



Schools Reconstruction Program in West Java and West Sumatra

INDEPENDENT COMPLETION REPORT

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Acronyms and Abbreviations

ACM	Asbestos containing material
ACR	Activity completion report (for AusAID)
AIBEP	Australia-Indonesia Basic Education Program
AMC	Australian management contractor
AusAID	Australian Agency for International Development
BOS	GOI school operational funding (BOS fund).
Coffey	Coffey International Development Pty Ltd
CEPA	Communities and Education in Aceh
CPG	Commonwealth Procurement Guidelines
FGD	Focus Group Discussion
FAAO	Financial assurance and audit officer
GOA	Government of Australia
GOI	Government of Indonesia
ICR	Independent completion report (for AusAID)
IMT	Infrastructure Monitoring Team
IIRT	Independent Infrastructure Review team
Kabupaten	District
Kecamatan	Sub-district
M & E	Monitoring and Evaluation
MONE	Ministry of National Education
MORA	Ministry of Religious Affairs
MTsN	MORA junior secondary school
NGO	Non Government Organisation
NRP	Nias Reconstruction Project
OHS	Occupational health and safety
O&M	(infrastructure) operations and maintenance
SDN	State primary school
SRC	School reconstruction committee (or KRS)
SRP	Schools Reconstruction Program
SRPEIS	SRP Economic Impact Study May 2011
SRPMC	SRP (Australian) management contractor - Cardno Emerging Markets (Australia) Pty Ltd (Cardno)
TA	technical assistance
USAID	USA Agency for International Development
YCAP	Yogyakarta Community Assistance Project

