Promoting Gender and Disability Inclusion in School Infrastructure:
Case Studies and Entry Points

GFDRR
Global Facility for Disaster Reduction and Recovery

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Photo: Classmates. Credit: ktaylorg.

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Abbreviations and Acronyms

AFE	Eastern and Southern Africa
CRPD	Committee on the Rights of Persons with Disabilities
CSOs	civil society organizations
DRM	disaster risk management
EAP	East Asia and the Pacific
ECA	Europe and Central Asia
FCV	fragility, conflict, and violence
GFDRR	Global Facility for Disaster Reduction and Recovery
GBV	Gender-based violence
GP	Global Practice
ICR(s)	implementation completion and results report(s)
ICRR(s)	implementation completion report review(s)
IDP	internally displaced people
LCR	Latin America and the Caribbean
LGBTQ+	lesbian, gay, bisexual, transgender, and queer/questioning
LMIC	low- and middle-income countries
MNA	Middle East and North Africa
PADs	project appraisal documents
PLE(s)	physical learning environment(s)
SAR	South Asia
SEA	sexual exploitation and abuse
SH	sexual harassment
UNICEF	United Nations Children's Fund
VECs	village education committees
WASH	water, sanitation, and hygiene

Glossary

Accessibility

The degree to which the physical environment, transportation, information and communications, and other facilities and services open or provided to the public are accessible to all persons, including those with disabilities.

Barriers

In relation to persons with disabilities, barriers encompass the wide range of obstacles that hinder their full and effective participation in society. Barriers may take the form of physical, structural, legal, attitudinal, communication, or other obstacles.

Disability

The Committee on the Rights of Persons with Disabilities (CRPD) defines persons with disabilities as including "those who have long-term physical, mental, intellectual or sensory impairments, which, in interaction with various barriers, may hinder their full and effective participation in society on an equal basis with others."

Disability-Inclusive Development

A process that actively seeks to ensure the full participation of persons with disabilities as empowered self-advocates in all development processes and emergency responses. In addition, it works to address the barriers that hinder their access and participation.

Discrimination

The CRPD defines discrimination based on disability as "any distinction, exclusion or restriction on the basis of disability which has the purpose or effect of impairing or nullifying the recognition, enjoyment or exercise, on an equal basis with others, of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field."

Gender

The social, behavioral, cultural attributes, expectations, and norms associated with biological sex.

Inclusive Education

A process of strengthening the capacity of the whole general education system to reach out to all learners. Increasing access and ensuring learning and achievement for all students is critical to developing human capital and economic growth. Inclusive education has been a universally acknowledged goal for over two decades.

Universal Access

The World Bank defines the concept of universal access as applying "both to the built environment (for example, schools, community water, sanitation facilities, bus terminals, and public playgrounds) and virtual environments (for example, smart villages or city interfaces, online learning, and government portals to access social benefits). It also applies to the design and delivery of services (for example, skills development programs and cash transfers).

Sources: Alasuutari et al. 2020; Mcclain-Nhlapo et al. 2022; World Bank 2023.

Photo: Drawing class. Credit: FG Trade Latin.

Executive Summary

I n many low- and middle-income countries (LMICs), inadequate school infra-structure disproportionately affects girls, children with disabilities, and other vulnerable groups, limiting their educational opportunities. Inclusive school infrastructure is vital for promoting gender equality, supporting children with disabilities, and enhancing disaster and climate resilience. Addressing these aspects improves educational outcomes, economic mobility, and social inclusion. This report examines World Bank projects that have successfully integrated gender- and disability-sensitive approaches in school infrastructure, presenting case studies and strategic entry points for future initiatives.

Overview of World Bank Projects

This report analyzes 57 World Bank projects that address barriers to inclusive school infrastructure. Projects focused on gender- and disability-sensitive designs and facilities, with key barriers identified as inadequate gender-segregated WASH (water, sanitation, and hygiene) facilities, travel distances to schools, and insuffi-cient facilities for students with disabilities. Regionally, Eastern and Southern Africa led in project implementation, followed by South Asia and East Asia and the Pacific.

Case Studies

Seven detailed case studies illustrate diverse approaches and impacts:

❶ Malawi

Post-emergency school reconstruction focused on girls' needs, improving sanitary facilities and reducing dropout rates.

❷ Pakistan (Sindh)

Infrastructure development in rural areas increased girls' enrollment and improved learning conditions.

❸ Mozambique

Gender-sensitive and climate-resilient WASH facilities enhanced girls' retention and reduced early marriage risks.

❹ South Sudan

Safe learning spaces in conflict areas increased girls' enrollment and improved learning environments.

❺ Pakistan (Balochistan)

Community-led school construction challenged gender stereotypes and increased girls' attendance.

❻ Tajikistan

Improved physical learning environments (PLEs) for children with disabilities increased their school attendance and inclusion.

❼ Viet Nam

National guidelines for inclusive education improved access and completion rates for children with disabilities.

Entry Points for Inclusive School Infrastructure

Key entry points for integrating gender and disability considerations include:

Gender-specific WASH and other facilities

Developing and maintaining gender-segregated sanitation facilities.

Safety measures

Implementing protocols to promote secure environments and encourage girls' attendance.

School supplies

Ensuring access to menstrual hygiene products and private facilities.

Construction and rehabilitation

Involving communities in planning and implementing inclusive school designs.

Emergency preparedness

Building disaster-resilient and accessible infrastructure.

Capacity building

Training school staff and involving community stakeholders in the operation and maintenance of inclusive infrastructure.

Community engagement

Engaging diverse stakeholders to ensure that schools meet the needs of all students and conducting regular audits and disaggregated monitoring and evaluation to ensure that facilities remain inclusive and accessible.

Conclusion and Recommendations

To effectively integrate gender and disability considerations in school infrastructure, practitioners should:

> Use interconnected strategies to address inclusion gaps simultaneously.

> Apply an intersectional approach to gender analysis in infrastructure projects.

> Develop robust narratives showcasing the impact of inclusive school infrastructure on educational outcomes.

> Implement specific recommendations that focus on enhancing gender and disability-sensitive infrastructure. This includes strengthening community engagement, conducting vulnerability analysis, building capacity, providing institutional support, establishing monitoring and evaluation systems, promoting knowledge sharing, and ensuring resilience and sustainability.

By adopting these insights and recommendations, future school infrastructure projects can better serve all students, particularly the most vulnerable, promoting equitable and inclusive educational environments.

Introduction

In many low- and middle-income countries (LMICs) around the world, lack of access to inclusive school infrastructure disproportionately affects girls, children with disabilities,[1] and other disadvantaged groups, hampering their education and future employment opportunities. The negative, gender-specific effects of limited access to education due to inadequate infrastructure are worsened in some cultures by existing discriminatory practices, gender-based social norms, and a lack of legislation related to inclusive school facilities (UNESCO 2020). In addition, climate change and increasing disasters threaten education outcomes in LMICs, with a disproportionate impact on girls and other disadvantaged groups (Hassani 2022; INEE 2022; Kwauk & Steer 2023).

This note presents findings from a study on gender- and disability-sensitive safer school infrastructure. It draws from a review of World Bank projects involved in constructing or rehabilitating schools in LMICs (see appendix A). The Global Facility for Disaster Reduction and Recovery (GFDRR) shares these lessons learned to help incorporate gender- and disability-inclusive perspectives into the World Banks' school construction and rehabilitation interventions. The note mainly focuses on school facilities providing basic, primary, and secondary education services.

In this note, school infrastructure is defined as "the network of school facilities, campus grounds, buildings, furniture, and equipment that enable teachers and administrators to offer educational services in accordance with a country's regulatory framework" (World Bank 2020). A broader term used in the note to refer to education facilities is "physical learning environments" (PLEs), which includes physical elements at three different levels: spaces such as classrooms and other teaching and learning areas; the school as a whole, including buildings, toilets, kitchens, libraries, playgrounds, and outdoor spaces; and school infrastructure in the form of the network of education facilities in a certain area (Alasino and Laberenne 2022).

PLEs are a critical contributor to positive education outcomes. However, many LMICs face severe challenges related to gender and disability, including the following: an insufficient supply of classrooms and poor physical conditions, discouraging the most vulnerable groups (such as girls and those with disabilities) from participating in learning; physically unsafe facilities with poor indoor environmental conditions, putting all students at daily risk of infectious disease, injury, or death; and the unequal distribution across various regions, especially rural areas (World Bank 2022d). Further, the design of existing PLEs is often outdated, without adequate attention to the special needs of girls and boys, and children with disabilities (UN Secretary-General 2023).

In addition to gender and disability, other aspects of a person's identity often intersect with one another; for example, students from low-income or economically disadvantaged backgrounds, ethnic and racial minorities, LGBTQ+ individuals, refugees, displaced persons, immigrants, and children in foster care or homeless youth. Addressing intersectionality is integral to any development work with communities and individuals. However, it doesn't require deconstructing every facet of an individual's identity and addressing each aspect separately. For this note's purposes, we

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[1] See "Inclusive education" at https://www.unicef.org/education/inclusive-education.

have focused on gender and disability while acknowledging that intersectionality is recognized and addressed case-by-case.

This note focuses primarily on gender- and disability-sensitive school infrastructure. Appendix B contains a checklist for gender and disability inclusion in a school infrastructure project cycle. When considering gender and disability in the context of school infrastructure, it is important to recognize their intersectionality. For example, accessible restrooms should accommodate not only wheelchair users but also individuals who require specific accommodations based on their gender identity. Safety measures within school infrastructure need to be inclusive of students with disabilities while also considering the unique safety concerns faced by different gender identities. This might involve ensuring that emergency evacuation plans are accessible to students with mobility impairments and that safety protocols address the specific vulnerabilities experienced by transgender or nonbinary students. Addressing the intersectionality of gender and disability in school infrastructure requires proactive policy measures and advocacy efforts. This includes advocating for inclusive policies that prioritize the needs of students with diverse gender identities and disabilities and ensuring that school infrastructure reflects these priorities through design and implementation.

> In addition, it is important to note that persons with disabilities represent a heterogeneous segment that includes the diverse range of disabilities that individuals may experience. This can include physical disabilities, sensory impairments, cognitive disabilities, developmental disabilities, and mental health conditions, among others.

In addition, it is important to note that persons with disabilities represent a heterogeneous segment that includes the diverse range of disabilities that individuals may experience. This can include physical disabilities, sensory impairments, cognitive disabilities, developmental disabilities, and mental health conditions, among others. Each disability can manifest in unique ways and impact an individual's ability to access education and participate in school activities. School infrastructure plays a crucial role in accommodating the diverse needs of students with disabilities. An inclusive school environment should be accessible to all students, regardless of their abilities. This includes physical accessibility, such as ramps, elevators, and accessible restrooms for students with mobility impairments, as well as sensory accommodations, such as quiet spaces or specialized equipment for students with sensory sensitivities. Also, children with developmental and intellectual disabilities may benefit from school buildings and facilities that are easy to navigate and have clear signage, wide hallways, and accessible entrances. Universal design can also include flexible seating options to accommodate students with different learning styles and behavioral disorders. Incorporating natural light, outdoor spaces, and calming elements such as nature-inspired artwork and designing features that reduce noise, distractions, and sensory overload can help create a more conducive learning environment for students with mental disabilities. Incorporating technology in school infrastructure can help enhance engagement, accessibility, and personalized learning experiences for students with developmental disabilities. Appendix C lists key school infrastructure elements to address different types of disabilities.

Focusing on gender- and disability-sensitive aspects of PLEs, this note complements previous analytical work in the area of safer, resilient, and inclusive schools, including the *Global Program for Safer Schools (GPSS): Road Map for Safer and Resilient Schools* (World Bank 2020); RIGHT+ Framework for Physical Learning Environments (PLEs). Guidance for Resilient, Inclusive, Green, Healthy, and Teaching- &

Learning-Conducive (RIGHT) PLEs Effectively Implemented (+) (Alasino et al. 2024); *Inclusive Education Resource Guide* (Alasuutari et al. 2020); Technical Note on Accessibility (World Bank 2022e); and the *Safe Schools Practices Guidance Package*, which includes *Approach Note: Global Guidance for Supporting and Sustaining Safe Schools* (World Bank 2022a) and *The Role of the Physical Learning Environment for Supporting Safe Schools* (World Bank 2022d). This note also aligns with the World Bank's analytical works on inclusion and fragility, conflict, and violence (FCV), such as G*uidance Note: Criteria for the World Bank's Disability-Inclusive Investment Project Financing (IPF) in Education* (World Bank 2021) and *Safe and Learning in the Midst of Fragility, Conflict, and Violence: A World Bank Group Approach Paper* (Holland et al. 2022), among others.

Importance of Gender- and Disability-Sensitive School Infrastructure and Its Integration with Disaster and Climate Resilience

Addressing gender- and disability-related challenges in school infrastructure is crucial for creating inclusive and equitable educational environments. First, education is a fundamental human right, yet vulnerable groups such as persons with disabilities and girls often face barriers to accessing quality education. According to UNICEF (2021), children with disabilities are 49 percent more likely than those without disabilities to have never attended school, 47 percent more likely to be out of primary school, 33 percent more likely to be out of lower secondary school, and 27 percent more likely to be out of upper secondary school. Similarly, gender disparities persist in many LMICs. In some countries in Africa, the Middle East, and South Asia, girls are still disadvantaged in terms of enrollment in primary education (UNICEF 2022). In Pakistan, for example, the gender parity index value is 0.84, meaning that only 84 girls are enrolled in primary school for every 100 boys (UNICEF 2022).

Access to education has a direct impact on economic mobility and opportunities for individuals. However, without inclusive school infrastructure, students from vulnerable groups may face challenges in accessing education, leading to lower educational achievement and limited prospects for future employment. The World Bank's Disability Inclusion and Accountability Framework indicates that persons with disabilities are less likely to be employed than their counterparts, and when they are employed, they often face lower wages and limited career advancement opportunities (World Bank 2022). Recent research has also shown that students with disabilities are at a higher risk of experiencing bullying and harassment in schools, which can have long-term consequences for their mental and emotional well-being (Blake et al. 2012).

