacity for entire program covering 1,201 teachers training institutes will be around 2,600 kW.

Summary: While the existing system includes codes/norms for building design and construction along with some initiatives on improving energy efficiency, there is a need and scope for mainstreaming and strengthening requirements and practices on the ground. The implementation of existing provisions, particularly those related to creating and maintaining sustainable and safe building infrastructure faces some challenges. These include:

- a. multiple regulations pertaining to effective planning, design and construction of buildings and related infrastructure;
- b. lack of awareness and clarity in the application of norms/codes by the users (Government, Consultants and Contractors); (c) weak monitoring and;
- c. insufficient attention to building/infrastructure maintenance requirements.

This calls for building capacities, streamlining the Program's framework for improved adoption of existing regulations/rules and strengthening systems for building/infrastructure maintenance so as to create an effective learning and teaching environment in the Teacher Training Institutes.

Given the Program scope, coverage and size, the anticipated adverse environmental issues and impacts related to Program implementation are expected to be limited in nature and also restricted in their geographic extent. While the Program scope and implementation is expected to be state-wide, investments by and large are not likely to impact environmentally sensitive areas such as national parks and other such designated protected/conservation areas.

At the same time, the Program is expected to deliver a number of environmental benefits. Over-all, the risk assessment and screening suggests that the environmental impact of the Program is likely to be positive, owing to benefits such as improved/greener campus management; improved planning and utilization of spaces; increased individual and cumulative efficiencies in water and energy footprint of buildings; strengthened sanitation, waste management and improved fire and electrical safety practices in the Teacher Training Institutes in Bihar.

Potential Social Benefits, Risks and Impacts

Social Benefits: The findings of the SSA indicate an improvement in both quality and scope of teacher training programs. Untrained elementary teachers will receive a major boost that will bring credentials to their academic profile and minimize social risk attendant on lack of training. Continuous Professional Development (CDP), in addition, will benefit all teachers to hone skills and meet evolving challenges of a changing elementary education landscape. Teachers were also positive about the provision of classroom performance accountability that brings reward and satisfaction to performing teachers.

CRC Coordinators, in the meantime, will benefit from the improved infrastructure and materialization of better skilled and trained coordinators. They already noted the recent efforts of Government of Bihar to redesign and refocus roles and responsibilities of BRCs and CRCs and the proposed project will further enhance their academic role in schools.

Likewise, DIETs, PTECs and BITEs will not only benefit from the improved infrastructure but also academically enrich faculty members, which the Government of Bihar has already undertaken through Development Needs Analysis (DNA).

SCERT will also be strengthened in its efforts to enhance teacher enrichment programs, including improvement in curriculum and syllabus for teacher education institutions and that of schools; and periodical development of socially relevant text books.

The proposed capacity building of SMC members will orient them to ensure teachers' presence in schools, supervising building construction and Mid-Day-Meals, as also take necessary measures for Right of the Child for Free and Compulsory Education.

Social Risks

1. Support to special category trainees: The SSA findings suggest that the project may impact some teacher-trainees adversely, and accentuate existing social risks unless the project implementation is broad based. Training programs (including CPD) for all teachers, appropriately emphasized in project objectives, should be customized and tailored to support their special academic requirements. Without adequate support to teachers from marginalized segments, there is a risk that they are less likely to succeed in achieving the desired qualifications and/or the acquiring skills and knowledge through professional development opportunities. Teacher Education Institutions (DIET/PTEC/BITE) may be provided adequate facilities and infrastructure to enable access to physically disadvantaged trainees.
2. *Gender inequity*: the share of female teachers in elementary schools is 42 percent (182,700 out of a total of 435,000 teachers). Though the data on CRCCs are not readily available, it was observed during the field visits that there is a considerable less number of female CRCCs in office. Special attention will therefore need to be paid to ensure female teachers complete the planned training programs so that they can remain in the teaching profession, and avoid a worsening of the gender imbalance. It is important therefore that the TEIDI collects information about the presence of female staff.
3. Social exclusion: The share of SC population in the state is 15.72% (Census 2001). No data on the social group categories for CRCCs is available. Special attention will therefore need to be paid to ensure SC teachers complete the planned training programs so that they can remain in the teaching profession, and avoid a worsening of the social imbalance. It is important therefore that the TEIDI collects information about the presence of SC category staff. The percent of STs in the state is only 0.91%.
4. Land requirement: The construction and rehabilitation of TEIs will be located on Government owned property without encumbrances. As a result, the project does not envisage any adverse social impact from the construction and rehabilitation of TEIs.
5. Grievance redress: awareness of grievance redressal mechanism is low and there is a risk that disadvantaged groups are not using the mechanism to address their specific needs.
6. Consultation and dissemination of information: the training programs being offered under the project are offered to all teachers from all social groups. However, the programs typically will require teachers to apply and indicate their interest (for example through the Training Needs Assessment exercise).

While this TNA exercise is a regular feature of the school calendar, there is presently no specific disclosure of information to ensure disadvantaged groups are fully aware and able to apply for these training opportunities. The Department of Education has also only recently taken over the TEMIS and so capacity building is needed so that the Department can use that database to track the success of disadvantaged groups and to target interventions to these groups as necessary.

Overall Risk Assessment

Based on the findings of the Environment and Social System Assessment, the following table aggregates the risks anticipated from the program and proposes measures to mitigate those risks. These are included in the Program’s Integrated Risk Assessment.

