

Free Basic Education Strategy Development

Volume 4

Financing Projections to 2020 for Implementation of Free Basic Education



**The Education Sector Analytical And Capacity Development Partnership
(ACDP)**

Free Basic Education Strategy Development

Volume 4

Financing Projections to 2020 for Implementation of Free Basic Education

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The Government of Indonesia (represented by the Ministry of Education and Culture, the Ministry of Religious Affairs and the Ministry of National Development Planning/ BAPPENAS, the Australian Agency for International Development (AusAID), the European Union (EU) and the Asian Development Bank (ADB) have established the Analytical and Capacity Development Partnership (ACDP) as a facility to promote policy dialogue and institutional and organizational reform of the education sector to underpin policy implementation and help reduce disparities in provincial and district education performance. The facility is an integral part of the Education Sector Support Program (ESSP) which consists of EU sector budget support with agreed arrangements for results-led grant disbursement, and earmarked policy and program-led AusAID sector development grant support consisting of a school infrastructure program, a nationwide district and school management development program and a program to accelerate the GOI's accreditation of private Islamic schools. This report has been prepared with grant support provided by AusAID and the EU through ACDP.



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- Attachment 2: Tool to calculate a series of scenarios in the personnel budget calculations required in the implementation of the MSS.
- Attachment 3: Tool to calculate the non-personnel operating costs per-pupil in the school / madrasah with a different number of students enrolled

This document is Volume 4 from the Free Basic Education Strategy Development. The full report comprises nine volumes:

- Volume 1. Final Report
- Volume 2. Free Basic Education Conceptual Framework
- Volume 3. Analysis of School Operational Funds
- Volume 4. Financing Projections To 2020 For Implementation Of Free Basic Education
- Volume 5. Survey Of Parental Contributions In Basic Education
- Volume 6. Human Resource And Institutional Capacity Development Strategy To Support Implementation Of Free Basic Education Report
- Volume 7. Support for poor families in meeting the personal costs of basic education
- Volume 8. Accountability framework
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LIST OF ABBREVIATION

ACDP	Analytical and Capacity Development Partnership
ADB	Asian Development Bank
AusAID	Australian Agency for International Development
Bappeda	Regional Agency for Development Planning (Badan Perencanaan Pembangunan Daerah)
Bappenas	National Agency for Development Planning (Badan Perencanaan Pembangunan Nasional)
BOS	School Operations Funds (Bantuan Operasional Sekolah)
BSM	Scholarships for Poor Students (Bantuan Siswa Miskin)
EMIS	Education Management Information System
FBE	Free Basic Education
FGD	Focus Group Discussion
Gol	Government of Indonesia
HLTWG	High Level Technical Working Group
MI	Primary Madrasah (Madrasah Ibtidaiyah)
MoEC	Ministry of Education and Culture
MoF	Ministry of Finance
MoHA	Ministry of Home Affairs
MoRA	Ministry of Religious Affairs
MSS	Minimum Service Standards
MTs	Junior Secondary Madrasah (Madrasah Tsanawiyah)
NES	National Education Standard
TNP2K	National Team for Accelerating Measures for Countering Poverty
SD	Primary School (Sekolah Dasar)
SMP	Junior Secondary School (Sekolah Menengah Pertama)
SNP	National Education Standards (Standar Nasional Pendidikan)
SUSENAS	National Socio-Economic Survey (Survei Sosial Ekonomi Nasional)
ToR	Terms of Reference

1. INTRODUCTION

This paper forms a part of the work of ACDP 006 project on *Free Basic Education Strategy Development*. The Terms of Reference (ToR) of ACDP 006 specify the following development objectives, purpose and results for the project.

Development Objectives

The development objectives of the support to Free Basic Education Strategy Development are to contribute towards achieving medium to long term social and economic national development goals through the development of effective policies, strategies and programs for implementation of Free Basic Education in Indonesia.

Purpose and Results

The purpose of the support to Free Basic Education Strategy Development is to develop a comprehensive implementation strategy for free basic education. The intended results are therefore more effective policies, strategies, systems, financing, and capacity which will ensure that all children of primary and junior secondary school ages are able to access schooling that at least complies with the Minimum Service Standards for Basic Education.

The ToR of ACDP 006 specifically requires the consultancy team to develop:

Financing Projections to 2015 and 2020 for Implementation of Free Basic Education (including explanatory narrative with assumptions).

2. STRUCTURE OF THIS PAPER

The ToR asks the consultancy team to provide financial projections over the period of two of Indonesia's five-year plans, the first ending in 2015 and the second in 2020. This work has been done in two main parts. The first is the identification, to the extent allowed by available data sources, of the budget gap between the current situation and one where all Indonesian mainstream providers of basic education meet at least the Minimum Service Standard (MSS) level. The second part focuses on projecting the budget needs to the year 2020, with the calculations demonstrating a range of policy option scenarios.

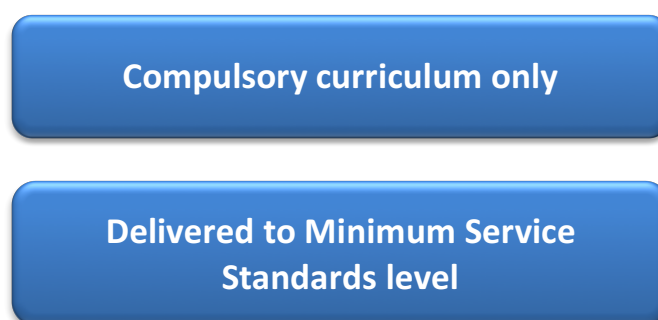
The budget calculations are presented in four categories of expenditure:

- Capital
- Personnel
- Operational non-personnel
- Personal

3. CONCEPTUAL FRAMEWORK OF THE FINANCIAL PROJECTIONS

The financial projections are calculated to demonstrate a range of possible scenarios of funding basic education, but are primarily based on the Conceptual Framework of Basic Education. The ACDP 006 paper *The Conceptual Framework of Basic Education* explains in detail the arguments for this particular shape of the framework. In summary, the framework can be represented as per Illustration 1, below.

Illustration 1. The draft free basic education framework



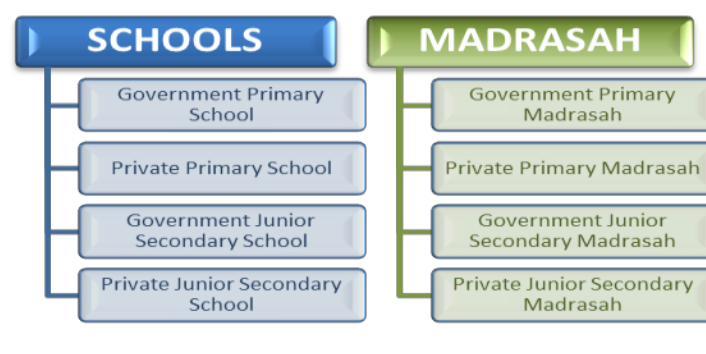
Funding System Government Responsibility	
Govt. School/Madrasah	Private School/Madrasah
<u>Capital expenditure</u> Both major and minor	<u>Capital expenditure</u> <ul style="list-style-type: none"> - Government funding for additional classrooms where this is a more efficient option. - Assistance with building of specialist facilities such as laboratories in private SMPs/MTs's which are essential to the delivery of the compulsory curriculum to MSS level. - Repairs of classrooms where the foundation running the school cannot afford to do it. - Provision of minor capital equipment to MSS level.
<u>Personnel</u> Wages and either functional or professional allowance	<u>Personnel</u> Functional or professional allowance to staffing levels consistent with MSS.
<u>Operational Non-personnel</u> Sufficient for the delivery of the compulsory curriculum at the lowest possible cost.	<u>Operational non-personnel</u> Sufficient for the delivery of the compulsory curriculum at the lowest possible cost.
<u>Personal Cost</u> Assistance to poor families by provision of scholarships.	<u>Personal cost</u> Assistance to poor families by provision of scholarships.

4. CAPITAL EXPENDITURE

The approach to quantifying the capital budget gap between the current situation and all mainstream schools/madrasahs achieving Minimum Service Standards (MSS)

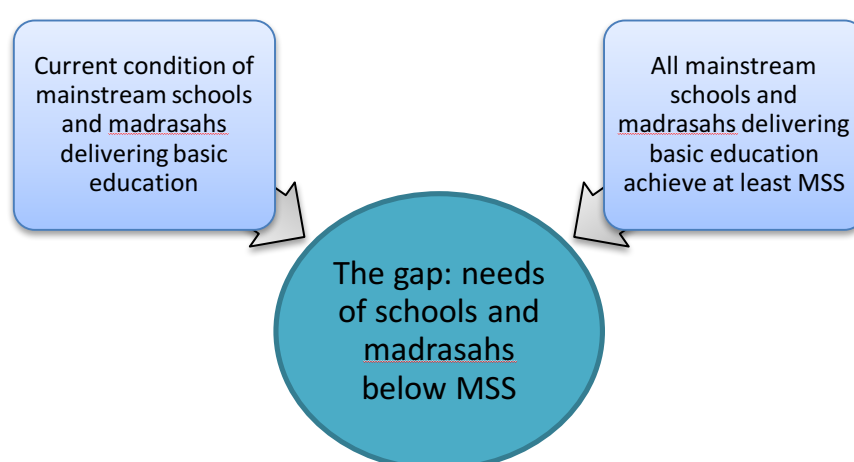
The objective was to identify the funding required for all mainstream schools/madrasahs in Indonesia which deliver basic education programs to achieve MSS in capital budget items, and as the second step, to project the costs required to the year 2020. The schools and madrasahs involved are presented in Illustration 1, below.

Illustration 2. Schools and Madrasahs Included in the Costing Analysis



Only schools and madrasahs which are categorised as "mainstream" or "normal" are included in this calculation. Facilities providing basic education programs in extremely remote locations cannot be encompassed in this scope of work, and special schools and one-roof schools are also excluded. The reasons for this decision include budgetary limitations of the project, and the fact that some of the data used in the analysis are based on data collected during the 2010 MSS survey, which made similar exclusions.