Inclusive education that addresses the intersectionality of gender and disability is essential for building a diverse and inclusive workforce. By providing equal opportunities for education and skill development, inclusive school infrastructure prepares students from all backgrounds to enter the workforce and contribute to society. Many countries have legal and human rights obligations to ensure equal access to education for all individuals, regardless of gender, disability, or other characteristics. This includes adherence to international treaties such as the Convention on the Rights of Persons with Disabilities and the Convention on the Elimination of

Integrating disaster and climate resilience along with gender and disability inclusion into school infrastructure projects is crucial for creating safer, more inclusive educational environments.

All Forms of Discrimination Against Women, which emphasize the importance of inclusive education and nondiscrimination in educational settings. Overall, addressing the intersectionality of gender and disability in school infrastructure is not only a matter of social justice and human rights but also essential for promoting educational achievement, economic mobility, health and well-being, workforce diversity, and legal compliance.

Integrating disaster and climate resilience along with gender and disability inclusion into school infrastructure projects is crucial for creating safer, more inclusive educational environments. Incorporating resilient design principles into school infrastructure projects includes building structures that can withstand natural disasters such as earthquakes, floods, hurricanes, and wildfires. For instance, using earthquake-resistant materials, elevating buildings in flood-prone areas, and designing roofs to resist high winds can enhance resilience. Designing schools with climate-responsive architecture involves strategies such as passive cooling techniques, green roofs, rainwater harvesting systems, and the use of sustainable building materials. These measures can improve energy efficiency, reduce greenhouse gas emissions, and enhance the overall environmental sustainability of school buildings.

Furthermore, ensuring that school infrastructure projects incorporate safe access and evacuation routes in case of emergencies is crucial for all students and school staff. However, it is especially critical for individuals with disabilities who may require specialized assistance to navigate and evacuate effectively. This is particularly important in disaster-prone areas where quick evacuation may be necessary. Designing accessible pathways and exits can facilitate the safe evacuation of students and staff during emergencies. Also, multipurpose school facilities can serve as community hubs during emergencies. For example, incorporating features such as emergency shelters, medical clinics, and community kitchens into school buildings can enhance community resilience and provide critical support services to the community during disasters. Soliciting inputs from diverse stakeholders, including parents, students, teachers, and community leaders can improve the design of such multipurpose school facilities. By integrating disaster and climate resilience along with social inclusion into school infrastructure projects, stakeholders can create safer, more resilient, and inclusive learning environments that benefit the entire community.

The analysis presented in this note is based on a sample of World Bank–financed projects addressing inclusive school infrastructure barriers. The methodology to identify relevant projects for this analysis consisted of applying a multistep process, starting from the use of the World Bank's Operations portal to search for projects with school infrastructure-related keywords such as "school construction," "school rehabilitation," "school renovation," "education facilities," and "physical learning environment" in their titles, project development objectives, or activities. The next stage included a content analysis of project documentation, such as project appraisal documents (PADs), implementation completion and results reports (ICRs), and implementation completion report reviews (ICRRs), to identify those projects that included gender- and disability-related actions and indicators. The result is a sample of 57 projects addressing inclusive school infrastructure barriers (see appendix A). At the final stage, seven projects were selected for a case study analysis. Those representative projects presented various types of inclusive school infrastructure barriers in their activities.

The overall analysis of a sample of 57 World Bank projects with activities related to gender- and disability-sensitive school infrastructure shows that 22 percent of them were focused on gender-sensitive separated bathrooms and changing rooms. Additionally, 12 percent included activities for building disability-sensitive facilities, and 8 percent were related to constructing new facilities to reduce walking distances to schools. Several projects in the sample were devoted to the construction of new classrooms with lower student-classroom ratios and the construction of dormitories and hostels for female students (see figure 1).
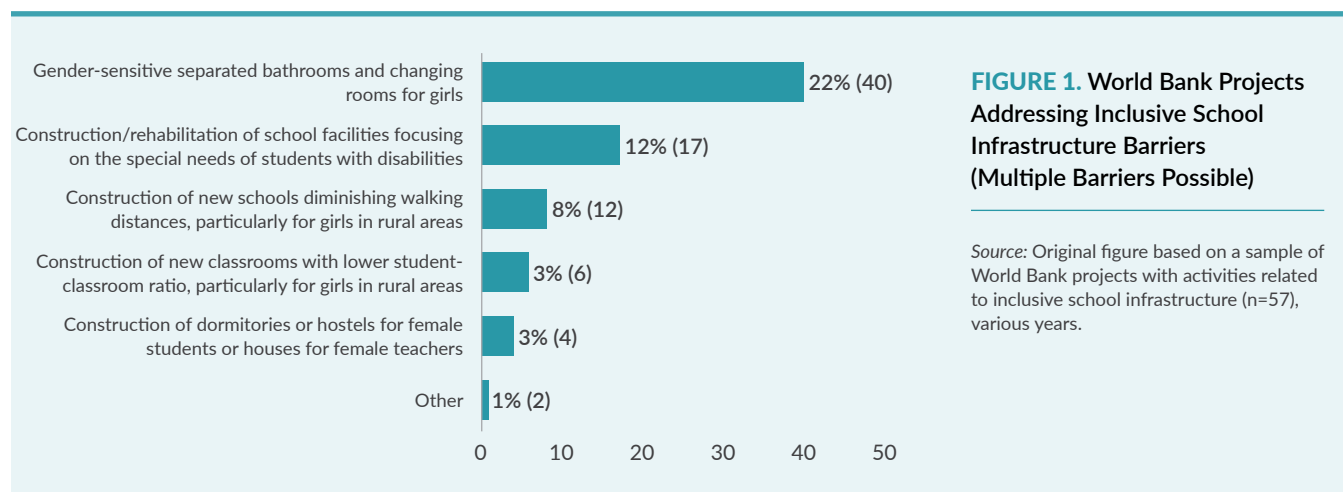
Overview of World Bank Projects with Gender- and Disability-Sensitive School Infrastructure Activities

Gender-sensitive separated bathrooms and changing rooms for girls — 22% (40)

Construction/rehabilitation of school facilities focusing on the special needs of students with disabilities — 12% (17)

Construction of new schools diminishing walking distances, particularly for girls in rural areas — 8% (12)

Construction of new classrooms with lower student-classroom ratio, particularly for girls in rural areas — 3% (6)

Construction of dormitories or hostels for female students or houses for female teachers — 3% (4)

Other — 1% (2)

FIGURE 1. World Bank Projects Addressing Inclusive School Infrastructure Barriers (Multiple Barriers Possible)

Source: Original figure based on a sample of World Bank projects with activities related to inclusive school infrastructure (n=57), various years.

In terms of regional representation, Eastern and Southern Africa (AFE) had the largest number of projects addressing inclusive school infrastructure barriers (63.2 percent of the total), followed by South Asia (SAR) with 17.5 percent and East Asia and Pacific (EAP) with 7.0 percent (see figure 2). The top three countries with the highest number of such projects were Malawi, Pakistan, and Tanzania. The Education Global Practice (GP) had the highest number of projects addressing inclusive school infrastructure barriers (91.2 percent), followed by the Urban, Resilience, and Land GP (5.3 percent).

FIGURE 2. **World Bank Projects Addressing Inclusive School Infrastructure Barriers, by Region and FCV Status**

Source: Original figure based on a sample of World Bank projects with activities related to inclusive school infrastructure (n=57), various years.

Shares of Projects by Region, %

EAP 7.0%
SAR 17.5%
MNA 5.3%
LAC 5.3%
ECA 1.8%
AFE 63.2%

Share of Projects in FCV Countries, %

FCV 24.6%
Non-FCV 75.4%
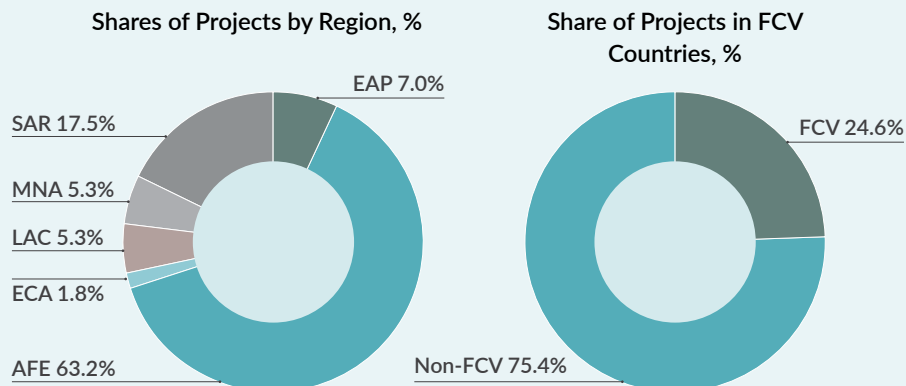
Importantly, a significant share of the projects addressing inclusive school infra-structure barriers (24.6 percent) were activated in FCV countries. Specifically, out of 57 such projects, 14 took place in the FCV context. Armed confrontations and violence often lead to the destruction of education facilities and school closures, which is particularly detrimental for girls and disadvantaged children. In Afghani-stan, for example, the education sector is highly secularized, with the Taliban direct-ly targeting education by threatening teachers, bombing schools, poisoning school wells, and targeting girls at every stage (World Bank 2018a). These conditions made the implementation of the Second Education Quality Improvement Program (P106259) uniquely challenging. Overall, in FCV countries, girls are 2.5 times more likely to be out of school than boys, and at the secondary level, they are 90 percent more likely to be out of school than in other countries.[2] This is why investments in inclusive school infrastructure are critically important in FCV countries.

An analysis of a sample of 57 World Bank projects (FY1997–2024) that included activities related to gender- and disability-sensitive school infrastructure showed that key barriers to equity in education include a lack of or insufficient WASH (water, sanitation, and hygiene) facilities separated for boys and girls, long walking distanc-es to schools that are particularly dangerous for girls in rural areas, and insufficient facilities allowing girls to feel safe in their school learning environment (Barrett et al. 2019). These barriers can result in higher dropout rates, lower retention rates, absenteeism for girls, child marriage, and other negative consequences. For exam-ple, the Tanzania Secondary Education Development Program (P114866) identified that 90 percent of secondary schools experienced shortages of latrines and access to reliable sources of water, which resulted in low enrollment rates for girls (World Bank 2017). In Afghanistan, the Second Education Quality Improvement Program (P106259) found that key reasons explaining low enrollment rates among girls were security concerns, cultural issues of families not allowing girls to attend, and lack of schools or long walking distances to education facilities (World Bank 2018a). In Haiti, given only 28 percent of public schools with functioning toilets, the Providing

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[2] See "Girls' Education" at https://www.worldbank.org/en/topic/girlseducation.

an Education of Quality Project (P155191) contributed to inclusive education by building or repairing single-sex toilets and water access points to encourage girls to attend school (including during their menstruation by providing hygiene products for latrines in the supported public schools). Furthermore, in Bolivia, studies conducted within the Education Quality and Equity Strengthening Project (P006204) suggest that despite the country's progress in achieving equal educational opportunities, girls in rural areas, particularly those belonging to indigenous groups, are still disadvantaged in terms of access to education.

In many low- and middle-income countries (LMICs), children, particularly girls from poor households and racial or ethnic minorities, often attend schools with high student-classroom ratios. This overcrowding negatively impacts their learning by limiting individual attention from teachers and exacerbating existing educational disparities. For example, in the Iraq Third Emergency Education Project (P096234), the poor and highly congested condition of schools was identified as a contributing factor to low enrollment and attendance rates among children, especially girls in rural areas and both boys and girls in more densely populated urban areas (World Bank 2014).

Additionally, many countries lack disability-sensitive school infrastructure, including ramps, adequate bathroom facilities, signage, and specialized equipment. For instance, the Elementary Education Project (P055459) in India highlighted severe challenges in school infrastructure, particularly in addressing the needs of children with mild to moderate disabilities.

In these contexts, vulnerable populations, such as persons with disabilities, women, girls, and vulnerable communities, are disproportionately affected by disasters and climate change impacts in LMICs. Therefore, investments in projects that integrate social inclusion with disaster and climate resilience in school infrastructure are critical for disaster-prone countries. One project example is the Mozambique Disaster Risk Management and Resilience Program (P166437), which was aimed at strengthening the government of Mozambique's program to finance and prepare for disaster response and to increase the climate resilience of vulnerable education infrastructure in risk-prone areas. Another example is the Infrastructure for Safer and Resilient Schools Project (P180936) in the Philippines, which was aimed at rehabilitating and increasing the resilience of school infrastructure and enhancing the Department of Education's capacity to manage green, resilient, inclusive, and learning-conducive school infrastructure. By integrating social inclusion into disaster and climate resilience efforts, such projects ensure that vulnerable groups are not left behind. For example, retrofitting schools in flood-prone areas with accessible ramps, braille signage, and designated evacuation routes for students with disabilities promotes their safe evacuation during floods. Such activities enhance the resilience of education infrastructure while fostering a more inclusive learning environment. This, in turn, strengthens community cohesion and resilience to future disasters.