Risk Description	Risk Management
Potential environmental and social impacts of Program are not identified, mitigated, and monitored	The potential environment and social risks of the program are low, straight-forward and manageable , given the fact that the program does not entail any land acquisition. To streamline work procedures and the actual implementation of existing regulatory / codal provisions, a guidance manual is being prepared. Monitoring and supervision of due diligence measures related to environmental and social issues will be a part of the technical assistance component of the project.
<i>Grievance Redressal Mechanisms:</i> There is a formalized complaint mechanism at the local (district) level but its effectiveness is hampered by lack of awareness	The program will carry out dissemination and awareness raising activities amongst teachers about the work of the grievance mechanisms. As necessary funds from the technical assistance component will be used.
<i>Staffing and skills mix</i> is insufficient to handle environmental and social management issues	The program will ensure that all necessary staffing is available with adequate skills. BSEIDC will appoint focal points for environmental/social monitoring and implementation of the environmental actions stated in the Program Action Plan. The program will be incentivized to provide adequate resources to environmental and social management as performance is a minimum condition to achieve program objectives. The TA component of the World Bank support will enable appropriate experts to be recruited.

Risk Description	Risk Management
<i>Involvement</i> with participatory decision making needs to be undertaken in spirit and not led by a single individual	Dissemination and awareness raising activities for environmental and social due diligence measures will be built into the Bihar TE Program.
Consultations are held for specific purposes such as thematic areas.	The program will undertake inclusive on-going consultations with stakeholders and a training program will be developed for implementers.

6 Consultation

The ESSA report considers consultation, stakeholder involvement and disclosure of information from two perspectives. First, the report describes the requirements of the Government and concerned Department/Implementation Agencies with respect to individual sub-projects and evaluates the extent to which the existing practices are effective and consistent with Bank policy expectations. These practices are described in the ESSA and its specific recommendations and support for improved performance by the Govt. of Bihar is provided for in the ESSA. Second, the ESSA itself has been the subject of state level public consultations held at Patna in July and October 2013. The consultations held provided more detailed information on the PforR process, the proposed Program, and key findings and recommendations of the ESSA. The ESSA was revised incorporating comments obtained from these consultation meetings. Over-all the participants showed support for the Program.

The ESSA report will be published on the website of the Department of Education, Government of Bihar.

Stakeholder Participation for Deliberation on Environmental Aspects of the ESSA and for Strengthening Environmental Performance of the Program

The involvement of different stakeholder has been at the core of the process of development of the system for improving the environmental performance of the "Enhancing Teachers Effectiveness in Bihar". A participative mechanism has been followed for the development of the system. Extensive consultations were held with the stakeholders during the assessment at the field level. For deliberation on the draft ESSA and the proposed environmental management system, state level consultations were held.

The state level workshop on the draft ESSA had participants that included the Prin. Secretary, Department of Education; Managing Director of BSEIDC; Director of Research and Training, Government of Bihar. The representatives from the SCERT, DIET, PTEC, BRC and CRC from various districts i.e. Patna, Araria, Gaya, Begusarai, East Champaran, Darbhanga and Vaishali participated in the meeting. Other officials from BSEIDC also participated in this workshop. In addition, design consulting firms associated with BSEIDC in the planning and designing of the training institutes also participated. The list of participants is presented as Annex 4.

The day long workshop discussed about the existing processes which are being followed, the gaps/issues which have been identified by ESSA and the resultant environmental risks from it were also presented and deliberated. The suggestions/proposals to strengthen the current system which was being planned for reduction of the identified risks and issues was also deliberated upon. The salient points of discussion and the decisions taken in the workshop are presented below:

- 1. Comprehensive/proper Planning and Design of Buildings/Facilities:** It was agreed that the concept of campus planning is absent which has resulted in the assets being underutilized or not being properly managed. Campus planning with projection for development was recommended before construction of building infrastructure.

2. **Resource Conservation:** It was agreed that as responsible building design and operation, rain water harvesting should be promoted. Provisions for rain water harvesting should be made in the institutes, specifically those where assured water availability/supply is an issue. Discussions also indicated that the possibility of using the rain water for sanitation purposes should also be explored during the design. It would not only promote the cause of rain water harvesting but also improve sanitation facilities in these institutes, which are often marred by inadequate water supply that affects health and hygiene. In areas where dependency of electric supply is not assured, it was suggested that use of pedal pumps to lift the water in toilets. Water harvested can be used for gardening and sanitation purpose.
3. **Maintenance of Buildings/Assets:** Maintenance of the existing facilities i.e. building and equipment has been one of the major concerns which were raised by all the stakeholders. Following recommendations were made in this regard:
 - It was suggested that a provision of annual building maintenance cost should be developed. It was recommended to be 5-10% of the capital cost of the building.
 - For annual maintenance requirement and planning it was opined that the individual institutes need to get involved but there should be explicit guidance to help them.
 - It was also suggested to review the government norms on maintenance of assets and cleaning work.
4. **Asset Management:** Teachers training program considers ICT as a major component. The infrastructure required for this program would thus not only include building but also assets e.g. audio-visual and computer equipment. All stakeholders appreciated that asset management and maintenance would be important for the successful operation of the program. They however argued since these two functions are interdependent it would be prudent to have a single guidelines which can cover both these activities.
5. **Disposal of Unwanted Material:** Accumulation of old documents and obsolete equipment in educational institute is a very common problem. As a result these redundant materials take up usable space (both teaching and non-teaching). It was suggested that guidelines be prepared for disposal of old and redundant items.



