ANNEX IV - EDUCATION

A. INTRODUCTION

1. The ocean waves that swept over the coastal areas of Sri Lanka on December 26, 2004 damaged 168 schools, 4 universities and 18 vocational training and industrial training centers. About 80,000 students, 330 teachers and 50 principals were directly affected by the tsunami. In addition, many more children, teachers and principals in the coastal areas are likely to have suffered psychological trauma, although this is more difficult to measure and quantify. Also, camps were set up in about 275 schools to provide temporary shelter for displaced individuals. The following ADB-JBIC-WB needs assessment analyzes the damage to the capital stock of the education system and the strategy of the Government of Sri Lanka (GOSL), donors and other stakeholders to rebuild and restore the damaged education system in the Tsunami-affected areas.

B. ASSESSMENT MATERIALS, CONSULTATIONS AND SITE VISITS

2. GOSL provided a preliminary estimate of the cost of the damage to the education team. This estimate was based largely on information provided by provincial and zonal education officials in the relevant areas. The estimate is currently being verified and refined by a team of engineers and architects under the leadership of the University of Moratuwa. The assessment team visited and interacted with officials from the Ministry of Education (MOE), Ministry of Finance and Planning (MOF), and provincial and zonal education officials, especially in Ampara and Hambantota. The team also held discussions with other potential donors, including Germany and UNICEF.

C. OVERVIEW OF DAMAGE TO EDUCATION ASSETS

Table 1. Summary of Damage to Schools, Universities and Vocational Training and Technical Education Institutions

Education and Training Institutions	Number damaged	Estimated cost of damage LKR million ($ million)
Schools	168	2,342($21.00)
Universities	4	49 ($0.44)
Vocational and Technical Institutions	18	300 $(2.70)
Total	190	2,691 (24.14)

Source: mission estimates, based on preliminary information from MOE and MOF.

Note: The assessment concentrates only on public schools, as about 97% of enrolment is in public schools. Also, schools often cover both primary and secondary grades, so no distinction is made between primary schools and secondary schools.

3. The total cost of the damage to the education capital stock, according to preliminary estimates, is approximately LKR 2.3 billion ($21 million). The major proportion of damage has been to primary and secondary schools, which account for over 90 percent of institutions damaged and about 92 percent of the estimated cost. Buildings in about 59 schools have been completely destroyed. Further, according to the MOE, around 91 schools which have been destroyed or damaged and are located too close to the seashore may have to be relocated and reconstructed. The damage to schools includes

school buildings, equipment, machinery and tools, furniture, books and other library resources, and consumable teaching materials such as chemicals, chalk and white-board pens. Universities have suffered damage to lecture halls, administration buildings and hostels. Vocational training and technical education institutions have experienced damage to lecture halls, workshops, equipment, machinery and tools, and residential facilities.

Table 2. Summary of Damage to Schools by District

District	NO. of Damaged Schools	Preliminary Cost of Damaged Schools LKR million ($ million)
Hambantota	6	66(0.6)
Matara	11	196(1.7)
Galle	22	378(3.4)
Kalutara	6	89(0.8)
Gampaha	2	40(0.4)
Batticaloa	33	409(3.7)
Ampara	38	697(6.3)
Trincomalee	27	285(2.6)
Mullativu	11	71(0.6)
Jaffna	12	110(1.0)
Total	168	2,342(21)

Source: mission estimates, based on preliminary information from MOE and MOF.

4. The regional pattern of destruction shows that the largest number of schools damaged has been in the Ampara district (38 schools), followed by Batticaloa (33 schools), Trincomalee (27 schools) and Galle (22 schools). Also in terms of costs, the Ampara district is the worst affected, with about LKR 697 million ($6.3 million) worth of damage, followed by Batticaloa with LKR 409 million ($3.7 million) of damages, followed by Galle with LKR 378 million ($3.4 million) of damages and Trincomalee with LKR 285 million ($2.6 million) of damages. Nearly all public schools operate in a matrix management structure between the Ministry of Education and the Provincial Councils.

5. Universities located in four districts, Matara, Batticaloa, Ampara and Jaffna have also suffered damage, with Jaffna Univesity suffering the worst damage in terms of cost. These universities had played a key role in fostering academic excellence in regions with a history of conflict. However, it should be noted that these universities are mapped to the central university grants commission, and do not report to any regional administration.

D. OTHER OBSERVED IMPACTS

6. Other impacts of the tsunami can be observed, but are hard to measure and quantify. Students, teachers, principals, university academics and education administrators have clearly suffered serious psychological trauma, and physical and social losses. Over the short and medium term, considerable counseling will be required, especially among students who have lost family members and in schools which have suffered large losses. In addition, the special learning needs of such children will have to studied, and appropriate remedial teaching introduced to schools. This, in turn, will require training of teachers in the special learning needs of traumatized children.