Therefore, investments in projects that integrate social inclusion with disaster and climate resilience in school infrastructure are critical for disaster-prone countries.
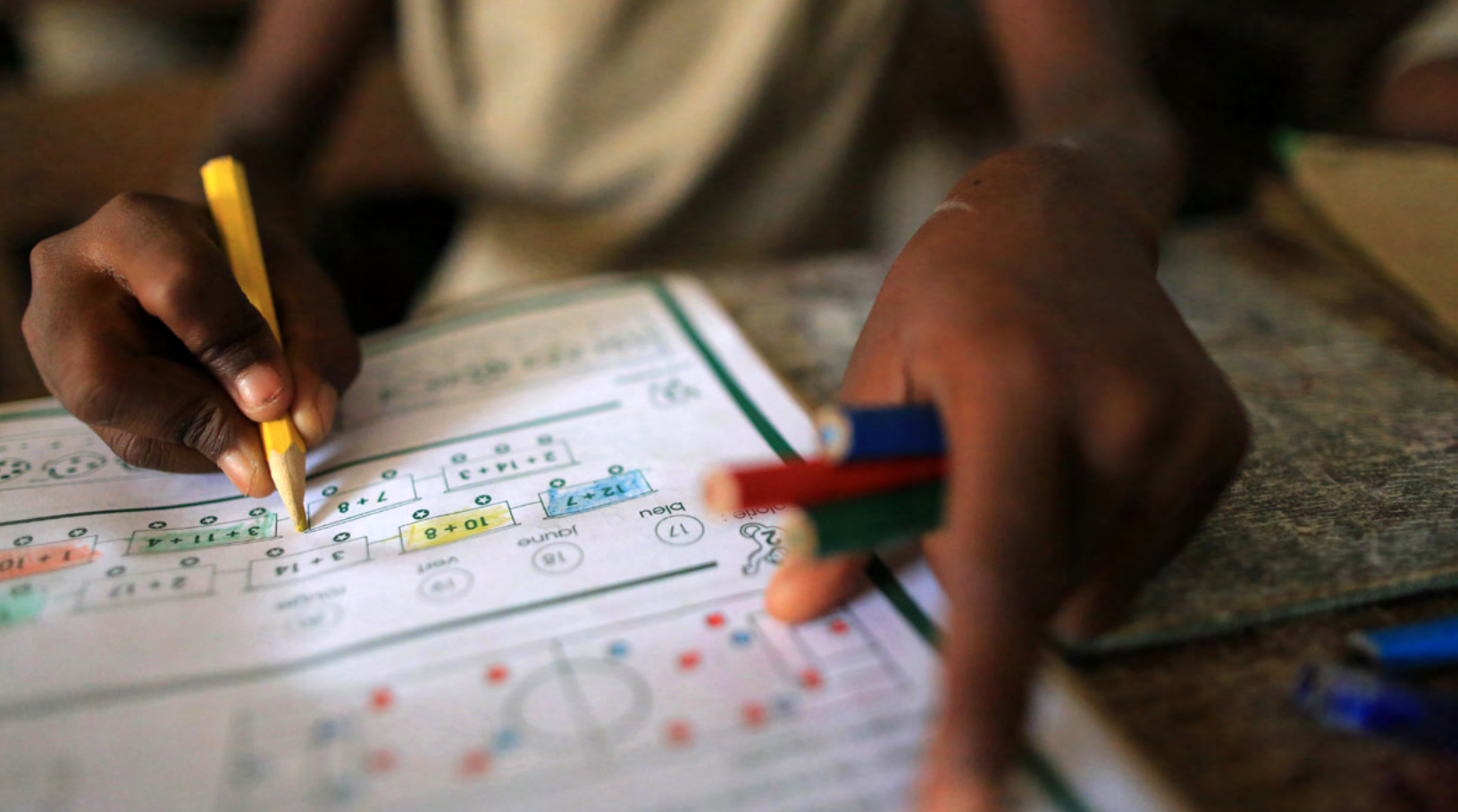
Case Studies of World Bank School Infrastructure Projects and Their Impacts on Gender Equity and Disability Inclusiveness

Photo: Primary school student using colored pencils for her math lessons. Credit: Catherine Leblanc.

The following case studies use World Bank projects to illustrate different aspects of gender- and disability-inclusive school infrastructure activities in LMICs. Most of the reviewed projects were conducted in the AFE region; however, to give other regions' perspectives, the selected case studies also include projects in the EAP, ECA, and SAR regions. The selection was based on prioritizing cases with long-term sustainable impacts on gender equality, disability inclusiveness, and educational outcomes for disadvantaged and vulnerable groups of children. This selection focuses on closed projects whose documentation contains ICRs and ICRRs that provide clear evidence of the achievement of gender and disability-related indicators and the positive impacts of project activities on children with different genders and disability statuses. The selection of these seven cases reflects different types of background challenges related to inclusive school infrastructure that were summarized in the previous section: lack of gender-disaggregated WASH facilities (cases 1 and 3); challenges in FCV contexts (cases 4 and 5); challenges in post emergency situations (cases 2 and 3); challenges related to access to education in rural areas (cases 2 and 5); and challenges related to disability (cases 6 and 7).

These cases provide valuable models for establishing inclusive and supportive learning environments that benefit present and future generations. Selecting cases with sustainable, long-term impacts sets a precedent for future projects and initiatives. By showcasing successful examples of gender-sensitive school infrastructure, task teams can replicate similar efforts in other communities and regions. The structure of these case studies includes five elements: identifying background challenges, providing project overview, analyzing gender gaps during project appraisal stage, summarizing actions taken, and assessing impacts on access to inclusive education gaps.

OVERVIEW: In 2015, a flood emergency heavily affected 13 of the 34 districts in Malawi, with massive flooding impacting over 135,000 people and damaging and destroying over 350 schools. In response, in FY2016-2021, the Malawi Education Sector Improvement Project (MESIP) (P154185) implemented specific mechanisms to address gender gaps in education through gender-sensitive resilient school reconstruction. **The project objective** was to improve the equity and quality of primary education service delivery in early grades with an emphasis on improved accountability and functioning at the school level. **The target beneficiaries** included primary school–aged children in the participating districts, with a particular focus on girls. Component 2 (US$9.60 million in financing) focused on improving equity for the most disadvantaged, such as girls.

GENDER GAPS: At the appraisal stage, gender inequity in completion rates remained a major challenge in Malawi's primary education, with girls falling significantly behind those of boys. Gender disparities varied from one school level to another, pointing to the worsening challenges that girls faced as they progressed through the education system (World Bank 2022b).

ACTIONS: The project design sought to enhance equity related to access to education. More precisely, it engaged in robust targeting of the neediest schools across the eight most disadvantaged districts, focusing on girls and children with disabilities. For this purpose, it sought to reduce girls' repetition rates and increase the number of low-cost learning facilities built for the lower primary level. Specifically, Component 2 of this project included targeted actions aimed at improving girls' access to quality sanitary facilities through the provision of gender-segregated bathrooms across the eight most disadvantaged districts in Malawi to lower their repetition rates.

INDICATORS MEASURING GENDER IMPACTS: To measure progress in addressing the identified gender gaps, the project used the following indicators:

› The number of sanitary facilities for boys and girls
› A repetition rate for girls in grades 1–4 in 8 most disadvantaged districts
› Dropout rates for girls in grades 5–7 in the 8 most disadvantaged districts.

Significant achievements were made concerning the number of gender-sensitive sanitary facilities constructed in target schools (World Bank 2022b). In total, 330 facilities were built, 115 for boys and 215 for girls, to contribute to improved learning conditions (figure 3).

CASE STUDY 1

Reconstructing School Infrastructure in Post-emergency Situations with a Focus on Girls' Needs (Malawi)

Photo: Chisiyo Primary School, Malawi.
Photo: Chisomo Chibwana.

Gender-Segregated School Bathrooms

- Target (boys): 100
- Actual (boys): 115
- Target (girls): 200
- Actual (girls): 215

Girls' Repetition Rates, %

- Baseline: 23.2
- Target: 20.9
- Endline: 20.8
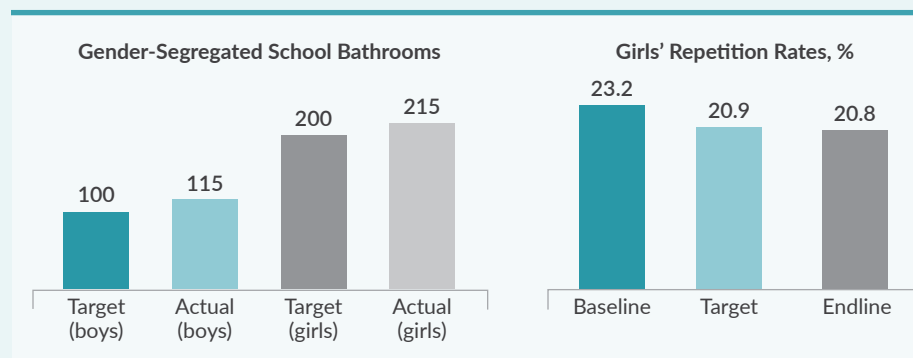
FIGURE 3. The Malawi Education Sector Improvement Project's Indicators

Source: Original figure based on World Bank 2022b.

These results likely contributed towards enhanced equity—especially for girls—given that the lack of appropriate sanitary facilities had been identified as a constraint to their education in the country (World Bank 2022b). As a result, girls' repetition rates decreased from 23.2 percent to 20.8 percent, against a target of 20.9 percent, indicative of the extent to which the project activities related to gender-sensitive school infrastructure were successful in bringing them back to school. ∎

CASE STUDY 2

Building and Rehabilitating School Infrastructure with a Focus on Underserved Girls in Rural Areas (Pakistan)

Photo: Girls' school in Islamabad, Pakistan.
Credit: Insiya Syed, © World Bank.

OVERVIEW: In 2010 and 2011, Sindh, the second-largest province by population in Pakistan, was affected by large-scale floods and heavy rains that significantly impacted the functioning and performance of the education sector. Each flooding event caused extensive damage to school infrastructure, loss of school and student resources, disruption to school operations, economic losses, and the physical displacement of households. In FY2013-2018, the Second Sindh Education Sector Project (P125592) supported the Sindh education sector through school infrastructure development based on objective, transparent, and needs-oriented criteria compliance with stipulated construction quality and school design specifications. The activity also supported third-party screening, assistance, monitoring, and certification of construction quality and completion, and pilot interventions on specific environmental enhancements in schools. **The project objective** was to raise school participation. **The target beneficiaries** were 8.5 million children, particularly in underserved rural areas, with a focus on girls (about 3.5 million girls were expected to improve access to education due to the project interventions). The total project financing (US$400 million) comprised Component 1 in the amount of US$392.7 million for result-based funding, including the establishment of new schools in underserved rural communities.

GENDER GAPS: At the appraisal stage, gender gaps in access to education were notably significant in rural areas. In rural Sindh, girls were particularly vulnerable due to poor conditions of school facilities, with insufficient gender sensitive resilient PLEs (World Bank 2019a).

ACTIONS: Since the likelihood of school participation in upper grades declined more rapidly for girls than for boys in rural areas in Sindh, the project activities included the establishment of new schools in underserved rural communities. These communities were selected based on specific criteria, including including significant gender disparities in primary school participation. The new schools aimed to increase enrollment among girls in these areas.

INDICATORS MEASURING GENDER IMPACTS: To measure progress in addressing the identified gender gaps, the project used the following indicators:

> Female share of total enrollment in private schools
> Female secondary school completion rates
> Survival rates from grades 1 to 10 for girls.

The project contributed to improving gender-sensitive, climate-resilient PLEs in rural Sindh, including sanitation facilities, common rooms, and water filters at the most disadvantaged schools. The female shares of total enrollment in private schools in rural

Sindh increased from 36 percent in 2013 to 41 percent in 2018 (World Bank 2019a). Also, female secondary school completion increased considerably. Specifically, the survival rates from grades 1 to 10 for girls increased from 16 percent to 26 percent between the 2012/13 and 2016/17 school years (figure 4).

Female Shares of Total Enrollment in Private Schools in Rural Sindh, %

- Baseline: 36
- Endline: 41
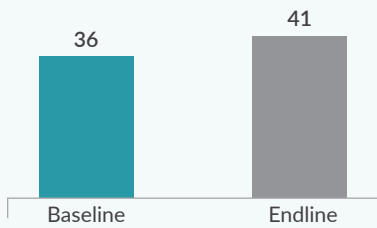
Girls' Survival Rates from Grades 1 to 10 in Rural Sindh, %

- Baseline: 16
- Endline: 26
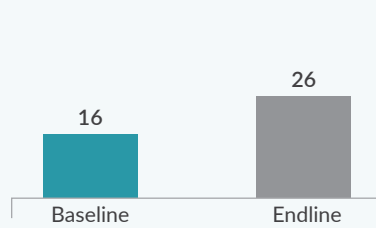
FIGURE 4. The Second Sindh Education Sector Project's Additional Indicators

Source: Original figure based on World Bank 2019a.

The ICR provides evidence that female students and parents expressed satisfaction with the provision of these facilities during beneficiary interviews (World Bank 2019a). As a result, the project activities led to a significant decrease in gender gaps in access to education. ■

OVERVIEW: In 2015, tropical storms and floods destroyed 2,362 classrooms in the provinces of Nampula, Niassa, and Zambezia in Mozambique. The damage revealed the high level of vulnerability of these classrooms to cyclones, strong winds, and flooding due to the location of schools in hazardous sites, lack of adequate building designs and standards, and poor construction materials and techniques. To address this issue, in FY2015-2021, the MZ - Emergency Resilient Recovery Project (P156569) supported the rehabilitation and reconstruction of resilient schools in the country. **The project objective** was to restore the functionality of critical infrastructure in a resilient manner in the disaster-affected provinces. **The target beneficiaries** of school reconstruction activities were 159,771 children. Component 1 (US$31 million in financing) of the project supported resilient infrastructure rehabilitation.

GENDER GAPS: At the appraisal stage, Mozambique faced substantial gaps in access to education and had the 10th highest rate of early marriage globally, with nearly half of adolescent girls aged 15–19 reporting being married. As of 2015, approximately 46 percent of girls in this age group were either already mothers or pregnant, and this percentage had been rising over the past 20 years (World Bank 2022c).

ACTIONS: The project piloted new resilient construction techniques and standards developed for the rehabilitation of 372 damaged classrooms and the construction of 257 new classrooms in the provinces of Nampula, Niassa, and Zambezia. Specifically, its actions included the construction of classrooms designed to withstand the locally mapped cyclone winds and ground shaking and to include rainwater harvesting systems and gender-segregated toilets. The rehabilitation and construction of classrooms were expected to increase enrollment and attendance rates, particularly for girls, contributing to better education outcomes.

CASE STUDY 3

Building Gender-Sensitive Water and Sanitation Facilities in Schools Based on Climate-Resilient Construction Techniques and Standards (Mozambique)


Photo: gaborbasch

INDICATORS MEASURING GENDER IMPACTS: To measure progress in addressing the identified gender gaps, the project used the following indicators:

> The number of children with access to improved education infrastructure
> The number of gender-segregated bathrooms
> The number of rainwater harvesting and storage systems built or rehabilitated in schools.

Two indicators— newly built or rehabilitated gender-segregated school bathrooms and rainwater harvesting and storage—exceeded their targets by 12 percent and 35 percent, respectively (figure 5). These results indicate significant improvements in water availability and safety of schools' sanitation facilities.

FIGURE 5. The MZ-Emergency Resilient Recovery Project's Indicators

Source: Original figure based on World Bank 2022c.