6. **Sharing of Information:** Several stakeholders are involved in the process of planning, designing, construction and maintenance of a teacher's training institute. A number of drawings and documents are prepared and used in the entire process. Timely accessibility of these documents and drawings by various departments involved in the development and maintenance would reduce considerable duplication of effort. Creation of a common repository was suggested where all the project related documents can be stored and can be more readily accessed by the relevant stakeholders, as needed.
7. **Handing over/taking over of Buildings and/or associated facilities:** New infrastructure for teacher's training is proposed to be developed across the state. There was also discussion on the modalities for transfer of asset, a finding from the assessment that was shared during the workshop for deliberation. It was pointed out by the institutes that they are often unwilling to take over because they were not qualified enough to understand that the technical aspects such as quality of construction. The following suggestions are made for handover of new infrastructure.
 - It was suggested that the facility should be handed over in workable condition and that it should be considered as a priority in the program.
 - It was also recommended to prepare handing over and taking over guideline/s considering involvement of non-technical persons in this process.

Stakeholder Participation for Deliberation on Social Aspects of the ESSA and for Strengthening Social Performance of the Program

The issues raised and responses provided during the stakeholder participation process on the social aspects at the state level consultations carried out in June and October 2013 has been summarized below and more details are in Annex 5.

Issue: DIETs are yet unable to provide the right training and direction to teachers. Draft report should elaborate yet more on how to bridge the distance between teacher-educators and teachers.

Response: reflected in ESSA as a risk. Design of the training activities under the Program will mitigate this risk.

Issue: DIETs are not short of land. By 2015 we will make 50 model DIETs with the right infrastructure and equipment.

Response: Reflected in ESSA as low risk.

Issue: Draft report recommends flexibility in grading teachers from marginalized communities. Government of Bihar follows reservation policy strictly. Majority of current teachers are either women or from such communities.

Response: Reflected in ESSA as low risk.

Issue: Bihar has the highest school enrolment in the country. Attendance rate, however, is 60-70%. We look forward to Draft report suggesting ways to improve this and also suggest ways to reduce teachers' non-academic responsibilities so that bulk of their time can go into teaching.

Response: Reflected in ESSA as risk. Baseline study has been conducted on how teachers spend their time, and how to reduce non-academic time; and this will be monitored during Program implementation.

Comment: The report suggests the Department to connect the missing links in our delivery mechanism. It is the first time in Bihar that there is a linkage between the two ends of education in the state: SCERT and schools.

Comment: Just as the Report points out anomalies in functioning in CRCs, we are working to make them better tools of assistance to teachers. Our recent amendments are a step in this direction.

□ Issue: About Rs. 15 Crores have been allocated for improvement of 50 DIETs. However, in order to make them effective for the district - particularly the Mahadalits, Backward Communities, Minorities and Women-- it is equally important their training curriculum be designed at respective district level. Unless DIET reflects the district and its aspirations it may not make much headway

Response: Reflected in ESSA as risk. The Department recognises this as an issue and has committed to participatory training and curriculum development processes as part of the Program.

Comment: New processes and initiatives and processes of the Education Department are yet to reach and acquire visibility at ground level. Hence, what teachers, parents, CRCs and BRCs etc. are doing is not yet known about them. It is our responsibility to ensure the initiatives and processes reach grassroots.

7 Recommended Remedial Measures to Strengthen Systems Performance

Given the low-to-moderate levels of environmental and social risk associated with the teacher effectiveness program in Bihar, the ESSA recommends proceeding with the PforR operation. Nevertheless, some important recommendations for addressing institutional capacity constraints and gaps across a range of environmental and social management system limitations are being made. These recommendations are summarized as actions to be incorporated in the Program Action Plan.

Environment

Based on the findings from the assessment exercise presented in the previous sections of this report and consultations with key stakeholders, specific measures have been agreed with the Government/Department to strengthen principles of economy, efficiency, health and safety in creating and operating Teacher Training Institutes in the state, including those related to energy.

Key actions agreed to address environmental risks and gaps in the existing systems are:

- (i) criteria to exclude certain interventions from the Program that may impact ecologically sensitive/ important/notified wetlands, and protected monuments; and
- (ii) a Program Action Plan that includes strengthening of the existing systems for improved environment/social management. This primarily includes the adoption of the manual on Environment Management System for Bihar TE Program and internal and third-party monitoring of the environmental/social performance of the Program.

The said stand-alone Technical Manual that has been specifically developed to facilitate the achieving of results envisaged under the Program. This manual also presents the detailed findings from the assessment. The strengthened requirements, including processes and procedures, which build upon the existing systems, have been described in this manual. The manual provides technical direction to environmental management of interventions envisaged under the Program and includes specific guidelines, checklists and flow charts to bring clarity and strengthen practices during planning and execution. A summary is provided in Annex 3.

The Environment Management System for the Teachers' Training Program in Bihar has been specifically developed to address the core principles of sustainability, health, safety of building and related infrastructure. Improved performance of the concerned department and agencies with respect to environmental planning/design and management will help to ensure that issues/gaps identified in the assessment are addressed more consistently and that supervision/monitoring will be strengthened and more regular. The system will form an integral part of the Teachers' Education Program in Bihar and seeks to address the sustainability challenges faced by the Program, which are currently affected by poor infrastructure/buildings and associated facilities.

The system of environmental management proposed would be traceable, and auditable and would be expected to evolve further through a process of continual improvement.

Social

The design of the Program will build capacity of teachers by means of pre-service and in-service training programs to function in socially diverse classrooms that are populated by children from SC (especially Mahadalits), ST, Women, OBC, Minority communities and CWSN to enhance classroom performance for ensuring access to quality education in schools.