7. The loss of time spent in classroom learning is also an important loss of output. This is especially serious in grade 11 and 13, where students are preparing to sit the General Certificate of Examinations Ordinary Level (GCE O/L) and the General Certificate of Examinations Advanced Level (GCE A/L). These are certifying examinations, as well as selection examinations for various types of vocational training, technical education and, at the GCE A/L stage, for university entrance. The damaged schools, as well as schools used as relief centers, have not been able to commence the academic year on schedule. This places students in these schools at a clear disadvantage in sitting for these examinations.

E. RECONSTRUCTION AND RECOVERY NEEDS

8. Clearly, the most urgent need is to repair schools, universities and vocational training and technical education institution wherever possible. All universities can be repaired immediately, as the extent of damage is fairly minor. The financial requirement to repair universities is only LKR 49 million ($0.44 million). In addition, undamaged schools being utilized as relief centers for displaced individuals need to be cleared and school recommence as quickly as possible. Where reconstruction of other education institutions is likely to be delayed, either due to the extent of damage suffered or the need to relocate the school/training institution to a new location, alternative arrangements need to be made to accommodate such students in other institutions, and where this is not possible by providing temporary shelters to conduct lessons. The provision of temporary shelters to facilitate schooling is estimated to cost about LKR 20 million ($0.2 million). Clearing and repairing schools that are currently being used as welfare camps and preparing them for academic instruction again is estimated by GOSL to cost LKR 1,375 million ($12 million), although this figure appears very high, and it is likely that these schools can be cleaned and repaired at a fraction of this cost. Revising this cost estimate to a more realistic level is an urgent priority, and MOE is undertaking this task.

9. Over the medium term, the destroyed or badly damaged schools need to be rebuilt. This will involve reconstructing or building new classrooms, science laboratories, libraries, aesthetic units, administration blocks, and furnishing and equipping such facilities with appropriate technology, machinery and tools, and books and providing basic services, such as electricity, water and sanitation. School will also need basic protection, such as gates and walls. The cost of a basic package of such buildings, facilities, furniture, equipment and services would be about LKR 3,903 million ($35 million).

10. Repairing vocational training and technical education institutions would involve rebuilding lecture rooms, workshops, administration buildings. In addition, furniture, equipment, machinery and tools would have to be supplied to these facilities. The cost of a basic rebuilding package is estimated at about LKR 300 million ($2.7 million).

F. PROPOSED RECOVERY ASSISTANCE STRATEGY

11. The Government of Sri Lanka is in the process of developing its recovery strategy. First, GOSL plans to repair and restore 77 schools, 4 universities and 18 vocational training and technical education institutions that have suffered damage and can be reconstructed in their current locations. The 77 schools would not merely be repaired according to their previous type plans and original state, but would also be upgraded according to the modern education quality norms and standards developed by MOE as part of its new Education Sector Development Framework and Program (ESDFP), which the World Bank will support through an education sector development programmatic credit commencing in 2006. Similarly, the 18 vocational training and technical education institutions would be upgraded with modern workshops, equipment and technology, to prepare students for the world of work in a technologically advanced, global economy. The four universities, however, which have largely suffered damage to their dormitories and lecture halls, would be chiefly repaired to their original state.

12. Second, GOSL plans to shift 91 damaged schools from their current vulnerable locations by the sea to safer ground further inland. This would involve the construction of these schools in new locations. Care will need to be taken to ensure ethnic sensitivity while relocating schools with a certain ethnic identity inland where the demographic ratio might well be different. These 91 schools would be also constructed according to the modern education quality norms and standards developed by MOE as part of ESDFP. The ESDFP envisages the construction of child-friendly classrooms in primary grades and classrooms in secondary grades that facilitate active learning. In addition, secondary schools are to receive fully equipped computer learning centers, science laboratories, libraries, agriculture units, home science rooms, multi-media units, facilities for aesthetic studies such as music, art and dancing, and vocational and technical rooms. In addition, all primary and secondary schools would have a full set of basic facilities and services, such as water supply, sanitation, electricity, administrative blocks, and access roads, gates and fences.

Short Term Recovery

13. GOSL, as part of its strategy to restore normalcy and routine, has commenced the school year wherever possible. Textbooks and basic educational kits have been supplied to affected schools with assistance from UNICEF. In addition, trauma counselors have been trained to identify and treat traumatized children and teachers. Schools which are presently used as refugee centers are to be opened as soon as alternative arrangements have been made to house the refugees. Schools that commence late will seek to catch up through double shifts and extended working hours. Cost estimates of school reconstruction and restoration are being refined and fine tuned, while estimates of damage to universities have been completed.

Medium to Long Term Reconstruction

14. There are a sequence of steps required, depending on whether education institutions can be rebuilt on their current locations or in new locations.