Gender-Segregated Bathrooms

Revised Target	Actual
364	408

Rainwater Storages in Schools

Revised Target	Actual
111	150
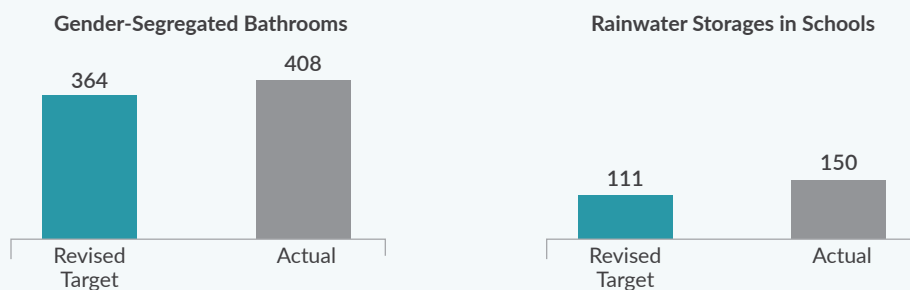
According to the ICR, local education sector staff in Mozambique believed that restoring classrooms, especially in remote areas, boosted students' self-esteem by providing better school facilities. This improvement contributed to reducing dropout rates in primary education, increasing the retention of girls, and lowering their risk of early marriage (World Bank 2022c). ■

CASE STUDY 4

Creating Safe Learning Spaces in the Fragility, Conflict, and Violence (FCV) Context (South Sudan)

OVERVIEW: From 2005 to 2013, Sudan was gradually emerging from a challenging period, including the aftermath of civil conflict, the secession of South Sudan, ongoing fiscal instability, and the slow recovery of public services and goods. Despite previous efforts to enhance basic education, significant challenges persisted. In FY2013-2019, the Sudan Basic Education Recovery Project (P128644) supported the education sector, providing an improved learning environment in primary and secondary schools. Given the emergency context marked by major adverse economic and social impacts arising from the instability caused by the ongoing conflict in some parts of the country, the World Bank applied its guidelines for response to crises (OP/BP 8.0) to enable a rapid response. In terms of PLEs, the project was aimed at building and reconstructing schools to alleviate the rising student-to-classroom ratio and increase access to education, particularly among girls. **The project objective** was to improve the learning environment in targeted areas in Sudan. **The target beneficiaries** were the most disadvantaged children from rural areas, with a focus on girls and vulnerable groups, such as internally displaced persons (IDPs) and nomads. Component 1 (US$36.2 million in financing) of the project focused on improving the learning environment.

Wiiners of the South Sudan Spelling Bee. Photo: Waniyusif94.

GENDER GAPS: In FY2008/09, at the appraisal stage in Sudan, due to an emergency related to the ongoing conflict, the gross enrollment rate for the first six years of basic education was 76 percent, which was low compared to 105 percent in other lower middle-income Sub-Saharan African countries (World Bank 2019b). While gender parity was 90 percent on average in Sudan, girls made up only 41 percent of enrolled students in rural areas (figure 6).

Gross Enrollment Rate
for All Children, %

76%

Gross Enrollment Rate
for Girls, %

41%
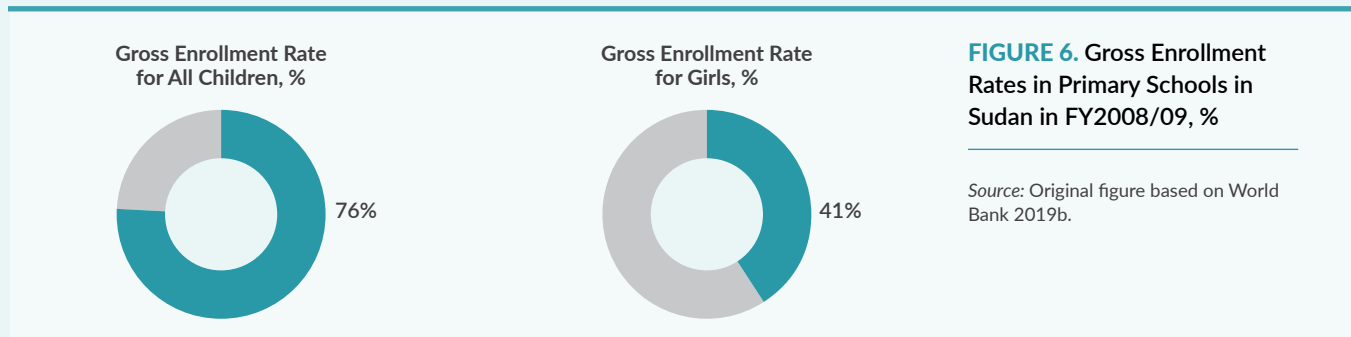
FIGURE 6. Gross Enrollment Rates in Primary Schools in Sudan in FY2008/09, %

Source: Original figure based on World Bank 2019b.

ACTIONS: To improve PLEs for girls, Component 1 of the projects included actions targeting girls' schools for the construction and rehabilitation of classrooms. Since a key challenge in getting out-of-school girls to attend was reducing their commuting distance, the project prioritized building schools in remote rural areas. To improve girls' safety, all schools were built with gender-segregated latrines and secure fences. These specifications were designed to provide a safe environment for girls and encourage their families to send them to school. The construction of additional classrooms also indicated a decrease in the student-classroom ratio, helping to avoid overcrowded classes. However, this improvement in ratios is not solely attributed to the construction itself. Other crucial implementation factors, such as effective teacher recruitment and allocation, proper timetable management, equitable student distribution policies, and adequate support infrastructure, are essential to achieving and sustaining this reduction.

INDICATORS MEASURING GENDER IMPACTS: The achievement of the school construction objective was captured by the following indicators:

> The number of female beneficiaries (percent)
> The number of additional classrooms built at the primary level.

The project reported the construction and/or rehabilitation of 1,226 classrooms, including latrines, water points, and fencing (figure 7). The proportion of female beneficiaries was 48 percent, thereby exceeding the target of 45 percent. ∎

FIGURE 7. The Sudan Basic Education Recovery Project's Indicators

Source: Original figure based on World Bank 2019b.

Additional Classrooms, including Latrines, Water Points, and Fencing

1,112 — Revised target
1,226 — Actual

Female Beneficiaries, %

45 — Revised target
48 — Actual
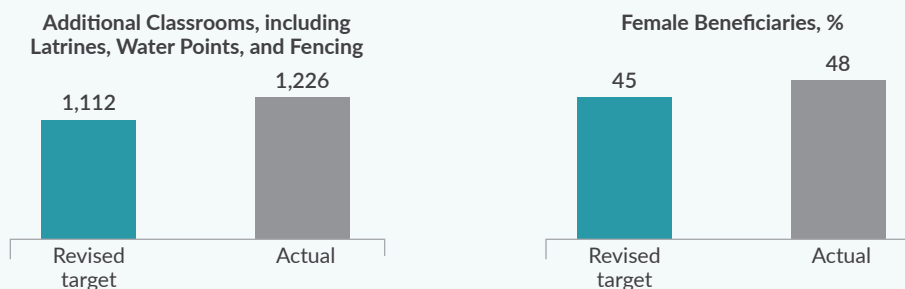
CASE STUDY 5

Destroying Gender Stereotypes through a Community-Led Model of Needs Identification for School Construction in Regions Characterized by Low Density of Population and Conflicts (Pakistan)

Photo: Helping Private Schools for Low-income Families Improve by Offering Loans
Credit: © World Bank.

OVERVIEW: Geographical sparseness and the ongoing conflict in Pakistan's province of Balochistan were found to have a particularly negative effect on access to schools for students, especially girls, as well as on the government's ability to provide education services. Conditions in school buildings were found to be highly inadequate due to a lack of shelters and other facilities, such as latrines and electricity. In response, in FY2012-2015, the Promoting Girls' Education in Balochistan Project (P128096) intended to construct facilities for shelterless girls schools (primary and secondary) and to provide previously lacking essential facilities such as toilets, boundary walls, blackboards, furniture, and connection to public services (drinking water and sewage) to approximately 200 girls' schools. **The project objective** was to improve access to education and retention of children in schools, with a special emphasis on girls in the province of Balochistan. **The target beneficiaries** were girls and boys of primary- and middle-school age in the selected schools in Balochistan, as well as communities and female teachers who were also empowered through the project. The total project financing (US$10 million) comprised Component 1 in the amount of US$4.99 million for the construction of shelterless girls' schools, Component 2 in the amount of US$2 million for the provision of essential facilities to girls' schools, and Component 3 in the amount of US$0.82 million for the establishment of new primary schools with community participation.

GENDER GAPS: At the appraisal stage, Balochistan's education indicators ranked among the lowest in the country, including net enrollment rates for children and girls in rural areas, in particular. Only 40 percent of girls aged 6–10 were enrolled at the primary level, and 13 percent of girls aged 11–13 at the middle school level in FY2010/11 (figure 8).

ACTIONS: The project design drew on the team's prior experience with community and government partnerships for the delivery of girls' education in Balochistan. A community-led model of needs identification provided a cost-effective solution to the establishment of new schools, which could be adopted in similar, sparsely populated regions. The project actions included the construction of primary and secondary girls' schools in remote areas. For the site selection, the project relied on a series of beneficiary interviews and anecdotal stories from the field that supported the high impact of the project on communities where no schools existed before. A transparent and accountable school selection process (instead of a political decision) made positive changes to their mindsets. As a result, communities were found to be more supportive of girls' education and more trustful in the government's new service delivery approach.

Gross Enrollment Rate for Girls
Aged 6–10, %

40%
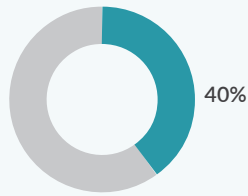
Gross Enrollment Rate for Girls
Aged 11–13

13%
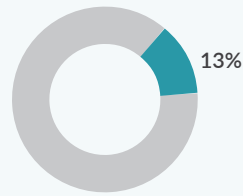
FIGURE 8. Girls' Gross Enrollment Rates in Balochistan in FY2010/11, %

Source: Original figure based on IEG 2016.

INDICATORS MEASURING GENDER IMPACTS: To measure progress in addressing the identified gender gaps, the project used the following indicators:

› The number of primary and secondary girls' schools that received essential facilities
› The number of primary and secondary girls' schools with adequate infrastructure.

Over the course of the project, the number of girls' schools receiving essential facilities increased to 226 compared to the target of 200 (figure 9). The number of girls' schools receiving shelters was almost achieved, except for seven schools in conflict-ridden areas.

Number of Primary and Secondary Schools
for Girls that Received Essential Facilities

200   226

Target   Actual
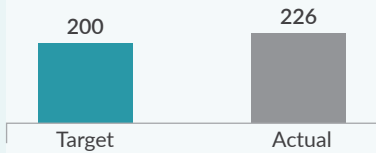
Number of Shelterless Primary and Secondary
Schools for Girls with Adequate Infrastructure

130   123

Target   Actual
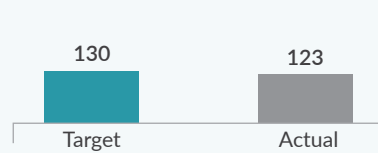
FIGURE 9. The Promotion of Girls' Education in Balochistan Project's Indicators

Source: Original figure based on World Bank 2019b.

In addition to directly impacting enrollment rates, the project had several effects on local communities. First, the processes of selecting school sites, as well as the construction and maintenance activities, led to stronger community cohesion. Previously, opinions on girls' education varied among community members, but through a series of discussions, they reached consensus on school site selection and became involved in school management. Second, the project influenced community mindsets, particularly regarding gender. The construction of schools reduced barriers stemming from distrust in education services and shifted the mentality of many households that were previously hesitant to send girls to school (World Bank 2015). The communities' strong sense of ownership of the schools contributed to enhancing girls' access to education. ∎

CASE STUDY 6

Improving Access to Education for Children with Disabilities through Improved PLEs (Tajikistan)

Photo: Taking the First Steps Towards Improved Teaching and Learning in Tajikistan
Credit: © World Bank.

OVERVIEW: In FY2013-2017, the Global Partnership for Education (GPE)-4 Project (P131441) implemented a set of activities to address critical issues in Tajikistan's education sector. **The project objective** was to contribute to improving the learning conditions in preschool and general education, including PLEs. **The target beneficiaries** of the program included students from relatively poor, rural regions, including students with disabilities and ethnic minorities. Component 3 of the project (US$8 million in financing) focused on improving child-friendly learning environments.

GAPS IN ACCESS TO INCLUSIVE EDUCATION: At the appraisal stage, it was observed that Tajikistan's preschool and general education suffered from a severe lack of adequate infrastructure, including physical premises, furniture, and equipment, as well as limited financing. In addition, rapidly growing preschool and school-age populations further strained the system's ability to serve the young generation, which led to a decline in the quality of education (World Bank 2018b). The lack of accessible infrastructure and resources has particularly impacted children with disabilities who account for 0.8 percent of the child population (or 25,000 children) and are often unable to receive an education.

ACTIONS: To facilitate inclusive education, component 2.3, *Promoting Inclusive Education*, aimed to ensure access for 750 children with disabilities through specific actions dedicated to upgrading schools with pathways, accessible latrines, and ramps. A compiled list of materials for inclusive education comprised computer equipment, furniture, teaching materials, and training guides for resource classes. The project relied on sustained and continuous external funding over time, in a coordinated framework, and with full government commitment, which had a strong impact not only on results but on institutional capacity building as well.

INDICATORS MEASURING DISABILITY-RELATED IMPACTS: To measure progress in addressing the identified gaps in inclusive education, the project monitored the following indicators:

> Number of schools with enhanced infrastructure for children with disabilities
> Increased number of children with disabilities benefiting from upgraded schools, including pathways, accessible latrines, and ramps
> Improved completion rates for children.