The TEIDI will assess the quality and availability of adequate infrastructure, qualified and sufficient number of teacher educators in teacher education institution, BRC and CRC Coordinators. The resulting institutional assessments should be used to prioritize program investments. Repeated use of the assessment will enable progress on social impacts to be monitored.

BITEs will be instituted in all Blocks that have a sizeable minority, scheduled caste and scheduled tribe populations.

BRC and CRC Coordinators' roles and assignments for schools should be as per BRC and CRC Guidelines, Department of Education, Govt. of Bihar. Deviations will adversely impact project outcome.

The capacity building of the members of School Management Committee (SMC) should be taken up in earnest so that the accountability mechanism at the level of schools can be ensured and strengthened. Besides, the deserved representation of parents from marginalized communities in the committee will be an additional incentive to help teachers perform.

SCERT will carry out awareness raising activities for teachers from disadvantaged groups regarding the availability of the district level grievance redressal mechanism.

Key Actions

The key actions agreed with the Government of Bihar are:

1. Adoption of Program documentation for environmental and social management. This will be adopted by Program effectiveness. BDSEIC will be responsible for this.
2. Preparation on awareness of grievance procedures and dissemination of this information. The TA component resources can be used to support the development of these procedures. The dissemination phase will start within the first 6 months of project implementation. The Department of Education will be responsible for this; seeking the assistance of the BDSEIC for any procurement of technical assistance.
3. Capacity building to address environmental and social issues for monitoring and due diligence. The TA component resources can be used to support the development of these procedures. The capacity building will start from the first month of implementation. The Department of Education will be responsible for this; seeking the assistance of the BDSEIC for any procurement of technical assistance.

Annex 1

Core Principles used for Assessment/Analysis in ESSA

Paragraph 8 of OP 9.00 outlines what the ESSA should consider in terms of environmental and social management principles in its analysis. Those core principles are:

1. Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts
2. Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program
3. Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards
4. Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards
5. Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups
6. Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

The ESSA considers the consistency of the Program systems with these principles on two levels: (1) as systems are defined in laws, regulation, procedures, etc., and (2) the capacity of Program institutions to effectively implement the Program environmental and social management systems. ESSA Vol. 1 (Analysis) considers the baseline information presented in this volume and compares this to how the system performs in practice vis-à-vis the core principles in the PforR policy outlined below.

Core Principle 1: General Principle of Environmental and Social Impact Assessment and Management

OP 9.00: 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 relating to a program's environmental and social effects.

BP 9.00: Program procedures will:

- Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the program level.
- Incorporate recognized elements of environmental and social assessment good practice, including

(a) early screening of potential effects; (b) consideration of strategic, technical, and site alternatives (including the “no action” alternative); (c) explicit assessment of potential induced, cumulative, and trans-boundary impacts; (d) identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized; (e) clear articulation of institutional responsibilities and resources to support implementation of plans; and (f) responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and responsive grievance redress measures.

Core Principle 2: Environmental Considerations – Natural Habitats and Physical Cultural Resources

OP 9.00: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.

BP 9.00: As relevant, the program to be supported:

- Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.
- Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.
- Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects.

Core Principle 3: Environmental Considerations – Public and Worker Safety

OP 9.00: Environmental and social management procedures and processes are designed 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; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

BP 9.00: Promotes community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections, or remedial works incorporated as needed.

- Promotes use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated through program construction or operations; and promotes use of integrated pest management practices to manage or reduce pests or disease vectors; and provides training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with international guidelines and conventions.

- Includes measures to avoid, minimize, or mitigate community, individual, and worker risks when program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.

Core Principle 4: Social Consideration Programs – Land Acquisition

OP 9.00: 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.

BP 9.00: As relevant, the program to be supported:

- Avoids or minimizes land acquisition and related adverse impacts;
- Identifies and addresses economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may lack full legal rights to assets or resources they use or occupy;
- Provides compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land or restricting access;
- Provides supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment); and
- Restores or replaces public infrastructure and community services that may be adversely affected

Core Principle 5: Social Considerations – Indigenous Peoples and Vulnerable Groups

OP 9.00: Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.

BP 9.00:

- Undertakes free, prior, and informed consultations if Indigenous Peoples are potentially affected (positively or negatively) to determine whether there is broad community support for the program.
- Ensures that Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples.
- Gives attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups. If necessary, special measures are taken to promote equitable access to program benefits.

Core Principle 6: Social Considerations – Social Conflict

OP 9.00: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

BP 9.00: Considers conflict risks, including distributional equity and cultural sensitivities.