Illustration 3. Gap between present situation and achievement of MSS (capital budget items)

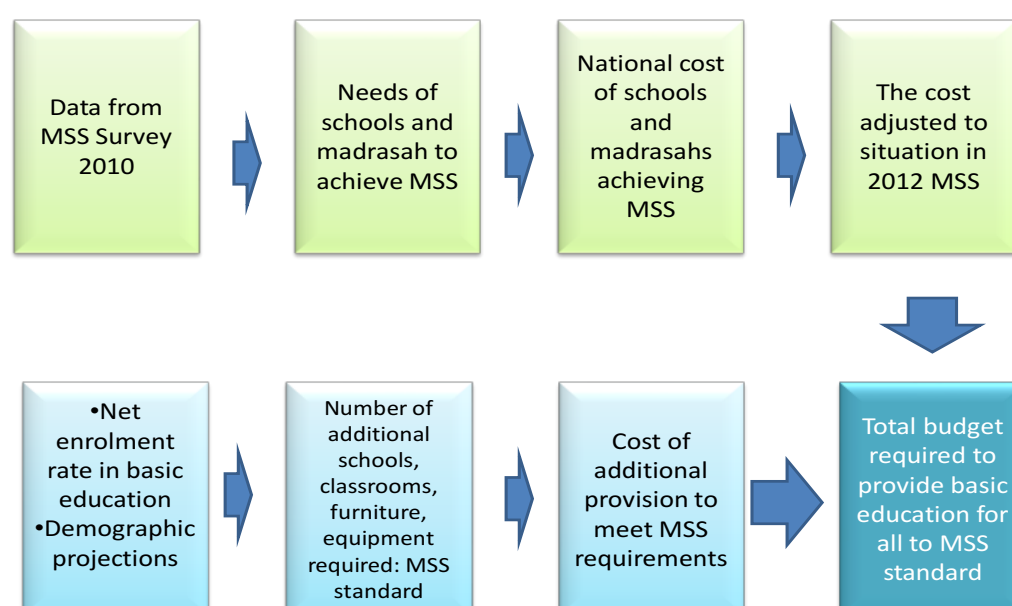


The calculation of the gap was done in two key stages. The first utilised mostly data from the 2010 MSS survey, and calculated the cost of the gap identified by the survey. The survey's sample of 3,966 primary and 1,248 junior secondary schools and madrasahs, both government and private, is regarded as adequately representative of Indonesia's basic education sector. For a number of MSS indicators, it is the only available data set which identifies the degree to which Indonesia's basic education providers meet MSS requirements. Where the MSS survey data is used, the gap identified by the survey is extrapolated to national level and then quantified in rupiah of current value, i.e. 2012. Where more

recent and/or more reliable data is available from government sources, that data is utilised in preference or as supplementary to the survey data.

The second key stage of the calculation concerns broadening the access to basic education, ensuring that it is available at MSS level to all Indonesian children. The calculation of costs in this stage involves the identification of changes in the size of the cohort of students undertaking basic education, per year level, and the assumption that the net school participation rate reaches 100%. The cohort of students used for this stage of the calculation is the cohort which will be in basic education in 2014. Demographic trends used in the calculations are derived from the national census data and from data held by MoEC and MoRA. The two key stages of calculating the cost of all Indonesian providers of basic education achieving MSS level in capital budget items are represented in Illustration 3, below.

Illustration 4. The approach to calculating the gap between current situation and achievement of MSS in capital budget items



5. CALCULATING THE COST OF BRINGING UP TO MSS STANDARD THE EXISTING SCHOOLS AND MADRASAHS WHICH IN 2010 WERE NOT AT MSS STANDARD IN RELATION TO CAPITAL BUDGET ITEMS. PART A: PRIMARY SCHOOLS/MADRASAH

The calculations provided below, except where otherwise indicated, are based on the data gathered by the 2010 MSS survey, extrapolated to national level. The cost base used, unless otherwise specified, is the cost as measured in Jakarta in 2012. The budgets provided below, unless otherwise indicated, show the cost of bringing up to MSS standard those schools and madrasahs which were not at that standard in 2010 in the area of capital budget items.

(1) Addition of primary schools

Data to calculate the need for additional primary schools in Indonesia is not available. For an accurate calculation very detailed information is required about student numbers and locations, and about school locations and capacities. Advice from MoEC is that some additional primary

schools are needed in very densely populated areas such as Jawa and parts of Sumatera. MoEC is currently undertaking some field work in relation to this issue, but no results of this work are available at this time. The net participation rate for primary education was already 95.41% in 2011, indicating that the proportion of additional primary education facilities required may not be large. Nevertheless, the very large numbers of schools and students in Indonesian primary education mean that the cost of providing the required additional primary schools, although low in terms of percentage, can be substantial in terms of cost. It is also likely that some additional primary education facilities are needed in very remote areas where student populations are highly dispersed. Although the number of such required facilities is likely to be small, each unit could be expensive because of the remoteness of locations.

Cost:

- Not able to be calculated but likely to be substantial.

(2) Addition of primary classrooms to existing schools/madrasahs.

Data from the MSS survey shows that the ratio of students to primary classrooms is 28.6:1, around 10% below the MSS requirement of 32:1. Without additional local data sets which are not available, it is not possible to ascertain to what extent students currently in classes with more than 32 students can be reallocated to schools/madrasahs which have fewer than 32 students in a class. It is therefore not possible to calculate how many additional primary classrooms will be needed across Indonesia.

Cost:

- Not able to be calculated.

(3) Repair of primary classrooms

In 2012, MoEC identified 150,317 primary school classrooms in need of major repairs. Funds were provided in 2011 to repair 18,000 of these classrooms and MoEC plans to fund the repairs of all the remaining classrooms by the end of 2012. MoRA has identified 5194 primary madrasah classrooms in 17 provinces as needing major repairs, and plans to fund all these repairs from the 2012 budget. According to the MSS survey, there were 6,530 primary madrasah classrooms (749 government and 5781 private) in need of major repairs in all of Indonesia. Subtracting the 5194 classrooms which MoRA plans to repair in 2012 leaves 1,336 very damaged classrooms to be repaired (153 government and 1,183 private). The cost of repairing a very damaged classroom, including replacing the furniture and blackboard, is an average of Rp 89,000,000. The cost of repairing the very remaining damaged madrasah classrooms calculates at Rp 118,904,000,000.

The MSS survey shows that in 2010, 67,638 classrooms in primary schools (49,917 government and 18,441 private) and 19,057 classrooms in primary madrasahs were in need of minor repairs. Data for minor and medium repairs in MoEC is not available at this stage. Since 2010, no central government funds have been provided for repairs of classroom in these categories. Current data from MoRA shows that 35,203 classrooms in primary madrasahs are in need of minor or medium repairs (2,730 government and 32,473 private). With an average cost of Rp 42m per classroom, this calculates at Rp. 2,840,796,000,000 for schools and Rp 1,478,526,000,000 for madrasahs..

Cost:

- Rp 118,904,000,000 for major repairs to primary madrasah classrooms.
 - Rp 13,617,000,000 (government) Rp 105,287,000,000 (private).
- Rp 2,840,796,000,000 for minor repairs in primary school classrooms.
 - Rp 2,066,274,000,000 (government) Rp 774,522,000,000 (private).
- Rp 1,478,526,000,000 for minor repairs to primary madrasah classrooms.
 - Rp 114,660,000,000 (government) Rp 1,363,866,000,000 (private).

(4) Provision of student desks and chairs

The survey identified that 82,260 primary school classrooms and 9,016 primary madrasah classrooms did not have an adequate number of student desks and chairs. Usually, when very damaged classrooms are rehabilitated, they are at the same time provided with new furniture. The price of the new furniture is included in the average cost of the rehabilitation, as provided above. Consequently, the cost of providing additional student classroom furniture is calculated by subtracting the number of classrooms needing major repairs from the total number of classrooms needing student furniture, as identified by the survey. This calculates at 2486 madrasahs needing student classroom furniture. MoEC is in the process of rehabilitating classrooms which are greater in number than the number of classrooms the survey identified as needing furniture, therefore removing the need for a budget in this area.

The survey did not identify how many desks and chairs were missing from each of the classrooms which did not have an adequate number. The cost of providing a desk is Rp 200,000 and a chair Rp 100,000. The cost of providing one desk and chair for each identified primary madrasah classroom is therefore Rp 745,800,000. Estimating an average shortage of 5 desk/chair sets per classroom provides a sum of Rp 3,729,000,000 for madrasahs.

Cost:

- Rp 3,729,000,000 for additional student desks and chairs in primary madrasah classrooms.
 - Rp 706,456,681 (government) Rp 3,022,543,319 (private).

(5) Provision of a blackboard for each primary classroom

Extrapolating data from the MSS survey to national level shows that 13,606 blackboards needed to be purchased for primary schools and 2,915 for primary madrasahs. These numbers are lower than the numbers of very damaged classrooms which will be repaired, and provided with a new blackboard. No additional budget is required for blackboard replacement.

Cost:

- None required.

(6) Provision of a teachers' room in each primary school/madrasah

The MSS survey shows that 13,105 schools (11,748 government and 1,357 private) and 2,875 madrasah (20 government and 2855 private) were in need of such rooms. At Rp 120m per room, the cost amounts to Rp 1,572,600,000,000 for primary schools and Rp 345,000,000,000 for primary madrasah.

Cost:

- Rp 1,572,600,000,000 for additional teachers' rooms in primary schools.
 - Rp 1,409,760,000,000 (government) Rp 162,840,000,000 (private).
- Rp 345,000,000,000 for additional teachers' rooms in primary madrasahs.
 - Rp 2,400,000,000 (government) Rp 342,600,000,000 (private).

(7) Provision of a desk and chair for each teacher, principal and ancillary staff member in the teachers' room

In 2010, the shortage of teachers' desks and chairs in primary schools was 367,933 (348,998 government and 18,935 private) and in primary madrasah 51,614 (964 government and 50,690 private). At a cost of Rp 250,000 per desk and Rp 150,000 per chair, this calculates at Rp 147,133,200,000 for primary schools and Rp 20,661,600,000 for primary madrasahs.

Cost:

- Rp 147,133,200,000 for additional teachers' desks and chairs in primary schools.
 - Rp 139,599,200,000 (government) Rp 7,534,000,000 (private).
- Rp 20,661,600,000 for additional teachers' desks and chairs in primary madrasahs.
 - Rp 385,600,000 (government) Rp 20,276,600,000 (private).

(8) Provision of a set of science teaching aids in each primary school/madrasah consisting of a model of a human skeleton, human body, a globe, example of optical equipment, basic science experiment kit, and science poster/chart

The MSS survey noted the percentage of primary schools/madrasahs which had each of the five items of science practical equipment, below. The results are tabulated below, and the cost to ensure all of the schools/madrasahs have a full set of the equipment is calculated.

Table 1. Cost of Required Science Equipment in Primary Schools/Madrasahs

Education Unit	Skeleton	Body model	Optical Equipment	Basic Experiment Kit	Poster	Globe	Cost required (RP)
Primary school							
Gov	21.34%	26.12%	25.29%	24.71%	31.30%	42.38%	706,102,000
Priv	28.29%	32.96%	34.52%	30.73%	39.20%	49.22%	61,976,000
Primary madrasah							
Gov	22.73%	22.73%	18.18%	18.18%	25.00%	38.64%	9,578,000
Priv	15.14%	14.51%	18.61%	15.46%	21.77%	35.65%	124,199,000
TOTAL						Rp 839,879,000	
Cost per item	1,270,0000	2,220,000	1,850,000	1,760,000	90,000	1,030,000	

Cost:

- Rp 768,078,000 for additional science equipment for primary schools.
 - Rp 706,102,000 (government) Rp 61,976,000 (private).
- Rp 133,777,000 for additional science equipment for primary madrasahs.
 - Rp 9,578,000 (government) Rp 124,199,000 (private).