A UNICEF study of inclusiveness under Component 2.3 found that the number of children with disabilities in 69 schools targeted under the project increased by 23 percent in 2017 (World Bank 2018b). Overall, 766 children with disabilities benefitted from the project. Specifically, 712 of them benefitted from opened and equipped resource classes for inclusive education in 49 cluster schools, and 54 of them also benefitted from physical infrastructure adjusted to their needs in 20 schools (figure 10). ■

Completion Rates for All Children

750	766
Target	Actual

Number of Schools with Improved Infrastructure for Children with Disabilities

49	20
Schools with updated resource clasrooms	Schools with improved physical infrastructure
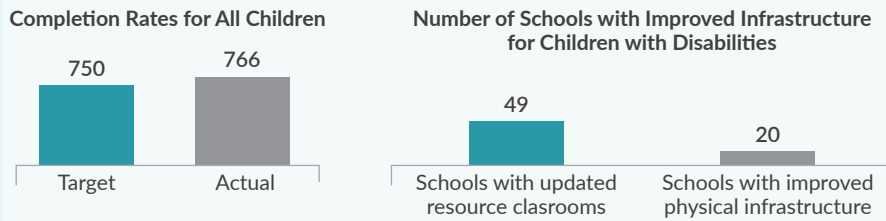
FIGURE 10. The Global Partnership for Education (GPE)-4 Project's Indicators

Source: Original figure based on World Bank 2018b.

OVERVIEW: In FY2003-2010, the Primary Education for Disadvantaged Children Project (P044803) implemented a set of activities to address critical issues in Viet Nam's education sector, with a focus on children with disabilities and other vulnerable groups. **The project objective** was to improve access to primary school and the quality of education for disadvantaged girls and boys. **The target beneficiaries** of the program included primary school-aged children from the 189 most educationally disadvantaged districts (out of 615 districts) and children with disabilities of primary school age. Component 2.1 (US$2.26 million in financing) of the project supported inclusive education for children with disabilities.

GAPS IN ACCESS TO INCLUSIVE EDUCATION: In the appraisal stage, there were an estimated one million children with disabilities in Viet Nam, with over 70 percent of them having no access to school (World Bank 2011). Most of these children lived in difficult social conditions, which also contributed to their low participation and poor performance in primary school.

ACTIONS: To facilitate inclusive education, Component 2.1, *Inclusive Education for Disabled Children,* was designed to support a national task force to develop an integrated set of national guidelines for inclusive education that ensured children with disabilities could gain access to educational services. Specific actions included the development of a comprehensive set of national guidelines addressing the needs and constraints faced by primary schools attempting to adopt an inclusive education policy, including the procurement of materials and equipment to support children with disabilities, based on the recommendations of the task force, among others.

The development of the task force and national guidelines for inclusive education was crucial for ensuring that school infrastructure development aligned with broader policy objectives and best practices in promoting inclusive education. Specifically, these guidelines outlined requirements for physical accessibility, design principles for inclusive spaces, and recommendations for accommodating diverse learning needs, including those of students with disabilities. The task force helped prioritize resource allocation for inclusive school infrastructure based on identified needs and priorities.

INDICATORS MEASURING DISABILITY-RELATED IMPACTS: To measure progress in addressing the identified gaps in inclusive education, the project monitored the following indicators:

CASE STUDY 7

Improving Access to Education for Children with Disabilities through an Integrated Set of National Guidelines for Inclusive Education (Viet Nam)

Photo: Ho Chi Minh City, Vietnam. Credit: raclro.

> The share of eligible children with disabilities enrolled in the targeted schools
> Their completion rates.

The former indicator remained at about 2 percent of all children throughout the project, while the completion rate of children with disabilities improved significantly in this period. Specifically, the completion rate for children with disabilities increased from 46 percent in 2006 to 72 percent in 2009 (figure 11).

FIGURE 11. The Primary Education for Disadvantaged Children Project's Indicators

Source: Original figure based on World Bank 2011.

Primary Completion Rates for All Children, %

72 — Baseline
97 — Endline

Primary Completion Rates for Children with Disabilities, %

46 — Baseline
72 — Endline
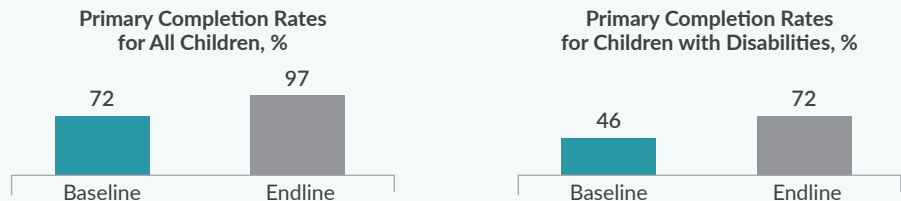
In comparison, it was estimated that over the same period, the project contributed to an increase in completion rates for all children from 72 percent to 97 percent. Although completion rates for children with disabilities were lower than those for all children in the final year, their rate of improvement was slightly higher, indicating a narrowing gap in inclusive education.

Based on these seven cases, appendix D summarizes key insights and recommendations on gender- and disability-sensitive school infrastructure. The insights and recommendations are grouped into seven key categories:

> Gender- and disability-sensitive infrastructure insights
> Community engagement and beneficiary involvement
> Vulnerability analysis
> Capacity building and training
> Institutional support
> Monitoring and evaluation
> Learning and knowledge sharing
> Resilience and sustainability. ■

T his section introduces a strategic approach to integrating gender and disability inclusion in school infrastructure, grounded in the World Bank's Gender Tag methodology. This approach not only identifies critical entry points where integrating gender and disability considerations yields the greatest potential for positive development outcomes but also outlines a structured, results-oriented process to target and measure these efforts.

The methodology operates through a logical three-step chain:

1. **Gender gap analysis:** This initial step involves analyzing the existing disparities in access, resources, or opportunities between genders within the project's scope. Gender analysis can be based on various sources, including academic research and studies from international and regional organizations, government agencies, nongovernmental entities, think tanks, and other organizations. Primary research can be conducted early in the project cycle (for example, through social and gender assessments).

2. **Actions:** Based on this analysis, a tailored set of actions is developed to specifically address and bridge the identified gaps. These actions are seamlessly integrated into the project's overall strategy to ensure effective implementation.

3. **Indicators for monitoring and evaluation:** Clear and measurable indicators are established to track the effectiveness of the interventions and the progress toward closing the gender gaps. These indicators serve as benchmarks for continuous monitoring and evaluation throughout the project lifecycle.

This method underscores the importance of a structured yet flexible approach to embedding gender considerations into projects, ensuring that the interventions are both targeted and measurable, thus contributing effectively to gender equality. The approach systematically identifies entry points across six key areas, which have been selected based on case studies and their demonstrated potential to generate impactful outcomes:

> Gender-specific WASH and other facilities in schools
> School infrastructure-related safety measures
> School infrastructure-related supplies
> School construction and rehabilitation interventions
> Emergency preparedness and response in schools
> Capacity building in school infrastructure operation and maintenance.

These areas represent the sectors where integrating gender and disability considerations can most effectively enhance accessibility, safety, and educational equity. Each entry point is critical for creating inclusive PLEs that foster equal educational opportunities for all students. This list of entry points is not exhaustive and should be continuously updated to reflect new school infrastructure interventions. Also, as entry points are project-specific, they should be modified according to particular circumstances.

Entry Points for Promoting Gender and Disability Inclusion in School Infrastructure

Gender-Specific WASH and Other Facilities in Schools

In many countries, educational institutions face significant challenges due to the lack of gender-specific WASH facilities. This deficiency not only affects the daily comfort and dignity of students, particularly girls and those with disabilities, but also impacts their attendance and enrollment rates. The following table details specific gaps in gender-sensitive WASH infrastructure, the actions proposed to address these gaps, and the indicators used to measure the effectiveness of these actions. Each entry point aims to enhance the accessibility and inclusivity of sanitation facilities, thereby promoting equitable learning opportunities and reducing gender disparity in school attendance and completion rates.

TABLE 1. Entry Points Related to Gender-Specific WASH and Other Facilities in Schools

Gaps	Actions	Indicators
› Schools lack gender-disaggregated WASH facilities, contributing to higher absenteeism among girls.	› Develop design standards for gender- and disability-sensitive sanitation facilities, including separate toilets with doors, water access, soap, toilet paper, and garbage disposal.	› Percentage of schools adhering to new gender-disaggregated design standards for WASH facilities.* › Reduction in absenteeism rates among boys and girls due to improved WASH facilities.
› Gender disparity persists in education completion rates in LMICs due to inadequate facilities. › Schools in LMICs lack facilities to accommodate the special needs of children with disabilities, affecting enrollment.	› Undertake infrastructure improvements to rehabilitate existing toilets with design features that meet the needs of girls and students with disabilities, such as separate toilets and accessible amenities.	› Percentage increase in primary and secondary education completion rates among boys and girls and students with disabilities in schools with improved facilities.
	› Implement infrastructure investments to create disability-sensitive sanitation facilities, equipped with features like outward-opening doors, single lever handles, grab bars, and reachable switches.	› Percentage of schools with newly installed disability-sensitive sanitation facilities* and increase in enrollment rates among students with disabilities.
› Insufficient inclusive and secure toilet facilities, leading to higher absenteeism among female students and students with disabilities.	› Invest in the construction of new toilet facilities that are both gender-sensitive and fully accessible, including ramps, appropriate signage, emergency call buttons, and space for maneuverability.	› Number of new gender-sensitive and accessible toilet facilities constructed* and reduction in absenteeism rates among female students and students with disabilities. › Change in perceptions of school attendance due to access to gender-segregated sanitary facilities, with sex-disaggregated data collected through surveys and qualitative research.

Note: Indicators with (*) might not be sufficient for the Gender Tag.

In many countries, significant barriers still prevent girls from accessing primary and secondary education, particularly in remote, fragile, and conflict-affected areas. One prominent challenge is the lack of safe educational facilities, which not only deters parents from sending their daughters to school but also contributes to the overall shortage of female teachers. This situation is further complicated by risks associated with infrastructure development projects, such as gender-based violence (GBV), sexual exploitation and abuse (SEA), and sexual harassment (SH). To address these critical issues, targeted actions are essential to enhance the safety and security of school environments, thereby improving girls' educational access and participation. This involves developing and implementing robust safety guidelines and infrastructure enhancements, including secure dormitories for female students and housing for female teachers, as well as integrating comprehensive social risk management strategies into project planning, preparation, and implementation. By prioritizing these measures, it is possible to create a safer educational landscape in LMICs, encouraging more consistent attendance and higher enrollment rates among female students, and establishing a more inclusive and equitable educational system.

School Infrastructure-Related Safety Measures

TABLE 2. Entry Points Related to Infrastructure Safety Measures

Gaps	Actions	Indicators
› In many LMICs, there is a gender gap in girls' access to primary and secondary education due to safety concerns, particularly in remote areas and the FCV contexts.	› Develop guidelines and procedures for enhancing the security and safety of school facilities.	› Number of guidelines and procedures developed and operational for enhancing the security and safety of school facilities.
› Insufficient safety and transportation infrastructure, coupled with the lack of dormitories for female students and housing for female teachers, exacerbates safety concerns, leading to a shortage of female teachers and reduced parental willingness to send daughters to school, thereby impacting regular attendance and enrollment rates.	› Implement infrastructure investment to construct and/or expand schools, incorporating security fences, the provision of adequate lighting throughout educational facilities and surrounding areas, and other safety measures. › Implement needs-based school grants to empower schools to enhance general security and safety measures and provide transportation facilities, with a specific focus on addressing the needs of female students and teachers.	› Number of schools constructed or expanded with security fences, adequate lighting, and other safety measures.* › Percentage increase in regular school attendance of female and male students. › Number of sex-disaggregated dormitories or houses constructed specifically for female teachers and students. › Percentage increase in the female share of total enrollment in schools.
› Labor-related risks in infrastructure projects may include GBV, sexual exploitation and abuse, and sexual harassment.	› Implement infrastructure investment to construct or expand sex-disaggregated dormitories or housing specifically for female teachers. The Environmental and Social Management Framework (ESMF) provides guidance for prevention and response to potential social risks, including GBV.	› Social risk management clauses are included in all bidding documents and mitigation measures in the contractor's environmental and social management plan, such as workers' codes of conduct.*

Note: Indicators with (*) might not be sufficient for the Gender Tag.

School Infrastructure-Related Supplies

Access to basic menstrual hygiene supplies is a critical factor affecting educational participation among female students in many LMICs. The absence of these essentials often leads to higher rates of absenteeism and even dropout among girls as they reach menstruation age. Recognizing the importance of addressing this gap, effective interventions aim to challenge and change cultural norms and stigmas associated with menstruation through education and dialogue. Fostering a supportive school environment that accommodates the needs of female students and teachers reduces absenteeism and increases enrollment rates. The effectiveness of these interventions is measured through indicators such as the decrease in school absences among female students, the percentage share of girls enrolled at primary or secondary levels, and the level of satisfaction among girls regarding menstrual hygiene management at school. By focusing on these areas, schools can significantly improve the educational experience and outcomes for female students, promoting gender equality and empowerment within the community.

TABLE 3. Entry Points Related to School Infrastructure Supplies

Gaps	Actions	Indicators
› Many schools lack private, clean, and accessible restrooms that are essential for girls to manage menstrual hygiene in a dignified manner.	› Develop and fund a plan to renovate existing restrooms and build new facilities where necessary, ensuring they meet health and safety standards for menstrual hygiene.	› Percentage increase in continuous school attendance rates among menstruating students. › Percentage increase in student satisfaction rates with the new menstrual hygiene facilities, assessed through annual surveys.*
› Schools often do not have a consistent supply of essential menstrual hygiene products, such as sanitary napkins, which are crucial for girls to attend school during their menstrual cycles.	› Implement needs-based grants for schools to procure and distribute sanitary napkins and other essential hygiene supplies.	› Percentage increase in school retention rates among female students. › Percentage of schools that can sustainably stock menstrual hygiene products throughout the academic year.*
› The absence of dedicated spaces for menstrual hygiene management often leaves girls without the privacy or resources needed to manage their menstruation comfortably and hygienically at school.	› Build specialized rooms equipped with supplies, disposal facilities, and educational materials about menstrual health. › Facilitate regular discussions led by school psychologists and pedagogues to educate and support students about menstrual hygiene.	› Increase in awareness and reduction of stigma as measured by pre-discussion and post-discussion surveys. › Percentage of students and staff participating in menstrual hygiene education sessions annually.

Note: Indicators with (*) might not be sufficient for the Gender Tag.