Annex 2

Existing Policy and Regulatory Framework References

Social

1. National Policy on Empowerment of Women, 2001 www.wcd.nic.in/empwomen.htm
2. The Bihar Panchayat Election Rules 2006:
http://biharprd.bih.nic.in/StateActRules/RULE_Bihar%20Panchayat%20Election%20Rules%202006%20-%20English.pdf
3. The Bihar Panchayat Election Rules, 2006 enunciates that for all reserved and unreserved seats of Gram Panchayat, Panchayat Samiti, Zila Parishad and Gram Katchahry there will be 50% reservations for women. If there is only one post available for a particular category, it will be reserved for women of that category in the first election. In fact, Bihar is the first state in the country to promulgate 50% reservation for women in Panchayati Raj elections. The provision has, indeed, strengthened the process of equal gender participation at the Panchayat and Zila Parishad level, and expedited the women empowerment practices.
4. Bihar Reservation of Vacancies in Posts and Services (for Scheduled Castes, Scheduled Tribes and other Backward Classes) Act, 1991:
<http://gad.bih.nic.in/Compendium/1979-00/Vol2/Chapter-01-3.pdf>
- The Government of Bihar has instituted the provision of 50% job reservation for SC, ST, EBC (Extremely Backward Caste), OBC (Other Backward Caste) and Women from marginalised communities. The job reservation for respective category is as follows: SC: 16%; ST: 1%; EBC: 18%; OBC: 12%; and Women from Marginalised communities: 3%. The step has brought the social and economic equity to a great extent.
5. Schemes under Bihar Mahadalit Vikas Mission (SC & ST Welfare department):
<http://www.mahadalitmission.org/BMVMIntroduction.php#.VC7Safi5P0U>
- There are a number of ongoing welfare programmes for Mahadalit communities. To this end, the state government has constituted Bihar Mahadalit Vikas Mission, which initiates and monitors such schemes. These schemes include: (1) Land for housing scheme (2) Mahadalit Awas Yojna (Home scheme) (3) Mahadalit Water-supply Scheme (4) Mahadalit Toilet Construction Scheme (5) Mahadalit Basti Link Road Scheme (Approach road to hamlet scheme) (6) Mahadalit Anganwadi (Integrated Child Development Scheme) (7) Mahadalit Creche (8) Special School / Hostel for Mahadalits (9) Mukhyamantri Mahadalit Poshak Yojna (Chief Minister school uniform scheme, (10) Dashrath Manjhi kaushal Vikas Yojna (Skill development scheme).

Environment

1. National Building Code, 2005
2. IS:8827 - 1978 (Reaffirmed in 2006) – Recommendations for Basic Requirements of School/Educations Buildings
3. IS: 7662 – 1974 : Recommendations for Orientation of Buildings
4. IS: 14435 – 1997 : Code of Practice for Fire Safety in Educational Institutions
5. IS: 9963 – 1987 : Recommendations for Buildings and Facilities for Physically Challenged
6. IS: 2440 – 1974 : Guidelines for Daylighting of Buildings

Annex 3

Summary - Environment Management System Developed for the Bihar TE Program

The Environment Management System for the Teachers' Training Programme in Bihar has been developed to address the core principles of sustainability, health, safety as part of the over-all management of Teacher Education Institutes. The system would be an integral part of the operation of Teachers' Education program and thus has been developed taking into consideration the existing processes and modified to meet the sustainability challenges/issue faced by the program (and identified in this ESSA).

The system of environmental management proposed would be traceable, and auditable and would is thus expected to evolve further through a process of continual improvement.

Objectives

The Environmental Management System (EMS) has been developed taking into consideration the activities related to the program. However, the weakness or gaps which have been identified in the existing system and could potentially lead to the environmental risk/s have been used as the basis for avoidance, minimization and/or mitigation of the identified issues. Thus, while the process reengineering has on one hand tried to maintain normal work flows, it has made definitive interventions to ensure that the risks arising out of the present process are managed appropriately.

The EMS system thus tries to integrate the principle of sustainability, health and safety into the normal business process of the functioning of the Teacher's training program and ensures that the environmental risks are minimized. By adoption of the procedures, guideline presented the principle of sustainability, health and safety would be integrated into the normal business process and it is expected that the learning environment would improve and also the impact of the program on the environment would reduce.

Elements of the System

The Environment Management System essentially contains three elements i.e. Procedures, Guidelines and Checklists. The components of the individual element are elaborated below.

Procedure

The major processes in the development and operation of the Teacher's Education Program include Planning, Construction and Operation of the facilities. For undertaking these process the procedures define the sub-processes which should be undertaken to ensure compliance with environmental core principles and also defines the roles and responsibilities of each stakeholders i.e. Directorate (Research & Training), BSEIEC and Training Institutes. Procedures in each of the stages of the project are defined in the following sections:

Planning Process

- **Needs Assessment:** The Needs Assessment procedure would be adopted during the planning stage for construction of new institutes.

In certain cases where existing institutes need to be upgraded the same procedure can be used. This procedure would be used to identify the requirement of facilities required in any training institute. The tools/checklists associated with the procedure would facilitate in identifying the facilities. The needs identified through the process would be used to formulate planning norms/requisition for BSEIDC.

- **Planning:** The planning process would commence after the needs assessment. The planning process would include three sub-processes i.e. site analysis, campus planning and preparation of architectural drawing. BSEIDC on receipt of the planning norm/requisition from the Directorate stating the detailed requirements at the training institute would initiate the process. The site assessment would be carried out by BSEIDC and based on the planning norms and making provisions for future a campus plan would be developed and finally approved by the Directorate. The architectural drawing would be prepared by BSEIDC once the concept plan is approved and the same should also be approved by Director (Research & Training) based on the non-technical summary and checking compliance as per the checklist provided.
- **Preparation of Working Drawing & Bidding Documents:** The Preparation of working drawing of Infrastructure will commence once the architectural drawing has been approved by Director (Research & Training). The approval of Architectural drawing marks the end of the planning process. The procedures specified in this document would help in integrating the environmental health and safety aspects into the design. The procedure would also help in ensuring that the EHS clauses are incorporated into the bidding process i.e. Bid Documents and Bill of Quantities. This would ensure that the EHS aspects are implemented. The procedure described in the document can be used both for construction of new institutes and up gradation of existing institute. The development and approval of Bill of Quantities would complete the planning.

Construction

- **Contractor Procurement:** The Contractor Procurement Process would initiate once the bidding document have been prepared. It can be used for all procurement of contractor of work e.g. construction of new building, up-gradation of existing building and also for maintenance.
- **Construction Management:** The construction management primarily focuses on activities to be undertaken during the construction process to ensure that the environmental and health and safety aspects are adequately addressed. The primary objective of this would be to ensure that the provisions of the Construction Management Plan are being implemented and that the EHS clauses in the standard bidding document are implemented.