(9) Provision of 100 enrichment and 10 reference books for each primary school/madrasah

The percentage of primary schools/madrasahs which met the MSS requirement for enrichment and reference books is provided below.

Table 2. Percentage of primary schools/madrasahs with the MSS required number of enrichment and reference books.

Type of school or madrasah	Percentage which met the requirement	
	100 enrichment books	10 Reference books
Govt primary school	16.87%	37.08%
Private primary school	15.81%	41.87%
Government primary madrasah	23.86%	45.45%
Private primary madrasah	11.04%	25.87%

The cost of providing the additional enrichment and reference books in primary schools and madrasahs is as per Table 3, below.

Table 3. Cost of additional enrichment and reference books required to ensure all primary schools/madrasahs meet the MSS standard

TYPE OF SCHOOL/ MADRASAH		Number of additional books required		Total Cost (Rp)
		Enrichment books at Rp 20.000 per book	Reference books at Rp 50.000 per book	
Gov primary school	No of books required	9,845,172	770,666	
Private primary school	Cost	196,903,440,000	38,533,300,000	235,436,740,000
Private primary school	No of books required	922,482	68,108	
	Cost	18,449,640,000	3,405,400,000	21,855,040,000
	Total cost for primary schools	235,436,740,000	41,938,700,000	277,375,440,000
Gov primary madrasah	No of books required	114,642	7,157	
-	Cost	2,292,840,000	357,850,000	2,650,690,000
Private primary madrasah	No of books required	1,719,073	129,871	
	Cost	34,381,460,000	6,493,550,000	40,875,010,000
	Total cost for primary madrasahs	36,674,900,000	6,851,400,000	43,526,300,000
	Total cost for primary schools and madrasahs	292,111,040,000	48,790,100,000	320,901,740,000

Cost:

- Rp 257,291,780,000 for enrichment and reference books for primary schools.
 - Rp 235,436,740,000 (government) Rp 21,855,040,000 (private).
- Rp 43,525,700,000 for enrichment and reference books for primary madrasahs.
 - Rp 2,650,690,000 (government) Rp 40,875,010,000 (private).

6. CALCULATING THE COST OF BRINGING UP TO MSS STANDARD THE EXISTING SCHOOLS AND MADRASAHs WHICH IN 2010 WERE NOT AT MSS STANDARD IN RELATION TO CAPITAL BUDGET ITEMS. PART B: JUNIOR SECONDARY SCHOOLS/MADRASAHs

(1) Addition of junior secondary schools and junior secondary classrooms

It is difficult to estimate the number of additional junior secondary schools and classrooms which were needed to provide access for the 2010 junior secondary student cohort; sufficiently detailed data sets are not available. It is clear that some additional schools and classrooms were needed in Indonesia's more remote locations, as indicated by the building program undertaken by the Education Sector Support Program (ESSP) which is planning to build an additional 2000 junior secondary facilities in the current RENSTRA period. It is estimated that more junior secondary schools were needed in densely populated areas such as Java and parts of Sumatra. There also remain small numbers of students living in extremely remote and sparsely populated locations who cannot easily access junior secondary education. Special arrangements such as residential facilities may need to be provided for these students.

Table 4, below, provides an analysis of the number of additional junior secondary schools, and by implication, of junior secondary classrooms, needed to accommodate the entire possible junior secondary cohort of students in 2013/2014.

Table 4. Access to Junior Secondary Education in 2013/14

ACCESS TO JUNIOR SECONDARY EDUCATION IN 2013/14	
Students graduating from SD/MI in June 2013	4,561,467
SMP/MTs existing capacity	3,683,385
Additional student places required	878,082
MSS classroom/student ratio	1:36
Classrooms per school	6
Total of new schools required	4065
Contribution of new ESSP SMP schools being built	2000
Needed schools remaining	2065
Cost per new SMP school	Rp 1,733,400,000
Total cost of new SMP school	Rp 3,579,471,000,000
Classroom furniture	Included
Teachers' room furniture	Included
Principal's room furniture	Included
Laboratory	Included
Laboratory equipment	Rp 58,759,389,150
Additional teachers needed	36,695
Cost of additional teachers	Not able to calculate

It should be noted that the calculation provided is based on the assumption that each of the new junior secondary classes will have the ideal number of 36 students. This cannot be achieved in reality. The MSS survey found that 28.1% of junior secondary schools and 18.7% of junior secondary madrasahs had classes above the MSS ratio of 36 students per class. The average ratio of junior secondary students to classrooms was 32.1:1. Applying this ratio as a more realistic basis of calculation results in the cost of new schools/classrooms being Rp 4,237,380,000,000 and the cost of laboratory equipment being Rp 69,559,401,486, a total of Rp 4,306,939,401,486.

Cost:

- Rp 4,306,939,401,486 for additional junior secondary schools/classrooms and laboratory equipment for those schools.

(2) Repair of junior secondary classrooms

MoEC identifies 44,527 junior secondary classrooms in need of major repairs. Funds were provided in 2011 to repair 3,500 of these classrooms and MoEC plans to fund the repairs of all the remaining classrooms by the end of 2012.

MoRA has identified 8,053 junior secondary madrasah classrooms in 17 provinces as needing major repairs (1,040 government and 7013 private), and plans to complete all these repairs by the end of 2014. In 2012, 3,799 classrooms will be repaired (450 government and 3,349 private), while 2,157 (350 government and 1,807 private) are planned to be repaired in 2013 and 2097 (240 government and 1857 private) in 2014. At an average cost of Rp 89m per room, the budget requirements for 2013 and 2014 total Rp 378,606,000,000.

Current data for minor and medium repairs in MoEC junior secondary schools is not available at this stage. The MSS survey shows that in 2010, 69,900 classrooms in junior secondary schools (51,459 government and 18,441 private) were in need of minor repairs. With an average cost of Rp 42m per minor repair, this calculates at Rp 2,495,430,000,000 for junior secondary schools. Since 2010, no central government funds have been provided for repairs of classroom in this category.

Current data from MoRA shows that 15,833 junior secondary classrooms (1,654 government and 14,179 private) are in need of minor repairs. Using the survey data, the cost of repairing these classrooms at an average cost of Rp 42m is Rp 664,986,000,000.

Cost:

- Rp 378,606,000,000 for major repairs in madrasah.
 - Rp 52,510,000 (government) Rp 326,092,000,000 (private).
- Rp 2,495,430,000 for minor repairs in schools.
 - Rp 1,837,086,300,000 (government) Rp 658,343,700,000 (private).
- Rp 664,986,000,000 for minor repairs in madrasahs.
 - Rp 69,468,000,000 (government) Rp 595,518,000,000 (private).

(3) Provision of student desks and chairs

The survey identified that 10,679 junior secondary school classrooms and 4,388 junior secondary madrasah classrooms did not have an adequate number of student desks and chairs. These numbers are below the number of very damaged classrooms which will be rehabilitated and which will receive new furniture. No additional budget is required for this item.

Cost:

- No additional budget required.

(4) Provision of a desk and chair for each teachers in classrooms

The total of teachers' desks and chairs needed is less than the total of very damaged classrooms which will be rehabilitated in both junior secondary schools and madrasahs. The rehabilitation includes the provision of the required new furniture. No additional budget is required for this item.

Cost:

- No additional budget required.

(5) Provision of a blackboard for each junior secondary classroom

Extrapolating data from the MSS survey to national level shows that 1,703 blackboards needed to be purchased for junior secondary schools and 977 for junior secondary madrasahs. These numbers are below the number of very damaged classrooms which will be rehabilitated and which will receive new furniture, including new blackboards. Therefore no additional budget is required for this item.

Cost:

- No additional budget required.

(6) Provision of a science laboratory in each junior secondary school/madrasah

The cost of providing a junior secondary science laboratory in a junior secondary facility is Rp 217,350,000. The MSS survey shows that 7,906 junior secondary schools (3,673 government and 4,233 private) and 10,188 junior secondary madrasahs (473 government and 9,715 private) were in need of science laboratories. At a cost of Rp 217,350,000 this calculates to Rp 1,718,369,100,000 for junior secondary schools and Rp 2,214,361,800,000 for junior secondary madrasahs.

Cost:

- Rp 1,718,369,100,000 for science laboratories in schools.
 - Rp 798,326,550,000 (government) Rp 920,042,550,000 (private).
- Rp 2,214,361,800,000 for science laboratories in madrasahs.
 - Rp 102,806,550,000 (government) Rp 2,111,555,250,000 (private).

(7) Provision of a set of teaching aids/equipment in every junior secondary laboratory

The shortage of teaching aids/equipment in junior secondary laboratories was identified in 541 government schools and 268 madrasahs. A complete set of the equipment costs Rp 24,000,000 per set, but schools which have laboratories already have some of the equipment, they don't need a whole new set. Using the data from the MSS survey it is possible to calculate the budgets needed to complete the sets already held by schools and madrasahs, as per below.

Cost:

- Rp 740,457,338,078 for science teaching aids/equipment in schools.
 - Rp 418,896,337,999 (government) Rp 321,561,000,079 (private).

- Rp 6,432,000,000 for science teaching aids/equipment in madrasahs.
 - Rp 36,421,521,428 (government) Rp 383,247,947,732(private).

(8) Provision of a teachers' room in each junior secondary school/madrasah

The shortage of teachers' rooms amounted to 1,235 in government schools (565 government and 670 private) and 1,032 in madrasahs (36 government and 996 private). At Rp 120m per room, the total is Rp 148,200,000,000 for schools and Rp 123,840,000,000 for madrasahs.

Cost:

- The cost of providing teachers' rooms in junior secondary schools is Rp 148,200,000,000.
 - Rp 67,800,000,000 (government) Rp 80,400,000,000 (private).
- The cost of providing teachers' rooms in junior secondary madrasahs is Rp 123,840,000,000
 - Rp 4,320,000,000 (government) Rp 119,520,000,000 (private).

(9) Provision of a desk and chair for each teacher, principal and ancillary staff member in the teachers' room

The shortage of desks and chairs in teachers' rooms amounted to 91,075 in government schools (82,649 government and 8,426 private) and 19,594 in madrasahs (7,480 government and 12,114 private). At Rp 250,000 per desk and Rp 150,000 per chair, the total is Rp 36,430,000,000 for schools and Rp 7,837,600,000 for madrasahs.

Cost:

- Rp 36,430,000,000 for additional staff desks and chairs in junior secondary school teachers' rooms.
 - Rp 33,059,600,000 (government) Rp 3,370,400,000 (private).
- Rp 7,837,600,000 for additional staff desks and chairs in junior secondary madrasah teachers' rooms.
 - Rp 2,992,000,000 (government) Rp 4,845,600,000 (private).