The construction and rehabilitation of school infrastructure provide a pivotal opportunity to enhance educational access and outcomes, particularly for girls and individuals with disabilities who are often vulnerable in educational settings. Several gaps currently hinder the effective design of gender-sensitive and inclusive PLEs. These include limited involvement of women and other vulnerable groups in the planning stages, a lack of understanding of their specific needs, and the absence of robust methodologies for assessing inclusivity. Furthermore, societal norms and discriminatory practices significantly impact the education of girls and persons with disabilities, compounded by inadequate data to inform targeted interventions.

School Construction and Rehabilitation Interventions

TABLE 4. Entry Points Related to School Construction and Rehabilitation Interventions

Gaps	Actions	Indicators
› Limited or insufficient involvement of women and other vulnerable groups in the design of gender-sensitive school infrastructure.	› Incorporate participatory planning and implementation in projects to involve more representatives of vulnerable and disadvantaged groups.	› Percentage increase in community involvement in the planning, implementation, and evaluation of school infrastructure.* › Number of community-level stakeholders consulted in the design process.*
› Knowledge gaps regarding the needs of girls and individuals with disabilities related to school infrastructure.	› Ensure a thorough understanding of the needs of vulnerable groups through surveys, consultations, focus groups, and interviews. Utilize this knowledge to inform the design of inclusive school infrastructure.	› Percentage increase of women and persons with disabilities engaged in project planning and implementation across various levels.*
› A mix of obstacles that lead girls to not pursue their education beyond the primary level, including social norms and gender roles.	› Implement holistic learning spaces tailored for girls, including life skills education and provision of material support, such as tuition fees, uniforms, and transportation fees, including bicycles where needed.	› Number of girls and children with disabilities benefiting from improved physical learning environments.
› Social norms and discriminatory practices limit educational access for individuals with disabilities, such as lack of ramps, poor signage, and lack of specialized support.	› Incorporate community engagement in project activities to create physical learning environments that support the success of girls and children with disabilities in school and beyond. Implement Universal Design principles.	› Number of schools constructed or expanded with inclusive features.* › Percentage decrease in barriers to access for students with disabilities through the implementation of mandatory technical standards.
› Limited gender-disaggregated data on key education outcomes, including female and male student attainment and retention at a school level, hinders the ability to inform gender-sensitive school design.	› Collect gender-disaggregated data on key education outcomes, including attainment and retention, to inform the design of gender-sensitive interventions supported by the proposed project.	› Percentage increase in the collection of gender-disaggregated data on key education outcomes, such as student attainment and retention.

Note: Indicators with (*) might not be sufficient for the Gender Tag.

Emergency Preparedness and Response in the School Infrastructure Context

Emergency preparedness and response in the context of school infrastructure is a critical area of focus, especially in regions prone to natural disasters and other crises. The need for gender- and disability-sensitive, climate-resilient educational facilities is paramount, particularly in rural and remote areas where such vulnerabilities can significantly impact enrollment and safety. The challenges include a lack of safe and accessible PLEs, limited interagency cooperation in DRM and gender mainstreaming, and insufficient emergency response capacity, particularly for children with disabilities. Addressing these issues requires a multifaceted approach that enhances coordination, develops safe and resilient infrastructure, and tailors emergency procedures to meet the diverse needs of all students. This strategic focus aims to ensure that PLEs are not only safe but also inclusive, promoting continued education during and after emergencies.

TABLE 5. Entry Points Related to Emergency Preparedness and Response in the School Infrastructure Context

Gaps	Actions	Indicators
❯ Limited interagency cooperation among organizations responsible for school infrastructure, DRM, and gender mainstreaming.	❯ Strengthen multisector coordination by establishing interagency protocols to ensure inclusivity in school infrastructure and emergency preparedness and response, with a focus on gender sensitivity.	❯ Percentage of interagency protocols established and operational with specific provisions for gender sensitivity in emergency preparedness.
❯ In many countries, PLEs are unsafe, exposing students to risks of disease, injury, and fatalities during emergencies.	❯ Develop standards for constructing resilient school facilities designed to withstand locally mapped hazards, incorporating gender and disability considerations into safety protocols.	❯ Percentage of schools constructed or renovated to meet new resilience and inclusivity standards, reflecting gender and disability considerations.*
❯ Insufficient gender- and disability-sensitive and climate-resilient PLEs in rural areas contribute to low enrollment rates among girls and children with disabilities.	❯ Integrate rainwater harvesting systems into the infrastructure to address water scarcity, ensuring systems are accessible and meet the specific needs of girls and children with disabilities.	❯ Number of schools with integrated rainwater harvesting systems that are accessible and tailored to the needs of girls and children with disabilities.*
❯ Children with disabilities often have lower capacity levels to effectively respond to emergencies compared to their peers without disabilities.	❯ Tailor disaster preparedness measures in education facilities to accommodate the needs of children with different degrees of vulnerability, ensuring gender-specific concerns are addressed.	❯ Number of schools with disaster preparedness plans tailored for children with disabilities and gender-specific needs.* ❯ Percentage increase in schools with operational emergency plans addressing both disability and gender inclusivity.
❯ General lack of training and awareness regarding emergency preparedness and response tailored to the needs of schools and vulnerable populations.	❯ Carry out capacity development, training, outreach, and awareness campaigns specifically tailored to school infrastructure, focusing on emergency preparedness and response, with an emphasis on gender and disability inclusivity.	❯ Percentage of targeted school personnel trained in gender-sensitive emergency preparedness and response, among them women* ❯ Number of children with access to improved schools, with a focus on gender and disability inclusivity.

TABLE 5. cont.

Gaps	Actions	Indicators
❯ Existing school evacuation routes, communication systems, and equipment often fail to comply with internationally recognized accessibility standards.	❯ Ensure that all new and renovated school facilities include evacuation routes, communication systems, and equipment that comply with internationally recognized accessibility standards, including Universal Design with a gender lens.	❯ Number of school evacuation routes, communication systems, and equipment that are upgraded to meet Universal Design standards with specific considerations for gender and disability inclusive.*

Note: Indicators with (*) might not be sufficient for the Gender Tag.

The effective operation and maintenance of school infrastructure critically influence educational outcomes, particularly for vulnerable groups such as girls and children with disabilities. Despite the growing emphasis on inclusive education, significant gaps remain in how schools address the specific needs of these groups in their daily operations and maintenance routines. Additionally, the lack of specialized training for staff in managing inclusive PLEs contributes to lower completion rates among students with disabilities, who often face systemic marginalization. To bridge these gaps, it is essential to build capacity within school systems by developing staff capabilities, increasing female representation in educational decision-making, and establishing inclusive policies and guidelines. These efforts aim to create a more equitable educational environment where all students can thrive, supported by infrastructure that caters to their diverse needs.

Capacity Building in Schools Infrastructure Operation and Maintenance

TABLE 6. Entry Points Related to Capacity Building in School Infrastructure Operation and Maintenance

Gaps	Actions	Indicators
❯ There is an inadequate focus on addressing the specific needs of girls and children with disabilities in the operation and maintenance of school infrastructure.	❯ Develop internal staff capabilities to operate and maintain school infrastructure, particularly focusing on the special needs of girls and children with disabilities.	❯ Percentage of women who have received training on the operation and maintenance of school infrastructure, with specific modules on gender sensitivity and disability inclusiveness.
❯ Students with disabilities have lower completion rates, partly due to their marginalization in policy making, with many countries lacking national guidelines for inclusive education.	❯ Develop an integrated set of national guidelines for inclusive schools that ensure children with disabilities can gain access to educational services, with explicit attention to gender inclusivity in policy frameworks.	❯ Development and implementation of an integrated set of national guidelines for inclusive education, ensuring that children with disabilities have access to educational services with gender-specific provisions.
❯ Limited or insufficient training in the operation and maintenance of school infrastructure.	❯ Implement measures to increase the representation of women and persons with disabilities in decision-making positions within relevant education bodies, community councils, and commissions.	❯ Percentage increase in women and persons with disabilities in decision-making positions within the educational sector, specifically related to infrastructure management and maintenance.
❯ Limited community involvement and gender representation in the support networks for school operation and maintenance.	❯ Create a network of community volunteers and task forces with an equal balance of gender representation, ensuring that operations and maintenance tasks are informed by diverse perspectives and meet the needs of all students.	❯ Number of new schools established or existing ones restructured in accordance with approved inclusive policies and protocols, with evidence of community involvement and gender-balanced representation in the support networks.

Note: Indicators with (*) might not be sufficient for the Gender Tag.

Community Engagement in School Infrastructure Projects

Community engagement is pivotal in the early stages of school infrastructure projects to better understand and address the unique challenges and opportunities for creating gender- and disability-inclusive environments. Under the Environmental and Social Framework, a comprehensive stakeholder engagement plan is crucial. This plan should facilitate meaningful consultations with a diverse group of stakeholders, including parents, teachers, students with and without disabilities, organizations representing persons with disabilities, and other civil society organizations (CSOs). These consultations aim to ensure that building new schools promotes an inclusive PLE accessible to all children and strategically located to benefit the most vulnerable groups. Involving local communities is essential in understanding their specific needs and integrating gender and disability considerations into the project design more effectively. Project documents such as the PAD should outline a clear results chain that includes a gender gap analysis, identification of targeted actions to bridge these gaps, and robust indicators for monitoring progress.

This community-driven approach varies by region and cultural context but is fundamentally crucial for the success of school infrastructure projects. For instance, in Pakistan, the Promoting Girls' Education in Balochistan Project benefited from existing community-government partnerships to determine optimal school locations through beneficiary interviews and field anecdotes. In India, the Elementary Education Project enhanced infrastructure in underserved regions by establishing village education committees (VECs). These VECs, which have been made statutory bodies in many states, manage construction funds and other resources, promoting transparency and community ownership, which, in turn, has led to significant improvements in enrollment and completion rates among girls and minority groups.

For effective monitoring and evaluation, it is critical to audit the accessibility and safety of all educational facilities regularly. This includes assessing WASH and other infrastructure critical to the school's operation. Project teams should employ a mix of quantitative and qualitative methods for monitoring. Indicators should be disaggregated by gender, disability, and other relevant criteria to track progress comprehensively. Apart from numerical data, rich qualitative insights can be gathered from beneficiary interviews, surveys, and focus groups, adding depth to the understanding of the impact and efficacy of the interventions. School infrastructure projects can achieve more nuanced and impactful outcomes by embedding community engagement deeply into the project design and implementation phases, ensuring that PLEs are truly inclusive and supportive of all students' needs.

FIGURE 12. Key Recommendations for New School Construction and Rehabilitation of Existing Education Facilities

❶ Community engagement	❷ Analysis of gaps in inclusivity	❸ Inclusive project design	❹ Monitoring and reporting
› Consult with communities and CSOs to identify ways in which all children, regardless of their gender and disability status, can access and feel safe at school. › Use community consultations to ensure that school construction enables a gender-inclusive and accessible PLE for all and that the location of schools benefits the most vulnerable, especially girls and children with disabilities.	› Use communities, CSOs, parents, and teachers to provide inputs to an analysis of inclusive barriers related to school infrastructure. › Use organizations for persons with disabilities to identify barriers to physical access in existing facilities; for instance, through identifying whether WASH facilities are accessible.	› Ensure that school buildings, including WASH facilities, are designed to enable accessible and inclusive PLEs. › Consult with communities and involve accessible design experts in the design phase. › Use Universal Design principles to allow access to all school areas. › Ensure that final school design is inclusive, accessible and context-appropriate, using local building capacity and materials that reflect the identity.	› Consult with communities and CSOs to identify ways in which all children, regardless of their gender and disability status, can access and feel safe at school. › Use community consultations to ensure that school construction enables a gender-inclusive and accessible PLE for all and that the location of schools benefits the most vulnerable, especially girls and children with disabilities.

Source: Original compilation based on case studies and a review of previous analytical works.
Note: CSOs = civil society organizations; PLE = physical learning environment; WASH = water, sanitation, and hygiene.

The following recommendations outline key strategies and actions that can be taken to embed community engagement deeply within school infrastructure projects. These steps are designed to ensure that the projects are not only effective in meeting the physical and educational needs of the community but also successful in achieving long-term sustainability and inclusivity.

› **Develop comprehensive stakeholder engagement plans:** Design and implement a detailed stakeholder engagement plan that involves regular, structured consultations with a diverse group of stakeholders such as parents, teachers, students with and without disabilities, and representatives from disability advocacy groups and civil society organizations. This plan aims to gather insights on specific community needs and preferences, ensuring the creation of a PLE that is inclusive, accessible, and meets the diverse needs of all students.

› **Incorporate local insights and customs into project design:** Utilize insights from community consultations to tailor the design and location of school projects, making them culturally appropriate and strategically placed to benefit vulnerable groups. Engaging with local communities can reveal unique cultural, environmental, and social factors that influence school attendance and accessibility, leading to more tailored and effective project designs.

› **Mandate statutory community involvement:** Where feasible, legislate the involvement of community bodies such as VECs in the management of school construction projects. Legal backing for community involvement ensures sustained engagement and ownership, enhancing transparency, resource allocation, and the maintenance of school facilities.

› **Perform regular audits for accessibility and safety:** Establish routine audits to evaluate the accessibility and safety of educational facilities, focusing on inclusive design and emergency preparedness. Regular assessments help maintain high standards of safety and accessibility, ensuring that facilities continue to serve the needs of all students, including those with disabilities.

› **Implement disaggregated monitoring and evaluation:** Implement a monitoring and evaluation framework that uses both quantitative and qualitative methods, with indicators disaggregated by gender, disability, and other relevant demographics. This allows for a nuanced understanding of how different groups benefit from infrastructure improvements, identifying gaps and areas for further improvement.

› **Enhance local capacity building:** Invest in training programs for local stakeholders, including community members and project staff, on best practices in inclusive design and stakeholder engagement. Building local capacity ensures the sustainability of project benefits and empowers communities to advocate for and maintain inclusive educational environments.

› **Document and share best practices:** Document lessons learned and best practices from successful community engagements and inclusive project implementations, sharing these findings widely across regions. Sharing successful strategies helps replicate effective approaches in different contexts, improving overall project outcomes and fostering a culture of inclusivity in school infrastructure planning.

Vietnam. Photo: it:hadynyah.