15. The 77 schools, 4 universities and 18 vocational training and technical education institutions that can be rebuilt in their current locations require the following activities. First, school sites need to be cleared and cleaned, so that work can commence as soon as possible. Second, reconstruction plans have to be drawn and detailed cost estimates produced, so that tenders can be invited. Sites and locations for upgrading facilities to improve education quality, such as computer learning centers, libraries and science laboratories, also need to be identified. Third, tenders need to be awarded for school reconstruction and expansion and upgrading of facilities. Fourth, the equipment, technology, machinery and tools required for the upgraded education quality development facilities need to be identified, specifications developed and tenders called at the appropriate time, so that the equipment can be delivered when the physical facilities are ready. Finally, school furniture and books need to be purchased, again in time for the completion of the new buildings and libraries.

16. The 91 new schools to be constructed needs to follow a similar implementation plan. First, school sites need to be identified. GOSL owns over 80% of the land in the country. Hence, GOSL is encouraged to use state-owned land for new schools if relocation is needed, rather proceeding through financially and socially costly vesting procedures. Second, alternative arrangements need to be made for the education of the children of these schools while the new buildings are under construction. Third, new construction plans have to be drawn and detailed cost estimates produced, so that tenders can be invited. These plans need to include upgraded facilities to improve education

Table 3. District-Wise Summary of Schools Reconstruction, With Quality Upgrading

District	Number of Damaged Schools	Basic Reconstruction Cost LKR million ($ million)	Reconstruction Cost with Quality Upgrade LKR million ($ million)
Hambantota	6	66(0.6)	124(1.1)
Matara	11	196(1.7)	334(3.0)
Galle	22	378(3.4)	720(6.5)
Kalutara	6	89(0.8)	139(1.3)
Gampaha	2	40(0.4)	67(0.6)
Batticaloa	33	409(3.7)	644(5.8)
Ampara	38	697(6.3)	1,192(10.8)
Trincomalee	27	285(2.6)	544(4.9)
Mullativu	11	71(0.6)	123(1.1)
Jaffna	12	110(1.0)	232(2.1)
Total	168	2,342(21)	4,118(37)

Source: mission estimates, based on preliminary information from MOE and *MOF*.

quality, such as computer learning centers, libraries, science laboratories, home science units, aesthetic units and agriculture rooms. Fourth, tenders need to be awarded for new school construction, with expanded and upgraded facilities. Fifth, the equipment, technology, machinery and tools required for the upgraded education quality development facilities need to be identified, specifications developed and tenders called at the appropriate time, so that the equipment can be delivered when the physical facilities are ready. Sixth, school furniture and books need to be purchased, again in time for the completion of the new buildings and libraries. Finally, a system of appointments and transfers of teacher, principals and other school staff needs to be instituted, to ensure that the newly constructed schools are adequately staffed and operational.

Table 4. Short and Medium-Term Requirements for Reconstruction with Quality Upgrading

Education and Training Institutions	Short-Term	Medium-Term	Total
Schools	1,118(10)	3,000(27)	4,118 (37)
Universities	49 (0.44)	-	49 (0.44)
Vocational and Technical Institutions	150(1.3)	350(3.2)	500(4.5)
Total	**1,317 (12)**	**3,350 (30)**	**4,667 (42)**

17. The cost of reconstructing schools and vocational training and technical education institutions with quality upgrading, and restoring the damaged universities, is estimated to be about LKR 4.7 billion ($42 million). The largest share of these funds, 88%, would be used to upgrade the quality of schools. In terms of district-wise shares, the Ampara district, followed by Galle, Batticaloa and Trincomalee would receive the largest benefits from quality upgrading of schools.

18. An important issue arises in the plan to relocate 91 schools. Schools should only be relocated in line with predicted enrolment patterns flowing from the relocation of the population from which these students are drawn. If such population relocation does not occur, relocating schools should be undertaken with great caution so that children are not denied access to schools. Further, if new land is required for relocated schools, as far as possible the government should utilize state land for the new school sites. This would reduce costs, eliminate lengthy and complicated vesting processes, and forestall the need for social and environmental assessments prior to donor financing of school reconstruction activities.

19. As evident from the post tsunami response and other localised disasters such as the 2003 floods, schools are often used to shelter affected population until other solutions are developed. This is a cost effective approach and in many countries, schools doubled as emergency rescue shelters as part of the local disaster preparedness plans. Additional design and construction standards need to be developed to accommodate large populations over a period of time and to ensure the survival of these buildings in the even of a disaster. International exchange of experiences should also be encouraged on these standards.

20. Resources for the reconstruction could come from several donors, including the World Bank, ADB, JBIC/JICA, donors from the UN system, and bilateral partners. Finally, it is vitally important that reconstruction of all schools, universities and training institutions should be implemented, as far as possible, within the appropriate central and provincial structures of the MOE and Provincial Education Authorities.