(10) Provision of a principal's room in each junior secondary school/madrasah

The shortage of principals' rooms amounted to 1,562 in government schools (1,071 government and 491 private) and 2,795 in madrasahs (55 government and 2,740 private). At Rp 17,150,400 per principal's room including the furniture, the total is Rp 27,413,724,800 for schools and Rp 49,053,368,000 for madrasahs.

Cost:

- Rp 27,413,724,800 for principals' rooms in junior secondary schools.
 - Rp 18,796,478,000 (government) Rp 8,617,246,400 (private).
- Rp 49,053,368,000 for principals' rooms in junior secondary madrasahs.
 - Rp 965,272,000 (government) Rp 49,053,368,000 (private).

(11) Provision of one set of government mandated textbooks for each junior secondary student for all subjects

Indonesian government policy is that money for the purchase of school text books should be sourced from BOS funding. A similar directive applies to item B(21) below.

Data from the MSS survey is not reliable for this item, consequently is not possible to determine how many schools/madrasahs do not have the required sets of books for all students.

Cost:

- Subject to further study.

(12) Provision of 200 enrichment and 20 reference books for each junior secondary school/madrasah

The percentage of junior secondary schools/madrasahs which met the MSS requirement for enrichment and reference books is provided below. This data is not able to be disaggregated between government and private schools/madrasahs.

Table 5. Percentage of junior secondary schools/madrasahs with the MSS required number of enrichment and reference books.

School/Madrasah	200 Enrichment books	20 Reference Books
Government SMP	52%	11,64%
Private SMP	43,79%	12,07%
Government MTs	47,43%	17,94%
Private MTs	24,11%	3,95%

The cost of providing the additional enrichment and reference books in primary schools and madrasahs is as per Table 6, below.

Table 6. Cost of additional enrichment and reference books required to ensure all junior secondary schools/madrasahs meet the MSS standard

TYPE OF SCHOOL/ MADRASAH	Number of additional books required			Total Cost (Rp)
		Enrichment books at Rp 20.000 per book	Reference books at Rp 50.000 per book	
Gov junior secondary school	No of books required	1,069,620	138,294	
	Cost	21,392,400,000	6,914,700,000	28,307,100,000
Private junior secondary school	No of books required	798,261	113,935	
	Cost	15,965,220,000	5,696,750,000	21,661,970,000
	Total cost for junior secondary schools	37,357,620,000	12,611,450,000	49,969,070,000
Gov junior secondary madrasah	No of books required	42,431	12,344	
-	Cost	848,620,000	617,200,000	1,465,820,000
Private junior secondary madrasah	No of books required	540,129	177,901	

TYPE OF SCHOOL/ MADRASAH	Number of additional books required			Total Cost (Rp)
		Enrichment books at Rp 20.000 per book	Reference books at Rp 50.000 per book	
	Cost	10,802,580,000	8,895,050,000	19,697,630,000
	Total cost for junior secondary madrasahs	11,651,200,000	9,512,250,000	21,163,450,000
	Total cost for junior secondary schools and madrasahs	49,008,820,000	22,123,700,000	71,132,520,000

Cost:

- Rp 49,696,070,000 for enrichment and reference books for junior secondary schools.
 - Rp 28,307,100,000 (government) Rp 21,661,970,000 (private).
- Rp 21,163,450,000 for enrichment and reference books for junior secondary madrasahs.
 - Rp 1,465,820,000 (government) Rp 19,697,630,000 (private).

7. SUMMARY OF THE BUDGET GAP BETWEEN THE CURRENT SITUATION AND ACHIEVEMENT OF MSS IN THE AREA OF CAPITAL EXPENDITURE

The summary of the budget gap between the current situation and achievement of MSS standard in the area of capital expenditure, as itemised in Sections 4 and 5, above, is provided in Tables 7 and 8, below.

Table 7. Summary of the budget gap between the current situation and achievement of MSS in the area of capital expenditure in primary education, by type school/madrasah

Items Requiring Funding	Total	Government	Private
Additional primary schools/madrasahs	Unable to cost	Unable to cost	Unable to cost
Additional primary classrooms	Unable to cost	Unable to cost	Unable to cost
Repair of very damaged classrooms			
Primary schools	All will be repaired by end of 2012		
Primary madrasahs	118,904,000,000	13,617,000,000	105,287,000,000
Primary schools + Primary madrasahs	118,904,000,000	13,617,000,000	105,287,000,000
Repair of classrooms: minor damage			
Primary schools	2,840,796,000,000	2,066,274,000,000	774,522,000,000
Primary madrasahs	1,478,526,000,000	114,660,000,000	1,363,866,000,000
Primary schools + Primary madrasahs	4,319,322,000,000	2,180,934,000,000	2,138,388,000,000
Additional student desks and chairs			
SD	No cost required	No cost required	No cost required
MI	3,729,000,000	706,456,681	3,022,543,319
SD + MI	3,729,000,000	706,456,681	3,022,543,319
Additional teacher desks & chairs in class			
Primary schools	No cost required	No cost required	No cost required
Primary madrasahs	No cost required	No cost required	No cost required
Primary schools + Primary madrasahs			
Additional blackboards			
Primary schools	No cost required	No cost required	No cost required
Primary madrasahs	No cost required	No cost required	No cost required
Primary schools + Primary madrasahs			
Additional teachers' rooms			
Primary schools	1,572,600,000,000	1,409,760,000,000	162,840,000,000
Primary madrasahs	345,000,000,000	2,400,000,000	342,600,000,000
Primary schools + Primary madrasahs	1,917,600,000,000	1,412,160,000,000	505,440,000,000

Items Requiring Funding	Total	Government	Private
Add. chairs and desks in teachers' rooms			
Primary schools	147,133,200,000	139,599,200,000	7,534,000,000
Primary madrasahs	20,661,600,000	385,600,000	20,276,000,000
Primary schools + Primary madrasahs	167,794,800,000	139,984,800,000	27,810,600,000
Additional science equipment			
Primary schools	768,078,000	706,102,000	61,976,000
Primary madrasahs	133,777,000	9,578,000	124,199,000
Primary schools + Primary madrasahs	901,855,000	715,680,000	186,175,000
Additional enrichment & ref. books			
Primary schools	257,291,780,000	235,436,740,000	21,855,040,000
Primary madrasahs	43,525,700,000	2,650,690,000	40,875,010,000
Primary schools + Primary madrasahs	300,817,480,000	238,087,430,000	62,730,050,000
SUB- TOTAL PRIMARY (schools + madrasahs)	Rp 6,829,069,135,000		

Table 8. Summary of the budget gap between the current situation and achievement of MSS in the area of capital expenditure in junior secondary education, by type school/madrasah

Items Requiring Funding	Total	Government	Private
Additional J.S. Schools			
Additional J.S. Classrooms	4,306,939,401,486		
Repair of very damaged classrooms			
Junior Secondary Schools	All will be repaired by end of 2012		
Junior Secondary Madrasahs	378,606,000,000	52,510,000,000	326,096,000,000
J.S. Schools + Madrasahs	378,606,000,000	52,510,000,000	326,096,000,000
Repair of lightly damaged classrooms			
Junior Secondary Schools	2,495,430,000,000	1,837,086,300,000	658,343,700,000
Junior Secondary Madrasahs	664,986,000,000	69,468,000,000	595,518,000,000
J.S. Schools + Madrasahs	3,160,416,000,000	1,906,554,300,000	1,253,861,700,000
Additional student desks and chairs			
Junior Secondary Schools	No cost required	No cost required	No cost required
Junior Secondary Madrasahs	No cost required	No cost required	No cost required
J.S. Schools + Madrasahs			
Additional teacher desks & chairs in class			
Junior Secondary Schools	No cost required	No cost required	No cost required
Junior Secondary Madrasahs	No cost required	No cost required	No cost required
J.S. Schools + Madrasahs			
Additional blackboards			
Junior Secondary Schools	No cost required	No cost required	No cost required
Junior Secondary Madrasahs	No cost required	No cost required	No cost required
J.S. Schools + Madrasahs			
Additional Science Labs			
Junior Secondary Schools	1,718,369,100,000	798,326,550,000	920,042,550,000
Junior Secondary Madrasahs	2,214,361,800,000	102,806,550,000	2,111,555,250,000
J.S. Schools + Madrasahs	3,932,730,900,000	901,133,100,000	3,031,597,800,000
Additional Science Lab Equipment			
Junior Secondary Schools	740,457,338,078	418,896,337,999	321,561,000,079
Junior Secondary Madrasahs	419,669,469,160	36,421,521,428	383,247,947,732
J.S. Schools + Madrasahs	1,160,126,807,238	455,317,859,427	704,808,947,811
Additional teachers' rooms			
Junior Secondary Schools	148,200,000,000	67,800,000,000	80,400,000,000
Junior Secondary Madrasahs	123,840,000,000	4,320,000,000	119,520,000,000
J.S. Schools + Madrasahs	272,040,000,000	72,120,000,000	199,920,000,000
Add. chairs and desks in teachers' rooms			
Junior Secondary Schools	36,430,000,000	33,059,600,000	3,370,400,000
Junior Secondary Madrasahs	7,837,600,000	2,992,000,000	4,845,600,000
J.S. Schools + Madrasahs	44,267,600,000	36,051,600,000	8,216,000,000

Items Requiring Funding	Total	Government	Private
Additional principals' rooms			
Junior Secondary Schools	27,413,724,800	18,769,478,000	8,617,246,400
Junior Secondary Madrasahs	50,018,640,000	965,272,000	49,053,368,000
J.S. Schools + Madrasahs	77,432,364,800	19,734,750,000	57,670,614,400
Additional enrichment & ref. books			
Junior Secondary Schools	49,969,070,000	28,307,100,000	21,661,970,000
Junior Secondary Madrasahs	21,163,450,000	1,465,820,000	19,697,630,000
J.S. Schools + Madrasahs	71,132,520,000	29,772,920,000	41,359,600,000
SUB- TOTAL JS SCHLS AND MDRSHS	13,403,691,535,524		
GRAND TOTAL	Rp 20,232,760,670,524		

NB: As indicated in the discussion above, the cost of all additional schools and classrooms required is not able to be calculated due to lack of systemic data, and the grand total calculated is necessarily an underestimation of the total budget required for capital items.

8. PROJECTIONS FOR CAPITAL EXPENDITURE TO MSS LEVEL TO THE YEAR 2020

The figures provided in table 9, below, show the summary of the projected capital expenditure to the year 2020 needed so that basic education schools and madrasahs can meet MSS standards in this regard. A detailed breakdown of the figures is provided in Attachment 1. The projections were constructed using the same data sources as those used for identifying the gap between the current situation and achievement of MSS (see sections 5 and 6 of this paper, above). In addition to those data sources, the calculations also took into account the projected changes in student numbers and rates of depreciation of buildings and equipment. Wherever possible, the depreciation rates were taken from official sources. For example, using information obtained from the Department of Public Works shows that school classrooms will need minor repairs after 25 years, and if this is not done, major repairs will be need four years later.