Operations

- **Asset Management & Maintenance:** During the operation period it is important to ensure that the assets are managed and maintained so that their effective life is increased.

The Asset management and Maintenance Procedures ensure that the assets are systematically managed through a system of inventory management to optimize the effective use of the assets. Simultaneously to ensure systematic maintenance of the assets, it is important that the maintenance protocols are defined and followed to ensure that the effective life of the asset is improved.

Guidelines

The EHS management Guidance's (EMG) which are being proposed in the EHSMS are:

- **EMG 1- Needs Assessment:** The Needs Assessment guidance is intended to be used by the Directorate (Research & Training) to ensure that the EHS aspects are included during preparation of requisition for infrastructure.
- **EMG 2:-Planning:** The Planning Guidance is intended for the architects and Directorate to ensure effective environmental planning of the site is carried out and EHS aspects are included in the project design.
- **EMG 3- Designing:** The Design Guidance is intended to help in facility design. This guidance does not provide design specification but would help in identifying and integrating the EHS issue in design.
- **EMG 4 – Handing & Taking Over:** This is an important phase of the asset creation and also would be a crucial stage to improve EHS performance and rectify EHS deficiencies. The Guidance would help the project implementing agencies e.g. BSEIDC and Directorate to test and verify the EHS Aspects.
- **EMG 5- Asset Management & Maintenance:** This has been an essentially weak area especially with public infrastructure and stress has been laid on tracing and tracking assets to ensure that they effectively function and their economic life is enhanced. The maintenance of assets has been ascertained as one of the main reason for poor performance of these assets. The Guidance would help the Directorate to schedule and priorities the maintenance so that the assets can perform better.
- **Construction Management Plan:** The Construction Management Plan is primarily targeted at small construction activities, where the risks are quite well established and would only occur if the activities are not undertaken with due precaution or care. The Construction Management Plan tries to delineate the safeguards the contractor has to take during the construction process to ensure that the EHS risks can be minimized, if not avoided.

Annex 4

Consultative Workshop on Draft ESSA – Environment Aspects

Maurya Hotel, October 26 2013, Patna

Sl. No.	Name	Designation	Ph. No.	Signature
1.	Shiv Kumar	CRCC NTP	9886544159	
2.	Sanjay Kumar	CRCC, Dhanapur	9934260366	
3.	Neha Vyas	Env. Spl. WB	9910436070	
4.	Ak Ghosh	Senior CED Crisis Mgt. Loss	9830567042	
5.	A. K. Pandey	Director	9430036700	
6.	Sanjivan Saha	MD, BSEIDC	9473191869	
7.	AVISIT GHOSH	SENES	9432674451	
8.	Anamika Saha	Secretary	9473191451	
9.	Sudhir	B.R.C.C. Patna	9304973035	
10.	Dr. Md. Kamal Ahmad	Lecturer, DIET, Ferozganj (Aroni)	9334468442	
11.	Munni Lal Pd. Singh	Lecturer, DIET GAYAT	9931867861	
12.	RAKESH KUMAR	Lecturer, DIET, Sharanbagh	9507248441	
13.	Anam Kumar	Lecturer, DIET, Motikari	9709857492	
14.	Ranjit Kumar	Lecturer, DIET Dhanbanga	9507640418	
15.	Dilip Kumar	Assistant Director Research & Training	9431831137	
16.	Bimod Kumar Saha	Deputy Director, Animal & Fisheries	9334117687	
17.	Tej Narayan Prasad	SCERT Patna	9835631670	
18.	Dr. Fair Kumari Kujur	S.C.E.R.T.	943107558	
19.	Nirupa Kumari	P.T.E.C. Patna	98008946023	
20.	Suna Bala Singh, Lecturer	P.T.E.C. Habesha	8102619044	

Sl. No.	Name	Designation	Ph. No.	Signature
21.	R.B. Pandey	G.M (P.D)	9481466403	
22.	Hjay Kumar	E.E BSEIDC	9771723782	
23.	Marandus Prasad	C.C.T	7765990800	
24.	Dr. Kiran Sharma	Principal P.T. Eo M.A. Sarda Patan.	9308205994	
25.	Pankaj Kumar	BREC Bidapur Vaishali	9431070631	
26.	अमितो शर्मा	CRCC, U.M.S. Saidpur Patada Majhapur, Vaishali	9431091399	
27.	Gayak Kumar	CRCC Hilsapur Majhapur (Vaishali)	9431070263	
28.	Shamshadq kumar	BRP, Gheraul Vaishali	9905244509	
29.	Kanchan Hani	DOF, Computer Pat. W. Patna.	8409097600	
30.	PRANAY KUMAR	BREC - Patrasahar	9334836540	
31.	PANKAJ SINHA	Sr. Architect BSEIDC	9835253843	
32.	Souabhi Manjya	EMKACH - Haidg	9826486002	
33.	Manoj Kumar	Executive Engineer	9430935365	
34.	Kiran Kumari	Lecturer DIET BIKRAM.	8797187662	
35.	DR. SAMOEN	MOB SCERT Patna	9473343786	
36.	SANJAY KUMAR	DESHKAL DELHI	9868216657	
37.	Jay Prakash.	BESWAAL, N. Delhi	9334150285	
38.	NAKESH	DESHKAL Soc.	9818151954	
39.	Anand Kumar	MICLL	9827878733	
40.	Swamkar Das	SENE S	9911051465	
41.	Souvik Barua	SENE S	09433336843	
42.	Satish Das	SENE S	9831357407	
43.	Sannalika Bhattacharya	SENE S	8885724454	