Conclusion and Overall Recommendations

n many LMICs, there is a need to integrate gender- and disability-inclusive perspectives into school infrastructure strategies, policies, and projects. The World Bank Group developed the Gender Tag methodology and the Social Inclusion Assessment Tool to help task teams and their counterparts address gaps in inclusion in policy operations and other projects. A list of possible entry points for addressing gaps in inclusive education infrastructure is provided in section 3 of this note. Following these tools, this note articulates logical results chains comprising three elements that identify gaps in inclusion, actions to close these gaps, and indicators for monitoring the related progress. The list of gaps, actions, and indicators provided in this note is not exhaustive, but it reflects good examples from the World Bank's operations. All entry points are organized around the six critical areas: gender-segregated facilities in schools, school infrastructure-related safety measures, school infrastructure-related supplies, school construction and rehabilitation interventions, emergency preparedness and response in the school infrastructure context, and capacity building in school infrastructure operation and maintenance. Gender gaps in the school infrastructure area differ across various countries in their breadth and scope, meaning all project results chains will be country specific. Following are several recommendations for task teams to consider in this process:

› **Incorporating multiple results chains:** Although one logical results chain is sufficient for the Gender Tag, multiple interconnected chains can have larger impacts on disadvantaged and vulnerable children. An example is the EQRA (P159378), which proposed two results chains to close gender gaps in education, including needs-based grants for female students that can be used, among other things, for hygiene supplies and transport, and the development of a policy aimed at increasing the number of female teachers. Simultaneous closures of

these gender gaps create synergies that allow girls to maximize benefits from such interventions.

› **Considering intersectionality in gender analysis:** An intersectional approach can benefit a sectoral gender analysis by demonstrating important links with sex, age, race, ethnicity, social identity, displacement and forced migration, among other forms of intersections. For example, the Second Education Quality Improvement Program (P106259) in Afghanistan pointed to the need for legislation for the demilitarization of schools, addressing the needs of IDPs and returnees, and supporting community school protection mechanisms—that is, support from security forces and use of community negotiation approaches to strengthen the school *shuras* (methods of community-based decision-making in Islamic society that is common and widely used in Afghanistan). To address intersectionality and meet the needs of all community members, assessment information should be gathered from diverse groups, taking into account factors such as gender, age, and disability. Employing various methodologies is essential to triangulate the information effectively (see appendix B). For example, a first-grade girl will have different needs in terms of using WASH facilities than a tenth-grade girl.

› **Developing a strong narrative to showcase a project's contribution to closing gender and inclusivity gaps:** School infrastructure operations can gain significant benefits by conducting a gender and vulnerability analysis early in the process. This involves identifying suitable data sources, developing a robust methodology, clarifying connections between gaps, actions, and indicators based on rigorous evidence, and ensuring that actions and indicators are as specific as possible. This is particularly important because addressing gender and other vulnerable groups in a project's objectives contributes to its overall success and inclusive and sustainable development.

Specific recommendations and insights into gender- and disability-inclusive school infrastructure are provided in appendix D. They are based on the case studies presented in this note and are grouped into seven key categories: gender- and disability-sensitive infrastructure insights, community engagement and beneficiary involvement, vulnerability analysis, capacity building and training, institutional support, monitoring and evaluation, learning and knowledge sharing, and resilience and sustainability. This list of recommendations is not exhaustive and should be continuously updated to reflect new practices and challenges experienced by task teams involved in school infrastructure interventions.

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Appendix A: Projects with Activities Related to Gender- and Disability-Sensitive School Infrastructure

Project ID	Project name	Country	Region	FY	Status	Education level
P154185	Malawi Education Sector Improvement Project (MESIP)	Malawi	AFE	2017	Closed	Primary
P120541	Second Education Development Policy Loan	Morocco	MNA	2013	Closed	Secondary
P096151	Nigeria State Education Sector Project	Nigeria	AFE	2007	Closed	Primary and secondary
P156001	Lesotho Education Quality for Equality Project	Lesotho	AFE	2016	Closed	Basic education
P152810	Tanzania Education and Skills for Productive Jobs Program (ESPJ)	Tanzania	AFE	2016	Closed	TVET
P077903	Third Education Project - Phase II	Gambia	AFE	2006	Closed	Primary
P128644	Sudan Basic Education Recovery Project	Sudan	AFE	2013	Closed	Basic education
P131441	Global Partnership for Education (GPE)-4	Tajikistan	ECA	2014	Closed	Primary and secondary
P064557	Education Sector Reconstruction Project	Burundi	AFE	2007	Closed	Primary
P107300	Pakistan: Sindh Education Sector Project (SEP)	Pakistan	SAR	2009	Closed	Primary and secondary
P006204	BO - Education Quality	Bolivia	LAC	1998	Closed	Primary and secondary
P114866	Secondary Education Development Program II	Tanzania	AFE	2010	Closed	Secondary
P144454	Global Partnership for Education – Balochistan Education Project	Pakistan	SAR	2015	Closed	Secondary and higher
P155191	Providing an Education of Quality in Haiti (PEQH)	Haiti	LAC	2017	Closed	Primary and secondary
P086994	Second School Access and Improvement	Djibouti	AFE	2006	Closed	Primary and secondary
P128096	Pakistan: Promoting Girls' Education in Balochistan (PGEB)	Pakistan	SAR	2013	Closed	Primary and secondary
P096234	Iraq Third Emergency Education Project	Iraq	MNA	2006	Closed	Primary and secondary
P157858	Secondary Education Improvement Project	Cambodia	EAP	2017	Closed	Secondary
P044803	Primary Education for Disadvantaged Children Project	Vietnam	EAP	2003	Closed	Primary
P106259	Afghanistan – Second Education Quality Improvement Program	Afghanistan	SAR	2008	Closed	Basic education
P125952	Pakistan: Second Sindh Education Sector Project	Pakistan	SAR	2013	Closed	Primary and secondary
P055459	Elementary Education Project	India	SAR	2004	Closed	Primary and secondary
P043255	RY Basic Education Expansion Project	Yemen	MNA	2001	Closed	Basic education
P001015	Basic Education Support Project	Guinea-Bissau	AFE	1997	Closed	Basic education
P045050	Rajasthan District Primary Education Project	India	SAR	1999	Closed	Primary
P168551	Rwanda Quality Basic Education for Human Capital Development Project	Rwanda	AFE	2020	Active	Primary and secondary

Appendix A. cont.

Project ID	Project name	Country	Region	FY	Status	Education level
P174012	Enhancing Early Learning Project	Zambia	AFE	2022	Active	Preprimary
P166437	Mozambique Disaster Risk Management and Resilience Program	Mozambique	AFE	2019	Active	Primary
P166415	Higher Education for Economic Transformation Project	Tanzania	AFE	2021	Active	Higher
P170943	Additional Financing to GEQIP-E	Ethiopia	AFE	2021	Active	Primary and secondary
P164223	Equity with Quality and Learning at Secondary (EQUALS)	Malawi	AFE	2019	Active	Secondary
P160083	Kenya Secondary Education Quality Improvement Project	Kenya	AFE	2018	Active	Primary and secondary
P172627	Skills for A Vibrant Economy Project	Malawi	AFE	2021	Active	Higher and TVET
P166570	Uganda Secondary Education Expansion Project	Uganda	AFE	2021	Active	Secondary
P163399	East Africa Skills for Transformation and Regional Integration Project (EASTRIP)	Eastern and Southern Africa	AFE	2019	Active	TVET
P174329	Malawi Education Reform Program Project	Malawi	AFE	2022	Active	Primary
P172434	Somalia Education for Human Capital Development Project	Somalia	AFE	2021	Active	Primary and secondary
P168699	Girls Empowerment and Learning for All Project	Angola	AFE	2021	Active	Preprimary, primary, and secondary
P167169	Sudan Basic Education Support Project	Sudan	AFE	2021	Active	Primary
P177983	Second Additional Financing for the Rwanda Quality Basic Education for Human Capital Development Project	Rwanda	AFE	2021	Active	Primary and secondary
P158570	Zambia Education Enhancement Project	Zambia	AFE	2018	Active	Primary and secondary
P172657	Improving Learning and Empowering Girls in Mozambique	Mozambique	AFE	2021	Active	Primary and secondary
P170480	Tanzania Secondary Education Quality Improvement Project (SEQUIP)	Tanzania	AFE	2020	Active	Secondary
P176867	Primary Education Equity in Learning Program	Kenya	AFE	2022	Active	Primary
P176354	Enhancing Shared Prosperity Through Equitable Services (ESPES) Second Additional Financing	Ethiopia	AFE	2021	Active	Primary
P170943	Additional Financing to GEQIP-E	Ethiopia	AFE	2021	Active	Primary and secondary
P160442	Madagascar – Basic Education Support Project	Madagascar	AFE	2018	Active	Basic education
P169222	Girls Empowerment and Quality Education for All Project	Sao Tome and Principe	AFE	2021	Active	Primary and secondary
P145309	Uganda – Skills Development Project	Uganda	AFE	2015	Active	TVET
P180936	Infrastructure for Safer and Resilient Schools Project	Philippines	EAP	2024	Active	Primary and secondary
P172213	Nagaland: Enhancing Classroom Teaching and Resources	India	SAR	2021	Active	Secondary

Appendix A. cont.

Project ID	Project name	Country	Region	FY	Status	Education level
P044876	Female Secondary School Assistance Project II	Bangladesh	SAR	2004	Closed	Secondary
P044674	Emergency Reconstruction	Eritrea	AFE	2001	Closed	Primary and secondary
P007223	Guatemala – Basic Education Reform Project	Guatemala	LAC	1997	Closed	Primary
P108776	Mongolia: Education for All Fast Track Initiative (EFA-FTI) Catalytic Trust Fund	Mongolia	EAP	2007	Closed	Primary and secondary
P156559	Emergency Resilient Recovery Project	Mozambique	AFE	2016	Closed	Primary and secondary
P146184	Higher Education Development Project	Afghanistan	SAR	2016	Closed	Higher

Note: AFE = Eastern and Southern Africa; EAP = East Asia and the Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

Appendix B: Checklist for Inclusion in A School Infrastructure Project Cycle

No.	Elements	Checklist Questions	Yes	No
1.	**Needs assessment and identification**			
	To ensure the needs of all members of the community are met, assessment information should be collected from diverse groups, including as much gender, age-balanced, and disability representation as possible. The use of different methodologies is required to triangulate the information.	**Do the terms of reference for the needs assessment explicitly include the issues of men, women, boys, and girls of different ages and with different types of disabilities?**		
		For example:		
		Do the terms of reference include requirements of gender and disability expertise or knowledge in the assessment team?	❏	❏
		Does the outline of the assessment report include the requirement of a separate chapter on gender and disability inclusion?	❏	❏
		Does the assessment ensure accessible communication methods are used to reach out and obtain information from community members with disabilities?		
		For example:		
		Has the team ensured that inputs from diverse groups, factor in gender, age, and disability?	❏	❏
		Has the team ensured that inputs from hearing-impaired community members can be obtained, for example, through the provision of sign language interpretation or customary interpretation through a family member?	❏	❏
		Has the assessment team ensured that other community members are informed and understand the importance of community members with disabilities participating in the needs assessment?	❏	❏
		Has the team ensured that community members with disabilities are informed about the need for their participation?	❏	❏
		Does the assessment ensure access to meeting points for interviews, focus group discussions, etc. from diverse groups, including gender, age balanced, and disability?		
		For example:		
		Has the assessment team ensured that the location of the focus group discussion or community meeting is accessible for members with mobility and/or visual impairments?	❏	❏
		Does the assessment include men, women, boys, and girls of different ages and with different disability statuses in the key informant interviews?	❏	❏
		Has the team conducting the needs assessment ensured that a variety of community members have the chance to give their feedback on their challenges and needs?	❏	❏
		Do focus group discussions include men, women, boys, and girls of different ages and with and without disability?		
		For example:		
		Does the needs assessment include the requirement of organizing separate focus group discussions for community members with different genders and disability statuses to get information and understanding of their challenges and needs?	❏	❏
		Does the assessment evaluate the accessibility of the existing school infrastructure?		
		For example:		
		Have community members with different genders and disability statuses been invited to provide feedback on the accessibility of the school infrastructure?	❏	❏

Appendix B. cont.

No.	Elements	Checklist Questions	Yes	No
2.	**Planning and design**			
	The planning and design phase of a gender- and disability-inclusive school infrastructure project requires the involvement and participation of children and adults with different genders and disability statuses in the assessment and design of a project that meets their needs and preferences, as well as the accumulation of evidence to deliver context-specific interventions aligned with the World Bank's strategies.	**Are persons with disabilities involved in the design, and is it reflected in the expected results?** *For example:*		
		Are community members with different genders and types of impairments consulted in the design process?	❏	❏
		Is the association, network, or cooperative of persons with disabilities consulted in the design process?	❏	❏
		Does the budget include provisions to enable support for transport or interpretation services to enable community members with disabilities to participate in meetings?	❏	❏
		Have specific objectives, outputs, and indicators been defined for children and adults with different genders and disability statuses? *For example:*		
		Does the assessment report show the different needs of children with different genders and disability statuses and measures taken in the community?	❏	❏
		Does previous planning and design consider how to accommodate different needs?	❏	❏
		Have approaches been defined for reaching girls and boys with different types of disabilities? *For example:*		
		Are girls and boys with different disability types included in collecting feedback related to school infrastructure?	❏	❏
		Are separate focus group discussions arranged for girls and boys with and without disabilities to obtain information on their challenges with school infrastructure?	❏	❏
		Have gender and disability-inclusive activities been identified based on the identified needs and barriers? *For example:*		
		Are there measures taken to ensure safety and accessibility to external and internal school facilities as well as to make all school water, sanitation, and hygiene facilities barrier free?	❏	❏
		Have gender and disability-targeted interventions been identified based on the identified needs and barriers? *For example:*		
		Is there a focal point who will follow up on the inclusion of children with different genders and disability statuses in all stages of the project cycle?	❏	❏
3.	**Implementation**			
	The implementation of gender- and disability-inclusive school infrastructure projects involves the participation of people with different genders and disability statuses in activities like capacity building, management committees, and community consultation or participation processes and ensuring that all project outputs are accessible to all, irrespective of their gender, age, and disability status.	**Have community members been sensitized on the importance of inclusive school infrastructure?** *For example:*		
		Have awareness-raising sessions been arranged for community leaders on the rights of persons with disabilities and inclusive school infrastructure?	❏	❏
		Have community members been sensitized or made aware of inclusive school infrastructure activities?	❏	❏

Appendix B. cont.