It should be noted that the projections are additional to the existing gap calculated in Sections 5 and 6, above, and that any part of that gap not filled in 2012 will need to be carried forward into subsequent years.

Table 9. Projections for capital expenditure to the Year 2020 needed to fulfil MSS.

Million Rupiah, value Rp 2012

YEAR	2013	2014	2015	2016	2017	2018	2019	2020
Grand Total	10,057,157	11,133,439	11,063,632	9,369,750	3,786,188	3,918,360	4,158,854	4,413,841
Gov. Schools	6,372,109	6,350,143	6,647,716	6,675,815	2,418,500	2,526,310	2,679,114	2,841,160
Priv. Schools	1,431,235	1,470,901	965,973	613,523	478,018	446,687	474,959	505,015
Total	7,803,344	7,821,044	7,613,689	7,289,338	2,896,518	2,972,997	3,154,073	3,346,175
Gov. Mdrs	181,297	712,753	688,871	129,608	137,385	145,859	154,855	164,147
Priv. Mdrs	2,072,516	2,599,641	2,761,072	1,950,805	752,286	799,504	849,926	903,519
Total	2,253,813	3,312,394	3,449,943	2,080,413	889,671	945,363	1,004,781	1,067,666

The calculations itemised in Table 9 (above) were done in an automated Excel format which allows a ready re-calculation if any of the base figures or assumptions need changing. This tool is provided as Appenedix A in the CD accompanying this paper.

9. PERSONNEL BUDGET

The legal framework of basic education is open to the interpretation that the government is obliged to fully fund basic education, whether provided by the government or by the private sector. In practice, the government has not tried to meet such a commitment, particularly in the area of payment of teacher salaries (see discussion in ACDP 006 *Conceptual Framework of Basic Education*).

The project has worked on calculating the budget requirements for payment of teacher salaries and allowances to MSS level in both the government and private schools and madrasahs delivering basic education.

1. Constraints and assumptions underlying the calculations.

Data used for the calculations is not complete. In calculating the personnel budget, the project has used two national data bases: the first contains data on individual teachers and the second has data on schools. The data used was for the year 2011. The calculations required a matching of information from both data bases. The interface between the two data bases is difficult, and the project was able to accomplish a match to the level of 43% only. The 43% sample was then extrapolated to produce the national-level data presented in the tables below.

The national individual teacher data records permanent teachers only: both those who are government public servants and those who are permanently employed by the private system. All permanent teachers are full-time employees. Teachers whose basic salaries are paid from BOS funds and who generally work part-time are not included in the data.

2. Teacher numbers required to meet MSS

Using the available data, the project was able to calculate to what extent the national system as a whole meets MSS staffing requirements. These requirements were taken to be:

- For SD/MI: One teacher for each class of students, with the principal also counted as a teacher.
- For SMP/MTs: One teacher for each 24 lessons to be delivered, with the principal also counted as a teacher.

It is recognised that a perfect distribution of teachers cannot be achieved, and that an education system always needs a buffer additional to the ideal teacher ratio. A 10% buffer was added to the calculations.

On a national level, the data including the 10% buffer produced the following result:

Table 10. Shortage of permanent teachers in the basic education system according to MSS level, year 2011.

School Madrasah	Status	Percentage of shortage of permanent teachers to MSS level, including 10% buffer
SD	Govt	11%
SD	Private	18%
MI	Govt	7%
MI	Private	48%
SMP	Govt	12%
SMP	Private	82%
MTs	Govt	25%

School Madrasah	Status	Percentage of shortage of permanent teachers to MSS level, including 10% buffer
MTs	Private	97%
Total		15%

The private basic education system shows a much greater shortage of permanent teachers than does the government system.

3. Cost to government of accepting responsibility for payment of salaries of permanent teachers currently working in the private basic education system

At present, the government pays the salaries of some permanent teachers who are seconded to work in the private basic education system. The total number of these teachers is not available, but it is not large. It is possible to get an estimation of what it would cost the government if it decided to accept responsibility for paying the salaries of teachers in the private basic education system to MSS level. Using the data from the national permanent teacher data base, reducing the total by an estimated 5% to allow for the government teachers who are already seconded to private schools/madrasahs, and assuming the average salary level to be Rp 1,900,000 per month (Golongan IIIA level of the public service) produces a figure of just over Rp 20 trillion per year. This sum does not take into account the functional and professional allowances for which the teachers would also be eligible, an obligation which already exists. If 40% of the existing permanent teachers in the private basic education sector received the professional allowance and 40 % the functional allowance, the cost would be approximately Rp 8.7 trillion for professional and Rp 1.5 trillion for functional allowance, a total of Rp 10.2 trillion.

The Rp 20 trillion identified above is the budget requirement for payment of salaries of only those permanent private teachers who are already in the system. As noted above, the private system is significantly short of such teachers. On top of paying the number of full-time private school teachers currently working, to meet the MSS requirements the government would also need to provide the funds to pay the additional teachers needed to ensure staffing at that standard.

4. Projected cost of staffing the basic education system to MSS standard to the year 2020, including wages of permanent private system teachers.

Calculations in Table 11, below, explore a scenario in which the government undertakes to pay teacher salaries in the basic education system to the level of MSS. Assumptions made are that at primary level, a teacher is needed for each class, at junior secondary level a teacher teaches 24 lessons per week, and principals have a teaching load. The table also contains assumptions about government payment of teacher allowances, both functional (40%) and professional (50% of teachers). The teaching force is assumed to be 85% permanent and 15% contract to ensure adequate flexibility in the system, and this last assumption is common to all remaining tables in this section of the paper.

The level of payments required are as follows:

1. Basic salary of permanent teacher (Golongan IIIA): Rp 1,900,000 per month
2. Basic salary of contract teacher: Rp 1,520,000 per month
3. Professional allowance: Rp 1,900,000 per month
4. Functional allowance: Rp 250,000 per month
5. Increase of 15% for districts and 10% for cities in the number of teachers required by the MSS ratios as a buffer to allow for the impossibility of getting a perfect distribution of the teaching force.

The calculations do not include the wages of permanent teachers already paid in the government system, nor the Rp 20 trillion per year required to pay the wages of the permanent teachers who were already working in the private sector in 2011 and the 10.2 trillion for their allowances. The sums shown indicate the additional amount which would need to be paid on top of the amount which was required in 2011 to bring the total number of teachers to MSS level. The sum is largest for 2020, because that year includes the cost of bridging the existing gap, particularly in government teacher salaries. Subsequent years show further adjustments which will need to be made because of changes to the teaching force caused primarily by factors such as retirement and mortality rates.

Table 11. Projections to 2020 of the budget needed for the teaching force of basic education, additional to the teaching force employed in 2011, in million rupiah. Both government and private teacher salaries paid by government. 40% of all teachers receive the functional allowance and 50% the professional.

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020
Govt SD	10,274,732	321,779	452,127	2,065,010	2,266,770	2,774,192	2,734,799	3,347,609	3,047,084
Priv SD	2,929,791	56,033	71,385	373,944	413,310	457,477	470,892	520,728	515,294
Govt MI	236,690	0	0	44,547	29,698	40,138	35,638	41,577	34,198
Priv MI	1,232,471	8,033	8,033	90,931	82,416	92,939	103,462	97,438	101,454
Govt SMP	2,363,111	41,445	272,794	274,868	388,525	330,295	376,286	354,546	403,144
Priv SMP	3,842,132	50,757	543,520	651,774	566,551	740,129	633,696	560,937	517,518
Govt MTs	317,538	19,674	0	56,400	7,870	35,534	7,870	0	7,870
Priv MTs	1,689,427	10,410	10,410	66,053	125,600	126,901	67,354	10,410	126,901
TOTAL	22,885,893	508,132	1,358,269	3,623,528	3,880,740	4,597,605	4,429,997	4,933,245	4,753,463

If no functional or professional allowances were to be paid, the sum required for 2012 would be reduced from the 22.886 trillion rupiah shown in Table 11 to 18.154 trillion - in either case, this represents a very large demand on the national education budget. If private sector teacher wages of Rp 8.119 trillion are also removed from the calculation, the budget for 2012 is reduced to 10.036 trillion, still a challenging sum for the education budget.

ACDP has constructed an Excel-based tool which can automatically calculate a wide range of scenarios in calculating the personnel budgets required for implementation of MSS. This tool is provided as Appendix B in CD accompanying this paper. Tables 12, 13 and 14 (below) show three other scenarios, but the tool can calculate any combination of factors which is chosen.

Table 12. Projections to 2020 of the budget needed for the teaching force of basic education, additional to the teaching force employed in 2011, with no salaries paid to teachers in the private system, 10% of both government and private teachers receiving the professional allowance, and 10% receiving the functional allowance, in million rupiah.

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020
Govt SD	7,608,782.95	238,306.93	334,720.74	1,528,984.63	1,678,563.87	2,054,527.39	2,025,117.61	2,478,995.08	2,256,531.86
Priv SD	377,298.62	5,324.98	7,058.40	46,515.60	50,531.15	57,029.10	56,536.14	64,646.48	64,138.12
Govt MI	175,325.10	-	-	31,938.15	21,292.10	29,209.94	25,550.52	29,808.94	24,951.52
Priv MI	161,599.70	100.41	100.41	5,658.10	7,058.82	5,683.20	4,307.59	4,232.28	4,282.48
Govt SMP	1,749,979.63	30,619.69	202,062.93	203,591.28	287,679.09	244,880.50	278,550.60	262,849.75	298,420.70
Priv SMP	496,321.32	4,084.54	70,836.09	83,617.66	79,964.81	93,239.48	77,030.60	73,641.36	73,206.44
Govt MTs	235,119.21	14,105.55	-	40,435.92	5,642.22	26,623.81	5,642.22	-	5,642.22

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020
Priv MTs	219,369.89	130.13	130.13	1,802.27	3,523.22	3,539.48	1,818.54	130.13	3,539.48
TOTAL	11,023,796.44	292,672.23	614,908.70	1,942,543.61	2,134,255.28	2,514,732.92	2,474,553.83	2,914,304.02	2,730,712.83

The draft FBE framework suggested by the project proposes that the government accepts responsibility for full payment of functional and professional allowances to private school and madrasah teachers. It also advises that consideration could be given to reducing the eligibility requirements for functional allowance from five years' continual service to one. Tables 13 and 14, below, show the financial impact of this on the projections. In both tables, 80% of government teachers are assumed to be in receipt of the allowances, half professional and half functional.