Annex 5

Consultative Workshop on Draft ESSA - Social Aspects

Maurya Hotel, June 29, 2013, Patna

Inputs from Key Stakeholders during the Workshop Deliberations

Sanjay Kumar, Secretary, Deshkal Society welcomed the Chief Guest of the Workshop Dr. Amarjeet Sinha, Principal Secretary, Dept. of Education Govt. of Bihar and the key stakeholders of education to the Workshop and shared briefly the Background and Context of the Draft Report. Dr. Manoj Kumar Tiwary, Director, Research and Advocacy, Deshkal Society briefly presented the structure of the report, and highlighted the key themes of the Report in order to explain the context, objectives and design of the Social Assessment Study on Teacher Education in Bihar. Mr. Narendra, Consultant, tabled the key recommendations of the Draft report before the chief guest, chairpersons, panelist and the participants. Dr. Amarjeet Sinha presided over the first session.

Against an invited strength of 30 there were 55 participants, experts and practitioners in diverse streams of education in Bihar.

The second session was presided over by Dr. A. K. Pandya, Director, Research & Training, Department of Education, Govt. of Bihar. Since Dr. Sanjiwan Sinha, Special Secretary, Department of Education, Govt. of Bihar could not make it owing to preoccupations elsewhere, Dr. Pandya consented to continue in the chair for the third session, too. The panelists were Dr. S. A. Moin, Head, Teacher Education, SCERT, Bihar; Dr. Gyan Deo Mani Tripathi, Principal, Maitreya College of Education & Management, Hajipur; Mrs. Abha Rani, Principal, DIET, Bikram, Patna; Dr. Subhash Chandra Jha, Principal, DIET, Darbhanga; and Mr. A. K. Banerjee, Consultant, World Bank.

The following are some of the salient highlights of deliberations at the Workshop:

Dr. Amarjeet Sinha, Principal Secretary, Dept. of Education, Govt. of Bihar

Thanking the Deshkal team for bringing out the Draft Report in time Dr. Amrjeet Sinha pointed out the draft report has effectively underlined the problems faced by education sector in Bihar. He observed the draft still has scope to highlight more the initiatives taken by Department of Education, Bihar. As an instance, the draft report ought to highlight that the 168000 new appointees of Department at Upper Primary Level would help fill up gaps in teachers' shortage.

Admittedly, some institutes in Sasaram town do not have pucca buildings, but it should not be the point of reference while talking about the infrastructural facilities in Bihar as other institutes do have pucca buildings. DIETs are yet unable to provide the right training and direction to teachers. Draft report should elaborate yet more on how to bridge the distance between teacher-educators and teachers. DIETs are not short of land. By 2015 we will make 50 model DIETs with the right infrastructure and equipment. Government of Bihar follows reservation policy strictly. Draft report recommends flexibility in grading teachers from marginalised communities. Majority of current teachers are either women or from such communities. There are teachers today of many years who cannot write even a line. They will have to be dismissed after due procedure laid down in RTE. Education Department has 20000 Tola Sevaks and Talim-e-Markaz personnel. We look forward to the Draft Report suggesting us how to convert them into

an effective link between the Mahadalits, backward sections and minority communities and schools. Bihar has the highest school enrolment in the country. Attendance rate, however, is 60-70%. We look forward to Draft report suggesting ways to improve this and also suggest ways to reduce teachers' non-academic responsibilities so that bulk of their time can go into teaching

Lack of infrastructure in schools is a big and pervasive issue. But even those schools that have good infrastructure are unable to deliver quality education.

Social Impact Mitigation Measures are also a significant part of the report mainly, grading of teacher education institutions and elementary schools; acknowledge of non-educational involvements and assignments, and grievance redress mechanism for teachers. Needless to mention we should take urgent initiative in order to key points of mitigation strategy suggested in the draft report, if, we have to move ahead one step forward for the programme of Capacity building of teachers, primarily the large section of untrained teachers.

Dr. A.K. Pandya, Director, Research & Training, Department of Education, Govt. of Bihar

The Draft Report is a comprehensive document and spurs the Education Department, Bihar, to improve its areas of weakness. The Department is striving hard to make education an effective tool of development in the state. To this end, we are focusing on untrained teachers. Our earlier attempt as such through IGNOU continues in other ways. The Draft Report comes in handy.

It suggests the Department to connect the missing links in our delivery mechanism. It is the first time in Bihar that there is a linkage between the two ends of education in the state: SCERT and schools.

Just as the Report points out anomalies in functioning in CRCs, we are working to make them better tools of assistance to teachers. Our recent amendments are a step in this direction

About Rs. 15 Crores have been allocated for improvement of 50 DIETs. However, in order to make them effective for the district --particularly the Mahadalits, Backward Communities, Minorities and Women - it is equally important their training curriculum be designed at respective district level. Unless DIET reflects the district and its aspirations it may not make much headway

Mr. A. K. Banerjee, Consultant, World Bank

Draft Report has highlighted linkages between student, teacher and community. More ways to strengthen them further should be suggested. Two sample studies on the best and worst of DIETS and schools should be drawn up sometime soon for a comparative analysis. This is the World Bank's biggest project on education in the world. It has high stakes.

Dr. Subhash Chandra Jha, Principal, DIET, Darbhanga

Just what the report refers to, DIET Darbhanga is striving to strengthen the school-community relationship. Folk art exhibitions are being held in schools. Folk paintings by women of marginalised communities are being displayed. Similarly, defence personnel on annual leave are holding classes on physical training. Local crafts persons are holding craft classes. Such inputs from community are vital to the said relationship and earlier community ownership of schools.