No.	Elements	Checklist Questions	Yes	No
3.	**Implementation (cont.)**			
		Are people with different genders and disabilities involved in consultation on school infrastructure?		
		For example:		
		Is there a quota or requirement in the project document or implementation plan that persons with disabilities are represented in the above activity?	❏	❏
		Is the representation of both women and men ensured?	❏	❏
		Are people with different genders and disabilities involved in school infrastructure assessments?		
		For example:		
		Is there a quota or requirement in the project document or implementation plan that persons with disabilities are represented in the above activity?	❏	❏
		Is the representation of both women and men ensured?	❏	❏
		Are people of different genders and disabilities involved in school infrastructure accessibility audits?		
		For example:		
		Is there a quota or requirement in the project document or implementation plan that persons with disabilities are represented in the above activity?	❏	❏
		Is the representation of both women and men ensured?	❏	❏
		Are people of different genders and disabilities involved in school infrastructure maintenance, etc.?		
		For example:		
		Is there a quota or requirement in the project document or implementation plan that persons with disabilities are represented in the above activity?	❏	❏
		Is the representation of both women and men ensured?	❏	❏
		Is school infrastructure designed to be accessible to persons with different types of disabilities?		
		For example:		
		Are school facilities designed to be accessible to community members with different types of impairments, including those with mobility impairments and visual impairments?	❏	❏
		Is geographical accessibility considered in the selection of sites?		
		For example:		
		Have community members with different genders and disability statuses been consulted when sites are selected?	❏	❏
4.	**Monitoring and evaluation**			
	Monitoring and evaluation of a gender- and disability-inclusive school infrastructure project, progress made, and impact on reaching persons with disabilities are useful to identify opportunities for learning both within school infrastructure and other cross-sectoral interventions, such as within gender, health, and disaster risk management sectors.	**Are people with different genders and with and without disabilities part of the monitoring and evaluation activities?**		
		For example:		
		Are people of different genders part of the project monitoring and evaluation team?	❏	❏
		Is disability inclusion part and parcel of the monitoring and evaluation report?		
		Are gender- and disability-disaggregated data included in the monitoring?		
		For example:		
		Do all event and activity reports include gender- and disability-disaggregated data on numbers of participants and/or beneficiaries?)	❏	❏

Appendix B. cont.

No.	Elements	Checklist Questions	Yes	No
4.	**Monitoring and evaluation (cont.)**			
		Are gender- and disability-inclusive indicators reported on?		
		For example:		
		Number of children with disabilities who are using school facilities	❏	❏
		Number of girls and boys that got direct access to school infrastructure	❏	❏
		Is knowledge about project beneficiaries (women, men, boys, and girls with and without disabilities) documented and shared?		
		For example:		
		Are beneficiaries with different genders and disability statuses interviewed for the production of case stories or profiles?	❏	❏

Sources: Original compilation based on Agarval 2020; IDDC, n.d.; and World Bank projects, various years.

Appendix C: School Infrastructure Elements to Address Different Types of Disabilities

Essential elements	Particulars	Details
Internal environment	Entry or exit	Ensure ease of use and entry or exit.
		Level, stepless, and wide gates and doors for children using mobility aids; marked by tactile indicators (pavers) for children with visual impairments.
	Ramps	A gentle slope (preferably 1:15 gradient) marked by firm and leveled surface; should have handrails on both sides and at two levels. Overhead shelter is a must in areas with adverse weather conditions.
	Stairs	Equal risers and handrails on both sides, with contrast color bands and tactile indicators on step edges.
	Corridors	Wide, well-lit, unobstructed, with antiskid flooring, ideally with two doors.
	Signage	Color-contrasted to the background wall; a combination of Braille, symbols, and large fonts; and strategically located.
	Doors	Wide, color-contrasted with the background wall.
		Wheelchair-accessible and at child-friendly reach height.
	Classrooms	Should have two doors and be well-lit, with adequate space for furniture rows and aisle space for ease of mobility aid users.
		Classroom acoustics should be suitable for children with hearing difficulties.
		Green boards instead of blackboards, at a child-friendly height.
	Desks and benches or chairs	Rounded corners to prevent injuries to children, child-friendly seating and table height, and adjustable as per need.
	Storage	At reach height of children, including wheelchair users and those of short stature, and strategically located without hindering their circulation areas.
	Windows	Without grills and wire mesh are preferred for use during an emergency evacuation. Should not create glare on green boards but provide sufficient light.
	Flooring	Leveled, without projections or threshold, and antiskid.
	Drinking water units	Stepless, multilevel taps are preferred and should have well-maintained drainage.
	Toilet blocks	Separate girls, boys, and accessible toilet cubicles; accessible cubicles should be wheelchair friendly and located near classroom blocks.
	Playgrounds	A firm and leveled approach path; should have resting benches with overhead shelter areas with accessible play equipment.
	Illumination	Evenly distributed in activity areas, including corridors and toilets. White incandescent light is preferred to yellow light.
	Lifts, tactile pavers, switches, door hardware, controls, and so on	Lifts are to be provided for multi-floor school buildings where there is no space available for ramps. Tactile pavers should be provided for people with visual impairments for way finding and highlighting change of level and hazards.

Appendix C. cont.

Essential elements	Particulars	Details
External environment	Accessible pedestrian paths	Upgrading and maintaining rural footpaths and roads used as footpaths. This includes maintenance activities such as scything down tall grass. Local schools can meet standards such as "Footpaths will be maintained up to at least 500 meters from the school."
	Safe roads crossing	Road safety measures such as refuge areas, road signs, traffic calming, signal crossings, STOP lines, and zebra crossing should be provided. Traffic signals should have audio beeper and audio announcement systems.
	School transportation	Accessible for all children with disabilities, reliable (available on time) and affordable.
Emergency evacuation		Early warning systems with both flashing lights and audio to use in emergencies. In the event of a fire, terrorist attack, or other emergency in schools, the absence of elements such as accessible exits, refuge areas, and alarms or warning systems with universal design can result in children with disabilities getting trapped and unable to evacuate.
Disaster risk management and resilience		Fire safety, security systems, and a good communication system. Implementation of school safety elements to reduce disaster risk should be provided, alongside accessible elements, which include setting up early warning systems and improving preparedness through mock drills, training, and awareness-raising.

Source: Adapted from Agarval 2020.

Appendix D: Insights and Recommendations on Gender- and Disability-Sensitive School Infrastructure from Case Studies

Gender- and disability-sensitive school infrastructure insights	1. **Infrastructure upgrades for accessibility**: Ensuring that school facilities are accessible to all children should include all types of disabilities, such as physical, developmental, intellectual, and others.
	2. **Gender-sensitive design:** Incorporating gender-sensitive features in school design—such as gender-segregated latrines and secure fencing—can greatly improve the safety and accessibility of educational environments for girls. This approach also encourages retention by providing a safer learning environment, particularly in regions with high rates of early marriage and pregnancy.
	3. **Provision of specialized resources, equipment, and materials**: Supplying schools with specialized computer equipment, furniture, and adapted teaching materials tailored to the needs of students with disabilities supports personalized learning and accommodates diverse learning needs and styles. This also includes physical modifications to school environments.
	4. **Development of resource classes**: Establishing resource classes in schools that are equipped with necessary adaptations and materials for inclusive education helps integrate children with disabilities into mainstream education while providing necessary specialized support.
	5. **Improving student-classroom ratio:** Expanding classroom capacity, whether by adding more classrooms or enlarging existing ones, can directly address issues of overcrowding. It is important to ensure that these new classrooms are inclusive and cater to the needs of all students, including specific provisions for girls. Additionally, considerations must be made for how these classrooms will be staffed to maintain a high quality of education. While expanding classroom capacity can significantly contribute to improving the learning environment, it is essential to acknowledge that multiple factors, such as inclusivity, teacher availability, and resource allocation, also play critical roles in this improvement.
	6. **Targeted infrastructure development:** Building and rehabilitating educational infrastructure in remote and conflict-affected areas can significantly enhance access to education, especially for girls and vulnerable groups, such as internally displaced persons and nomads. By reducing the distance students must travel to reach school, the project effectively addresses one of the major barriers to education.
Community engagement and beneficiary involvement	1. **Community-led needs assessment:** Utilizing a community-led approach to identify the specific needs for educational infrastructure is crucial. This method ensures that the solutions provided are directly relevant to the local context and are more likely to be supported and maintained by the community.
	2. **Involving target beneficiaries:** Target beneficiaries can provide useful inputs into the project design. Ensuring that the voices of girls and boys and children with disabilities are heard can lead to better-designed facilities.
	3. **Community engagement and participation:** Engaging the community, including parents, educators, and other stakeholders in the planning and implementation phases helps design interventions more aligned with their needs and are culturally appropriate. This practice also enhances community ownership and is particularly important in FCV contexts where trust may be low and local norms may significantly impact project success.
	4. **Changing community mindsets:** A focus on engaging communities in school infrastructure planning and maintenance helps change long-standing beliefs and gender stereotypes. By involving communities in the project, there is a greater chance of altering perceptions and increasing acceptance of girls' education.
	5. **Inclusive and transparent decision-making:** Engaging community members in the decision-making process, particularly in school site selection and management, fosters a sense of ownership and accountability.
Vulnerability analysis	1. **Robust needs assessment:** Conducting a thorough needs assessment to understand the specific challenges faced by vulnerable individuals and groups in education settings is crucial for the project success.
	2. **Addressing socioeconomic barriers:** Recognizing the broader socioeconomic conditions that affect the participation of children in education is important. This includes providing support for transportation, healthcare, and nutritional needs that may affect school attendance and performance.
	3. **Targeted support for disadvantaged districts:** Focusing on the most disadvantaged districts and tailoring interventions to meet their specific needs can lead to more effective outcomes. This approach ensures effective resource allocation for greater impact.
	4. **Needs-based school construction:** Prioritizing the construction of new schools in areas with high shares of vulnerable populations and disparities ensures that interventions directly address the most significant needs. This approach is crucial in rural areas where girls face higher obstacles to accessing education.

Appendix D. cont.

Capacity Building and Training	1. **Capacity building and training:** Offering capacity building and training programs for educators and other stakeholders in how to use inclusive teaching practices effectively is essential because they ensure that teachers are prepared to meet the diverse needs of their students, fostering an inclusive classroom environment. 2. **Training in accessibility:** Training should cover the use of specialized equipment, adaptation of teaching methods, and strategies for integrating children with various disabilities into mainstream classrooms.
Institutional support	1. **Development of national guidelines:** Creating a comprehensive set of guidelines that address the specific needs of boys and girls and children with disability ensures that inclusive practices are standardized and uniformly implemented across regions, providing a clear framework for schools to follow. 2. **Formation of a dedicated task force: Establishing a task force dedicated to the development and oversight of incl**usive education practices ensures focused attention to the needs of all children, regardless of their gender, age, or disability status. This group can continuously update and refine guidelines based on evolving needs. 3. **Inclusive policy framework:** Integrating the guidelines into the national education policy framework ensures that inclusive education becomes an integral part of the education system, supported by law and policy, thereby enhancing sustainability and reach. 4. **Government commitment and coordinated frameworks:** Securing full government commitment and coordinating efforts with external funding sources are crucial for the sustainability and scalability of inclusive education projects. A strong partnership between government bodies and international organizations ensures continuity and enhances the institutional capacity to support inclusive education.
Monitoring and Evaluation	1. **Use of specific, measurable indicators:** Establishing clear and measurable indicators to track progress is vital for assessing the impact of gender- and disability-focused interventions. 2. **Use of a mixed method approach:** Implementing a combination of quantitative indicators (such as enrollment rates and survival rates) and qualitative assessments (such as beneficiary satisfaction surveys) provides a comprehensive understanding of the project's impact. 3. **Focus on educational outcomes:** Linking infrastructure improvements directly to educational outcomes like increased enrollment, retention rates, and reduced dropout rates provides a clear picture of the project's success in enhancing educational opportunities, especially for girls. 4. **Comprehensive reporting and documentation:** Keeping detailed records and reporting on the project's progress and outcomes helps in evaluating effectiveness and can serve as a blueprint for similar future projects. 5. **Third-party monitoring:** Employing third-party monitoring to oversee construction quality and compliance with design specifications ensures that the infrastructure meets the intended standards and is fit for purpose. This accountability mechanism is critical to maintaining trust and verifying the effectiveness of the implemented measures.
Learning and Knowledge Sharing	1. **Sharing of knowledge:** Documenting successes, challenges, and lessons learned throughout the project lifecycle and sharing insights can guide future projects and contribute to broader knowledge on effective gender- and disability-sensitive interventions. 2. **Documenting failures:** Documenting failures and practices that did not work and sharing them broadly can help other teams to avoid critical errors and reallocate resources more efficiently for greater impact.
Resilience and Sustainability	1. **Rapid-response mechanisms:** Employing flexible and rapid-response strategies, as outlined in the World Bank's crisis response guidelines, enables effective interventions even in unstable and unpredictable environments, such as emergencies and ongoing conflicts. 2. **Climate-resilient construction:** Implementing building designs and construction techniques that are resilient to local climate challenges, such as cyclones and floods, should include the use of appropriate materials and standards that ensure the longevity and safety of school infrastructure. 3. **Integration of water systems:** Including rainwater harvesting and storage systems in school designs not only provides a sustainable water source but also ensures the availability of clean water vital for hygiene and helps increase girls' attendance rates. 4. **Scalability and sustainability:** Designing interventions that can be scaled up and sustained over time is critical. Building facilities that are low-cost and easy to maintain ensures that the project's benefits continue long after the initial investment. 5. **Inclusive design and resilience:** Designing school infrastructure that is not only resilient to environmental threats but also inclusive of gender- and disability-sensitive features is essential 6. **Conflict-sensitive approach:** Implementing educational projects in conflict-affected areas requires careful consideration of safety and accessibility.

Source: Original compilation based on case study analysis.