Table 13. Projections to 2020 of the budget needed for the teaching force of basic education, additional to the teaching force employed in 2011, with no salaries paid to teachers in the private system, 40% of government teachers receiving the professional allowance and 40% the functional, and neither the professional nor functional allowances paid to private sector teachers, in million rupiah.

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020
Govt SD	9,668,109.24	302,785.42	425,411.84	1,943,040.21	2,132,926.61	2,610,435.65	2,573,314.37	3,149,960.18	2,867,198.23
Priv SD	344,988.59	4,683.10	6,244.14	42,370.93	45,939.01	51,960.14	51,291.13	58,873.29	58,427.29
Govt MI	222,726.46	-	-	41,678.16	27,785.44	37,651.28	33,342.53	38,899.61	32,094.19
Priv MI	148,044.37	-	-	4,578.69	6,104.92	4,578.69	3,052.46	3,052.46	3,052.46
Govt SMP	2,223,596.17	38,982.13	256,699.59	258,649.18	365,577.68	310,859.50	354,046.55	333,680.83	379,314.79
Priv SMP	453,969.28	3,493.75	64,852.75	76,425.81	73,805.49	85,051.00	69,984.20	67,473.07	67,582.25
Govt MTs	298,784.27	18,407.25	-	52,767.44	7,362.90	33,506.52	7,362.90	-	7,362.90
Priv MTs	200,761.58	-	-	988.97	1,977.95	1,977.95	988.97	-	1,977.95
TOTAL	13,560,979	368,351	753,208	2,420,499	2,661,480	3,136,020	3,093,383	3,651,939	3,417,010

Table 14. Projections to 2020 of the budget needed for the teaching force of basic education, additional to the teaching force employed in 2011, with no salaries paid to teachers in the private system, 40% of both government and private teachers receiving the professional and 40% the functional allowance, in million rupiah.

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020
Govt SD	9,668,109.24	302,785.42	425,411.84	1,943,040.21	2,132,926.61	2,610,435.65	2,573,314.37	3,149,960.18	2,867,198.23
Priv SD	474,228.73	7,250.59	9,501.18	58,949.59	64,307.57	72,235.98	72,271.19	81,966.04	81,270.62
Govt MI	222,726.46	-	-	41,678.16	27,785.44	37,651.28	33,342.53	38,899.61	32,094.19
Priv MI	202,265.72	401.64	401.64	8,896.32	9,920.50	8,996.73	8,072.96	7,771.73	7,972.55
Govt SMP	2,223,596.17	38,982.13	256,699.59	258,649.18	365,577.68	310,859.50	354,046.55	333,680.83	379,314.79
Priv SMP	623,377.43	5,856.92	88,786.10	105,193.23	98,442.76	117,804.92	98,169.81	92,146.25	90,079.02
Govt MTs	298,784.27	18,407.25	-	52,767.44	7,362.90	33,506.52	7,362.90	-	7,362.90
Priv MTs	275,194.83	520.51	520.51	4,242.17	8,159.03	8,224.09	4,307.24	520.51	8,224.09
TOTAL	13,988,282.85	374,204.46	781,320.87	2,473,416.29	2,714,482.48	3,199,714.68	3,150,887.54	3,704,945.15	3,473,516.39

All of the above calculations have been made on the assumption that the current patterns of distribution of teachers will persist to the year 2020. The data show that the efficiency of teacher distribution varies widely. Some districts have a great shortage of permanent teachers in their basic education systems

when the MSS standard is applied, while some others show a surplus of over 60%, meaning that they have more than 60% of permanent teachers above the number required by MSS ratios.

The Indonesian government has been aware of the inefficiency of teacher distribution in the system and has tried to address it. The latest measure are the Five Ministers' Regulations issued in October 2011, requiring local education authorities to improve the distribution of teachers in their areas. On evidence to date, little progress appears to have been made, although it is still relatively soon after the regulations were issued. Table 15 below, demonstrates the savings which can be made if the distribution of teachers is improved on a national scale.

Table 15. The budget needed in 2012 for the teaching force of basic education, additional to the teaching force employed in 2011, with no salaries paid to teachers in the private system, 40% of both government and private teachers receiving the professional and 40% the functional allowance, and a range of efficiency of teacher distribution, in million rupiah.

	No improvement on current level of efficiency	30% improvement on current level of efficiency	80% improvement on current level of efficiency
Govt SD	9,668,109.24	8,723,881.54	7,151,099.71
Priv SD	474,228.73	429,959.33	351,983.90
Govt MI	222,726.46	207,303.53	165,343.49
Priv MI	202,265.72	179,131.27	145,473.87
Govt SMP	2,223,596.17	2,004,313.23	1,640,408.43
Priv SMP	623,377.43	561,456.72	458,911.10
Govt MTs	298,784.27	268,656.86	220,175.55
Priv MTs	275,194.83	250,899.92	202,075.87
TOTAL	13,988,282.85	12,625,602.39	10,335,471.93

The table shows that even a 30% improvement in efficiency of teacher distribution reduces the budget by Rp 1.363 trillion, while an improvement by 80% increases the saving to Rp 3.653 trillion.

10. OPERATIONAL NON-PERSONNEL BUDGET

a. An overview

Central government provides the *Bantuan Operasi Sekolah* (BOS) funds to all government and private schools/madrasahs which deliver basic education. BOS funds are intended primarily to be used for operational non-personnel expenditure. They are paid directly into school/madrasah bank accounts on the basis of the number of enrolled students.

In some parts of Indonesia, there is additional provincial and district funding similar to BOS, the *BOS Daerah* (BOSD). The amounts provided through BOSD vary but with notable exceptions such as Jakarta, they are generally much lower than the per-capita rate paid by the central government. These funds are usually provided to schools only, as most local governments argue that they cannot fund madrasahs because they are not a part of a decentralised system.

Provincial MoRA offices provide some additional operational funds to government madrasahs.

b. Variable needs of operational non-personnel funds by schools/madrasahs of different sizes

BOS funds are provided to schools on a per-head-of-student basis, with each primary student attracting Rp 580,000 and each junior secondary student, Rp 710,000 in 2012. This funding system does not allow for a differentiation between fixed cost and variable cost. It is clear that larger schools are advantaged, and small schools are disadvantaged by the system. Prior to the work of ACDP 006, no detailed study had been done on how the current method of BOS funding affects schools of different size.

ACDP 006 built on work previously undertaken by Decentralised Basic Education 1 which itemised in great detail all the activities and sub-activities that schools engage in during a school year, based on the eight National Standards. All operational non-personnel items and services which schools need to purchase or pay for in a school year were listed against the relevant activities. ACDP 006 comprehensively reviewed the lists of activities and items with a range of primary and junior secondary schools and madrasahs, both government and private, urban and rural, representing different socio-economic contexts.

Based on this comprehensive list of activities, items and payments, ACDP 006 calculated the operational non-personnel cost of delivering a year's program of basic education in Indonesian schools and madrasahs. In general, the standard of delivery was tied to the MSS. It is recognised that in relation to the curriculum, the only applicable standard is the NES, so from the MSS perspective, the calculation was based on the minimal cost at which the compulsory NES curriculum could be delivered. The criteria for the calculation are as outlined below:

- the funds are used for the delivery of the compulsory curriculum only;
- all optional activities such as extra-curricular activities and out-of-school sport and other competitions are excluded;
- the school uses a syllabus which requires minimal provision of teaching aids and equipment;
- all salaries and honorariums are excluded, with the exception of the honorarium of the school treasurer;
- all consumption costs are excluded;
- all minor capital costs, such as books, are excluded; and
- school and school grounds maintenance costs are included.

Only seven of the eight national Standards contain activities or items which bear a cost.

All items to be purchased are in Jakarta market prices 2012. The market price is used because most Indonesian schools purchase their consumables at their nearest markets. Prices for repairs of facilities including painting of rooms are estimates based on advice of school and madrasah principals. Actual prices will vary depending on location, with some districts cheaper, and some more expensive than Jakarta. All prices have been inflated by 5%, to indicate prices likely to be paid in 2013.

ACDP has developed a tool to automatically calculate the per-student operational non-personnel cost in schools/madrasahs with different student enrolment numbers. As student numbers change, the tool automatically changes operational non-personnel costs based on the number of teachers and classrooms, and makes adjustment to whole-of-school costs. Table 16, below, shows the operational non-personnel annual cost of delivering the minimal compulsory curriculum in Jakarta primary schools/madrasahs, per Standard, by various school/madrasah sizes.

Table 16. Minimal operational non-personnel budget of SDs/MI of different sizes, with no allowance for honorarium, consumption, minor investment or cost related to specialist subject teachers (Year 2013)

	NUMBER OF CLASSES	12	6	6	6	6
	NUMBER OF STUDENTS	400	192	95	90	60
1	MINIMUM STUDENT COMPETENCY		SPM	BREAK EVEN		
2	CURRICULUM AND SYLLABUS	402,050	402,050	402,050	402,050	402,050
3	TEACHING AND LEARNING ACTIVITIES	2,158,365	1,869,485	1,732,245	1,732,245	1,732,245
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	10,665,066	6,933,866	5,448,469	5,377,316	4,986,566
5	PROVISION OF TEACHING & LEARNING FACILITIES	8,085,000	6,105,000	4,125,000	4,125,000	4,125,000
6	SCHOOL ADMINISTRATION	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000
7	STUDENT PERFORMANCE EVALUATION	24,675,151	23,768,151	23,581,110	23,570,526	23,512,401
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	27,177,050	10,798,550	4,317,984	4,083,425	2,795,300
	COSTS PER STUDENT	86,287,682	63,002,102	52,731,858	52,415,562	50,678,562
	ESTIMATED 2013 INFLATION RATE	215,719	328,136		582,395	
	TOTAL COSTS AFTER INFLATION	5%	5%	5%	5%	5%
	COSTS PER STUDENT	90,602,066	66,152,207	55,368,451	55,036,340	53,212,490
	BIAYA PER SISWA (RP/SISWA)	226,505	344,543	580,000	611,515	886,875
	HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	0%	0%	0%	0%	0%
	TOTAL COSTS	90,602,066	66,152,207	55,368,451	55,036,340	53,212,490
	COSTS PER STUDENT	226,505	344,543	580,000	611,515	886,875

During consultations, including Focus Group Discussions with key stakeholders at provincial and district level, it became evident that it is thought not possible for schools to deliver the basic curriculum without incurring some honorarium, consumption, and minor capital costs. The BOS program currently allows all three of these categories of payments from BOS funds, even though honorariums and minor capital costs are not operational non-personnel costs. If 20% of the operational non-personnel cost of schools/madrasahs is added to the minimal calculation to allow for expenditure in these three categories, the costs for primary schools and madrasahs of various sizes become those displayed in Table 17, below.