Just as students are given projects, BRCs and CRCs are being persuaded to undertake projects that trace the history of a school in a particular area, how it began, whether it was an individual initiative, problems encountered, growth phases and current situation. This would also help in documenting the history of schools

Despite severe lack of infrastructure at DIET Darbhanga --unpaid electricity bills, lack of labs, appropriate classrooms and toilets etc.- it is trying to move forward with help from wherever it gets. For example, with assistance from a private computer training centre students have been helped to sit in examination being held today. When not available within the Department we try to tap resources in the community.

Dr. S.A. Moin, Head, Teacher Education, SCERT, Bihar

In one way or the other the Draft Report is an eye opener for us in the Education Department. It makes us aware of many areas of weakness and anomalies.

It should have highlighted yet more the infrastructural, financial and social difficulties faced by DIETs, strategies they employed in handling them, and how they provided leadership and changed social structures and chemistries in respective districts. Impacts created by DIETs should have been mentioned. They should have met the District Collectors to find out how such structures and chemistries have changed.

In the prevailing atmosphere of certain pessimism, the Department's plan of creating documents highlighting its achievements and reaching out to parents/community does not find mention.

The Department's initiative on 144000 untrained teachers should have been highlighted. There have been some radical changes for the better in education in Bihar. The state is on the threshold of becoming a leader globally. These should be brought out in the Report. Remedial measure taken vis a vis weak students (such as fixing the last period everyday for enhancing learning abilities) should have been highlighted yet more.

Mrs. Abha Rani, Principal, DIET, Bikram, Patna

New processes and initiatives and processes of the Education Department are yet to reach and acquire visibility at ground level. Hence, what teachers, parents, CRCs and BRCs etc. are doing is not yet known about them. It is our responsibility to ensure the initiatives and processes reach grassroots

Issues raised in the Report are food for thought for the Department. It is for us to ask why our well intentioned initiatives get diluted by the time they reach ground level, sometimes they change so much that they become unrecognizable.

We have developed some of the best training modules in the country, and have been praised too. One or two states are even implementing them. Why do our modules fail to acquire visibility in our own classrooms?

Trainers' roles end with training. They have no participation in implementing the training in classrooms. There is no accountability where there is no participation. Trainers' accountability should be linked to performance of classrooms.

In spite of implementation and implementation mechanisms our policies and programs fail to produce results. The Draft Report helps us think over this.

Since our stated mandate is delivery of quality education and there ought to be no

compromise on that, we have to have suitable teachers even if they be acquired from private sector or BPSC. It does not speak well to first recruit teachers who are neither skilled nor trained and then terminate them. Where will they go?

Compared to the earlier mode of electing a CRC Coordinator from amongst teachers themselves the new mode of selecting CRCs is undemocratic. Even though it did not function well it was the right way of doing things. Instead of taking measures to improve on it, selecting a Coordinator is a knee jerk reaction.

Dr. Gyan Deomani Tripathi, Principal, Maitreya College of Education & Management, Hajipur

The Draft Report mentions there are deficiencies in curriculum and syllabus. These should have been underlined so that improvements can be made. DIETs and other Govt. training agencies strive to equip the teachers with almost each and every aspect of education. It is too ambitious and cannot be transacted at the level of classrooms.

Over the past few years new kinds of global, national and local pressures have emerged in schools. In such challenging scenario Bihar Govt. is unable to decide what kind of education, teachers, or trainers it wants. Such decisions are yet to be taken. The Final Report should be produced in Hindi for greater coverage.

Other observations that came are:

Mr. Umesh Kumar, Block Resource Centre Coordinator, Phulwari Sharif, Patna

We thank the Deshkal team for coming and interacting with teachers, trainers, BRCs, and CRCs at grassroots level. New initiatives and plans offer teachers the scope to do more. The Draft Report should have reflected the potential positive and negative implications of such initiatives and plans.

Mr. Manoj Kumar, Cluster Resource Centre Coordinator, Darbhanga

There are tensions and uneasy relationships between the BEOs and teachers. These are not isolated incidents but almost a rule across the state. These tensions are defects in both the structural linkages and delivery mechanism across Bihar.

Mr. Jainendra, CARE India, Bihar

Depending on whether the Draft Report is looked at positively or negatively, it offers a vast scope for improvement of education system in Bihar. There are some excellent and gifted individuals in the Education Department in Bihar. They are capable and have potential to deliver. However, there exist gaps between them. Irrespective of earning pleasure or displeasure, Deshkal should stand by what it has seen and observed at the village or town level.

Mr. S. H. Jha, Cluster Resource Centre Coordinator, Darbhanga

The fact that the Draft Report has brought in many comments and observations from the participants assembled here today goes on suggest that it is good and effective as a Draft Report. More the comments better the report. Sample size in Report should have been bigger. Some of the criticism could have been precluded

In the Concluding Session, Mr. Narendra remarked that given the context and objectives of the study, Deshkal Society would incorporate the inputs from stakeholders into the final report to be prepared shortly. As an exercise to that end, the workshop has been exceedingly helpful and constructive. He added that though the range of inputs is very wide but all of them are relevant in some way or the other, more so because they come

from people who have struggled hard over years and decades to improve the status of education in Bihar, particularly for children of disadvantaged classes. The enthusiasm and keenness to provide inputs reflects a very vital social energy which was also evident in every village, institute, nook and corner that Deshkal team visited in the six districts of Bihar over the past few weeks.