Table 17. Operational non-personnel budget of SDs/MI of different sizes including 20% allowance for honorarium, consumption and minor investment, but excluding any cost related to specialist subject teachers (Year 2013)

	NUMBER OF CLASSES	12	6	6	6	6
	NUMBER OF STUDENTS	400	192	117	90	60
1	MINIMUM STUDENT COMPETENCY		SPM	BREAK EVEN		
2	CURRICULUM AND SYLLABUS	402,050	402,050	402,050	402,050	402,050
3	TEACHING AND LEARNING ACTIVITIES	2,158,365	1,732,245	1,732,245	1,732,245	1,732,245
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	10,665,066	6,705,866	5,732,931	5,377,316	4,986,566
5	PROVISION OF TEACHING & LEARNING FACILITIES	8,085,000	4,125,000	4,125,000	4,125,000	4,125,000
6	SCHOOL ADMINISTRATION	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000
7	STUDENT PERFORMANCE EVALUATION	24,675,151	23,768,151	23,623,425	23,570,526	23,512,401
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	27,177,050	8,463,050	5,255,726	4,083,425	2,795,300
	COSTS PER STUDENT	86,287,682	58,321,362	53,996,377	52,415,562	50,678,562
	ESTIMATED 2013 INFLATION RATE	215,719	303,757	460,317	582,395	844,642.7
	TOTAL COSTS AFTER INFLATION	5%	5%	5%	5%	0.05
	COSTS PER STUDENT	90,602,066	61,237,430	56,696,196	55,036,340	53,212,490
	BIAYA PER SISWA (RP/SISWA)	226,505	318,945	483,333	611,515	886,874.8
	HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	20%	20%	20%	20%	0.2
	TOTAL COSTS	108,722,479	73,484,916	68,035,435	66,043,608	63,854,988
	COSTS PER STUDENT	271,806	382,734	580,000	733,818	1,064,250

ACDP 006 consultations and Focus Group discussions have shown that the Indonesian education community finds it difficult to accept that the compulsory primary curriculum can be delivered without some specialist teachers, even though such teachers are not included in MSS. If specialist teachers in

religion, health and physical education and local content are included, the per-student costs of delivering the program rise, as per Tables 18 and 19, below. This level of provision can be termed MSS +. The cost in primary madrasah is higher than in a primary school because of the four religious subjects taught in primary madrasah. At junior secondary level, there is no change because MSS specifies the provision of a teacher for each subject.

Table 18. Operational non-personnel budget of SDs of different school sizes including allowance for honorarium, consumption and minor investment, and with operational non-personnel costs related to subject teachers (Year 2013)

	NUMBER OF CLASSES	12	6	6	6	6	6
	NUMBER OF STUDENTS	400	192	127	120	90	60
NO	SCHOOL /MADRASAH PROGRAM		SPM	BREAK EVEN			
1	MINIMUM STUDENT COMPETENCY	402,050	402,050	402,050	402,050	402,050	402,050
2	CURRICULUM & SYLLABUS	2,295,605	1,869,485	1,869,485	1,869,485	1,869,485	1,869,485
3	TEACHING & LEARNING ACTIVITIES	10,893,066	6,933,866	6,087,185	5,996,066	5,605,316	5,214,566
4	TEACHER AND EDUCATION PERSONNEL DEVELOPMENT	10,065,000	6,105,000	6,105,000	6,105,000	6,105,000	6,105,000
5	PROVISION OF TEACHING & LEARNING FACILITIES AND MATERIALS	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000
6	SCHOOL ADMINISTRATION	24,675,151	23,768,151	23,642,205	23,628,651	23,570,526	23,512,401
7	STUDENT PERFORMANCE EVALUATION	32,008,550	10,798,550	7,227,376	6,843,050	5,194,925	3,546,800
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	93,464,422	63,002,102	58,458,301	57,969,302	55,872,302	53,775,302
	COST PER STUDENT	233,661	328,136	460,317	483,078	620,803	896,255
	ESTIMATED 2013 INFLATION RATE	5%	5%	5%	5%	5%	5%
	COSTS AFTER INFLATION	98,137,643	66,152,207	61,381,217	60,867,767	58,665,917	56,464,067
	BIAYA PER SISWA (RP/SISWA)	245,344	344,543	483,333	507,231	651,844	941,068
	HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	20%	20%	20%	20%	20%	20%
	TOTAL COSTS	117,765,172	79,382,649	73,657,460	73,041,321	70,399,101	67,756,881
	COST PER STUDENT	294,413	413,451	580,000	608,678	782,212	1,129,281

Table 19. Operational non-personnel budget of MIs of different sizes including allowance for honorarium, consumption and minor investment, and with operational non-personnel costs related to subject teachers (Year 2013)

	NUMBER OF CLASSES	12	6	6	6	6	6
	NUMBER OF STUDENTS	400	192	129	120	90	60
NO	PROGRAM SEKOLAH/MADRASAH		SPM	BREAK EVEN			
1	STANDAR KOMPETENSI LULUSAN	402,050	402,050	402,050	402,050	402,050	402,050
2	STANDAR ISI	2,413,805	1,908,885	1,908,885	1,908,885	1,908,885	1,908,885
3	STANDAR PROSES PEMBELAJARAN	10,893,066	6,933,866	6,110,517	5,996,066	5,605,316	5,214,566
4	STANDAR PENINGKATAN PENDIDIK DAN TENSIK	12,045,000	6,765,000	6,765,000	6,765,000	6,765,000	6,765,000
5	STANDAR PENYEDIAAN SARPRAS	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000	13,125,000
6	STANDAR PENGELOLAAN PEMBELAJARAN	24,675,151	23,768,151	23,645,676	23,628,651	23,570,526	23,512,401
7	STANDAR PENILAIAN HASIL PEMBELAJARAN	32,008,550	10,798,550	7,325,786	6,843,050	5,194,925	3,546,800
	BIAYA SEBELUM INFLASI, HONORARIUM, KONSUMSI, DAN INVESTASI SKALA KECIL	95,562,622	63,701,502	59,282,913	58,668,702	56,571,702	54,474,702
	BIAYA PER SISWA (RP/SISWA)	238,907	331,779	460,318	488,906	628,574	907,912
	PERKIRAAN TINGKAT INFLASI TAHUN 2013	5%	5%	5%	5%	5%	5%
	BIAYA SESUDAH INFLASI	100,340,753	66,886,577	62,247,059	61,602,137	59,400,287	57,198,437
	BIAYA PER SISWA (RP/SISWA)	250,852	348,368	483,333	513,351	660,003	953,307
	HONORARIUM, KONSUMSI, DAN INVESTASI SKALA KECIL	20%	20%	20%	20%	20%	20%
	TOTAL BIAYA	120,408,904	80,263,893	74,696,471	73,922,565	71,280,345	68,638,125
	BIAYA PER SISWA (RP/SISWA)	301,022	418,041	580,000	616,021	792,004	1,143,969

The costs for junior secondary schools is presented in Tables 20 and 21, below.

Table 20. Annual operational non-personnel cost of delivery of the compulsory curriculum in Jakarta junior secondary schools at minimal cost (Year 2013).

			SPM	BREAK EVEN			
	NUMBER OF STUDENTS	400	216	154.1395	120	90	60
	NUMBER OF CLASSES	3	6	4	3	3	3
1	MINIMUM STUDENT COMPETENCY	390,550	390,550	390,550	390,550	390,550	390,550
2	CURRICULUM AND SYLLABUS	2,675,500	3,022,000	2,791,000	2,675,500	2,675,500	2,675,500
3	TEACHING AND LEARNING ACTIVITIES	14,798,723	15,109,523	14,902,323	14,798,723	14,798,723	14,798,723
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	6,675,000	6,675,000	6,675,000	6,675,000	6,675,000	6,675,000
5	PROVISION OF TEACHING & LEARNING FACILITIES AND MATERIALS	7,875,000	14,437,500	10,062,500	7,875,000	7,875,000	7,875,000
6	SCHOOL ADMINISTRATION	44,244,825	59,591,125	49,455,859	44,382,825	44,313,825	44,244,825
7	STUDENT PERFORMANCE EVALUATION	14,875,090	23,958,250	19,950,471	17,832,648	16,345,573	14,875,090
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	91,534,688	123,183,948	104,227,704	94,630,246	93,074,171	91,534,688
	COSTS PER STUDENT	228,837	570,296	676,190	788,585	1,034,157	1,525,578
	ESTIMATED 2013 INFLATION RATE	0	0	0	0	0	0.05
	TOTAL COSTS AFTER INFLATION	96,111,422	129,343,145	109,439,089	99,361,758	97,727,880	96,111,422
	COSTS PER STUDENT	240,279	598,811	710,000	828,015	1,085,865	1,601,857
	ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	0%	0%	0%	0%	0%	0%
	TOTAL COSTS	96,111,422	129,343,145	109,439,089	99,361,758	97,727,880	96,111,422
	COSTS PER STUDENT	240,279	598,811	710,000	828,015	1,085,865	1,601,857

Table 21. Annual operational non-personnel cost of delivery of the compulsory curriculum in Jakarta junior secondary schools at minimal cost + honorariums, consumption and minor capital expenditure (Year 2013).

			BREAK EVEN	SPM			
	NUMBER OF STUDENTS	400	219	216	120	90	60
	NUMBER OF CLASSES	3	4	6	3	3	3
1	MINIMUM STUDENT COMPETENCY	390,550	390,550	390,550	390,550	390,550	390,550
2	CURRICULUM AND SYLLABUS	2,675,500	3,022,000	3,022,000	2,675,500	2,675,500	2,675,500
3	TEACHING AND LEARNING ACTIVITIES	14,798,723	15,109,523	15,109,523	14,798,723	14,798,723	14,798,723
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	6,675,000	6,675,000	6,675,000	6,675,000	6,675,000	6,675,000
5	PROVISION OF TEACHING & LEARNING FACILITIES AND MATERIALS	7,875,000	14,437,500	14,437,500	7,875,000	7,875,000	7,875,000
6	SCHOOL ADMINISTRATION	44,244,825	59,597,031	59,591,125	44,382,825	44,313,825	44,244,825
7	STUDENT PERFORMANCE EVALUATION	14,875,090	24,096,694	23,958,250	17,832,648	16,345,573	14,875,090
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	91,534,688	123,328,298	123,183,948	94,630,246	93,074,171	91,534,688
	COSTS PER STUDENT	228,837	563,492	570,296	788,585	1,034,157	1,525,578
	ESTIMATED 2013 INFLATION RATE	5%	5%	5%	5%	5%	5%
	TOTAL COSTS AFTER INFLATION	96,111,422	129,494,713	129,343,145	99,361,758	97,727,880	96,111,422
	COSTS PER STUDENT	240,279	591,666	598,811	828,015	1,085,865	1,601,857
	ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	20%	20%	20%	20%	20%	20%
	TOTAL COSTS	115,333,707	155,393,655	155,211,774	119,234,110	117,273,456	115,333,707
	COSTS PER STUDENT	288,334	710,000	718,573	993,618	1,303,038	1,922,228

Although the BOS tariff is currently the same for schools and madrasahs, their actual costs are not the same. Authorised by a delegation of the Minister of Education, the Minister for Religious Affairs has regulated the madrasah curriculum to have more compulsory subjects, and to have more teaching hours per week than schools. In calculating the budget for operational non-personnel costs to MSS level, this results in a different set of costs, as demonstrated in Tables 22 and 23 below.

Table 22. Annual operational non-personnel cost of delivery of the compulsory curriculum in Jakarta junior secondary madrasahs at minimal cost (Year 2013)

			SPM	BREAK EVEN			
	NUMBER OF STUDENTS	400	216	160	120	90	60
	NUMBER OF CLASSES	10	6	4	3	3	3
1	MINIMUM STUDENT COMPETENCY	449,950	449,950	449,950	449,950	449,950	449,950
2	CURRICULUM AND SYLLABUS	3,115,000	3,115,000	3,115,000	3,115,000	3,115,000	3,115,000
3	TEACHING AND LEARNING ACTIVITIES	14,987,323	14,987,323	14,987,323	14,987,323	14,987,323	14,987,323
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	7,200,000	7,200,000	7,200,000	7,200,000	7,200,000	7,200,000
5	PROVISION OF TEACHING & LEARNING FACILITIES AND MATERIALS	10,062,500	10,062,500	10,062,500	10,062,500	10,062,500	10,062,500
6	SCHOOL ADMINISTRATION	49,468,658	49,468,658	49,468,658	49,468,658	49,468,658	49,468,658
7	STUDENT PERFORMANCE EVALUATION	23,058,809	23,058,809	23,058,809	23,058,809	23,058,809	23,058,809
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	108,342,240	108,342,240	108,342,240	108,342,240	108,342,240	108,342,240
	COSTS PER STUDENT	270,856	501,584	677,139	902,852	1,203,803	1,805,704
	ESTIMATED 2013 INFLATION RATE	5%	5%	5%	5%	5%	5%
	TOTAL COSTS AFTER INFLATION	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352
	COSTS PER STUDENT	284,398	526,664	710,996	947,995	1,263,993	1,895,989
	ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	0%	0%	0%	0%	0%	0%
	TOTAL COSTS	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352
	COSTS PER STUDENT	284,398	526,664	710,000	947,995	1,263,993	1,895,989

Table 23. Annual operational non-personnel cost of delivery of the compulsory curriculum in Jakarta junior secondary madrasahs at minimal cost + honorariums, consumption and minor capital expenditure (Year 2013)

			MSS	BREAK EVEN			
	NUMBER OF STUDENTS	400	216	192	120	90	60
	NUMBER OF CLASSES	10	6	5	3	3	3
1	MINIMUM STUDENT COMPETENCY	449,950	449,950	449,950	449,950	449,950	449,950
2	CURRICULUM AND SYLLABUS	3,115,000	3,115,000	3,115,000	3,115,000	3,115,000	3,115,000
3	TEACHING AND LEARNING ACTIVITIES	14,987,323	14,987,323	14,987,323	14,987,323	14,987,323	14,987,323
4	TEACHER AND EDUCATION STAFF DEVELOPMENT	7,200,000	7,200,000	7,200,000	7,200,000	7,200,000	7,200,000
5	PROVISION OF TEACHING & LEARNING FACILITIES AND MATERIALS	10,062,500	10,062,500	10,062,500	10,062,500	10,062,500	10,062,500
6	SCHOOL ADMINISTRATION	49,468,658	49,468,658	49,468,658	49,468,658	49,468,658	49,468,658
7	STUDENT PERFORMANCE EVALUATION	23,058,809	23,058,809	23,058,809	23,058,809	23,058,809	23,058,809
	COSTS BEFORE INFLATION AND ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	108,342,240	108,342,240	108,342,240	108,342,240	108,342,240	108,342,240
	COSTS PER STUDENT	270,856	501,584	563,492	902,852	1,203,803	1,805,704
	ESTIMATED 2013 INFLATION RATE	5%	5%	5%	5%	5%	5%
	TOTAL COSTS AFTER INFLATION	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352	113,759,352
	COSTS PER STUDENT	284,398	526,664	591,667	947,995	1,263,993	1,895,989
	ALLOWANCE FOR HONORARIUM, CONSUMPTION, AND MINOR CAPITAL INVESTMENT	20%	20%	20%	20%	20%	20%
	TOTAL COSTS	136,511,222	136,511,222	136,511,222	136,511,222	136,511,222	136,511,222
	COSTS PER STUDENT	341,278	631,996	710,000	1,137,594	1,516,791	2,275,187

c. Adequacy and fairness of current BOS funding

The calculations in Tables 16-23 show that at both primary and secondary level, the adequacy of BOS funding is strongly dependent on the number of students enrolled. This is true whether the calculation used is minimal; minimal +20%; or minimal + 20% + specialist primary teachers.

ACDP 006 consultations and FGDs showed very strong support for addressing the current inequity in the system by providing compensation to small schools/madrasahs. It was recognised that this cannot be done by reducing the tariff of schools with larger numbers of students and using those funds to compensate small ones. But a system of additional support or compensation for small schools is possible, alongside of a freezing of the tariff for a period of time. The limitations of Indonesia's current Education Management Information System (EMIS) make it impossible to administer a level of compensation specifically for each school/madrasah which currently falls below the "break even" line, even though the ACDP tool can calculate the sum required. But it should be possible to establish

compensation based on groups of schools/madrasahs, e.g. a group with enrolments between 50 and 100 students, and another between 100 and 150.

As an indicator, the compensation level currently required for groups of schools/madrasahs is provided in Table 24, below.

Table 24. Compensation above current BOS tariff required by small schools/madrasahs for delivery of the compulsory curriculum

School/madrasah	Compensation for minimal MSS	Compensation for minimal MSS + 20% for honorarium, consumption and minor investment	Compensation for minimal MSS + 20% for honorarium, consumption and minor investment, + subject teachers
Prim. school 50 -100 students	187,533	303,533	341,040
Prim. school 100 -150 students	0	0	7,854
Prim. madrasah 50 -100 students	187,533	303,533	341,040
Prim. madrasah 100 -150 students	0	0	7,854
JS school 50-100 students	582,146	840,575	-
JS school 100-150 students	65,288	220,000	-
JS madrasah 50-100 students	593,034	911,235	-
JS madrasah 100-150 students	71,823	262,741	-

It is recognised that the financial capacity of the national government is limited, and that the compensation may need to be introduced in steps, particularly if the BOS tariff includes the additional 20% and/or primary specialist subject teachers.

11. NEED TO IMPROVE EFFICIENCY BY MERGERS

Considering providing additional, compensatory funding for small schools and madrasahs raises questions of efficiency. Indonesia has many small schools and madrasahs delivering basic education. In many cases, there is no choice but to retain them because they are the only way to provide basic education in many rural communities. But in other cases, particularly in urban settings, school mergers are a viable option. An example is provided by the cities of Yogyakarta and Jakarta. Table 25, below, shows the average number of students in the bottom five deciles of basic education schools/madrasahs in those cities in 2011.

Table 25. The minimum and average number of students in the bottom five deciles of basic education schools/madrasahs in Yogyakarta and Jakarta.

PROVINCE	LEVEL	10th Pctl	20th Pctl	30th Pctl	40th Pctl	Median
DI YOGYAKARTA	SD/MI	54.0	72.0	84.0	96.0	114.0
	SMP/MTS	51.0	81.0	129.0	186.0	267.0
DKI JAKARTA	SD/MI	84.0	126.0	162.0	192.0	216.0
	SMP/MTS	48.0	78.0	108.0	150.0	204.0

Given the much higher per-student cost in small schools/madrasahs, it is difficult to justify an education system which has 10% of junior secondary schools/madrasahs in Jakarta with an average of just 48 students, and in Yogyakarta with an average of 51 students. It is not just that the operational non-personnel per-student budget required is uneconomically large. The personnel and capital costs, per student, are also very high and difficult to justify. In Indonesia small schools/madrasahs tend to serve

the poorest sections of society. This means that the communities served by small schools/madrasahs are generally the least able to provide the additional resources needed to ensure that the education their children receive is of adequate quality. There is an urgent need to consolidate the provision of basic education by mergers, wherever it is possible. This task is the responsibility of local, rather than the national government.

12. PERSONAL EXPENDITURE FOR BASIC EDUCATION

A full discussion of this area is covered in the ACDP paper, *Assistance to Poor Families with Personal Costs of Basic Education*.

That paper concludes that the best way to assist poor families with the personal cost of basic education is through a scholarship program similar to that currently operating under the name of *Bantuan Siswa Miskin* (Help for Poor Students), (BSM).

In 2012 this scholarship system targeted 6,599,683 basic education students at a cost of Rp 2,589,848,900,000 with the tariff set at Rp 350,000 for primary students and Rp 550,000 for junior secondary students.

Table 26. Number of poor students in basic education targeted by BSM in 2012 and the associated budget allocation

SCHOOLS/ MADRASAHS	TOTAL OF TARGETED STUDENTS	STUDENT PAYMENTS	TOTAL BUDGET
Primary schools	3,530,305	Rp 360,000-/Year	Rp.1,270,909,800,000
Primary Madrasahs	750,000	Rp 360,000-/Year	Rp. 270,000,000,000
Jun. Sec. Schools			
Yrs 7, 8	894,946	Rp 550,000-/Year	Rp. 492,220,300,000
Yr 9 (1 semester*)	479,918	Rp 275,000-/Semester	Rp. 131,977,450,000
New year 7 class (1 semester)	344,514	Rp 275,000-/Semester	Rp. 94,741,350,000
Jun. Sec Madrasahs	600,000	Rp 550,000-/Year	Rp. 330,000,000,000
Total	6,599,683	-----	Rp.2,589,848,900,000

*This class graduates from junior secondary school at the end of semester 1.

Work currently being undertaken by the National Team for Accelerating Measures for Countering Poverty (TN2PK) in the Vice President's office aims to improve the scholarship system in terms of efficiency and effectiveness of the disbursement of funds, more accurate targeting of recipients and a higher tariff of the scholarships which do not meet the personal costs incurred by families.

TN2PK estimate the personal costs of education, per child, to be Rp 910,000 at primary and Rp 1,390,000 at junior secondary level, far above the BSM tariffs. Increasing the scholarship value to that level would cost an additional Rp 2.354 trillion per year for primary students and Rp 1.098 for junior secondary students.

It is difficult to determine the percentage of poor students who should be eligible to support but who do not currently receive the scholarship. Doubling the number of students in receipt of the scholarship, and funding them for the full cost estimated by TN2PK would cost Rp 3.895 trillion for primary students and Rp 3.634trillion for junior secondary students.