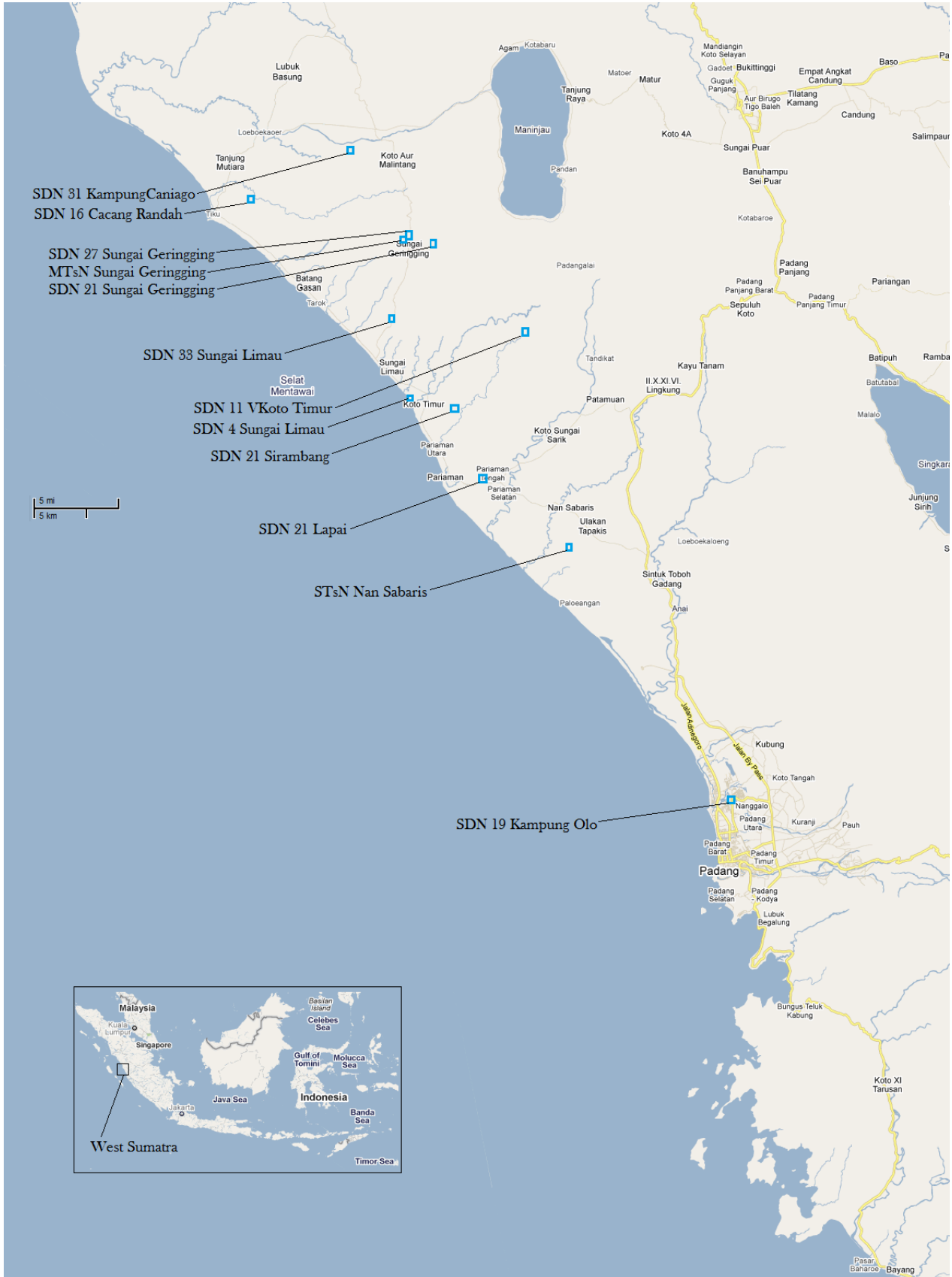
AID Activity Summary

Aid Activity Name		School Reconstruction Program in West Java and West Sumatra	
AidWorks initiative number: 37597			
Funding Agencies:		Government of Indonesia, Government of Australia and the Government of the United States of America	
Commencement date:	3 January 2010 (AMC)	Completion date:	2 June 2011
Total Program Budget		A\$ 15,840,941	
Government of Australia		A\$ 10 million (approx)	
Government of the United States of America		USD 5 million	
Delivery organisation(s)		Cardno Emerging Markets (Australia) Pty Ltd	
Implementing Partner(s)		Ministry of National Education / Ministry of Religious Affairs	
Form of Aid		Program	
Country/Region		Indonesia	
Primary Sector		Education	

Key Dates

September 2009	Earthquakes in West Sumatra and West Java
3rd January 2010 – 2nd May 2010	Preparation and Planning Phase
30th April 2010	Signing of GoUS / GoA Grant Agreement
7th May 2010	Signing of GoI / GoA Subsidiary Agreement
3rd May 2010 – 2nd June 2011	Implementation Phase
October – November 2010	Independent Infrastructure Review team
November 2010	PriceWaterhouseCooper's (PWC) Compliance Review of SRPMC and 15 Random School Visits
Official Opening with Ambassadors of Australia and the USA	18 May 2011

Program Locations and Sites Visited by ICR Team West Sumatra



West Java



Executive Summary

Background

Following severe earthquakes in September 2009, AusAID committed A\$10 million to the School Reconstruction Program in West Java and West Sumatra (SRP or the Program) working through the Ministry of National Education (MONE) and Ministry of Religious Affairs (MORA). The Government of United States of America, through USAID, provided a US\$5 million grant to AusAID to co-finance additional MONE schools in West Sumatra. The Program started in January 2010 with Cardno EMG (Australia) Pty Ltd as the Australian managing contractor (SRPMC) as they were already implementing the Australia Indonesia Basic Education Program. The Program closed on 3 June 2011.

The program objective was: 'to provide timely and high quality support to the Indonesian Government earthquake recovery and reconstruction operations in West Sumatra and West Java for the reconstruction of severely damaged schools.' The activities addressed four main areas: reconstruction of 57 schools serving approximately 9,500 students; school-community partnerships leading school reconstruction; enhanced economic livelihoods and community capability from these partnerships; and, reduced community vulnerability to future disasters through stronger school buildings and better prepared school communities.

Program Achievements and ICR Team Findings

Reconstruction: SRP has reconstructed 57 schools, 18 in West Java and 39 in West Sumatra, enabling 9,412 students (4,536 female and 4,876 males) to return to school. The Program was a major non-GOI contributor to the GOI primary school reconstruction program which still has a significant number of severely damaged schools. The reconstructed schools provide a significant improvement in basic facilities and are stronger and finished to a higher standard than comparable contractor constructed buildings. This will extend their functional life. Construction costs were comparable with other reconstruction activities but are a higher standard. Furniture and A\$ 325,000 of educational resource materials were provided. Installed water supply and / or sanitation facilities are less than satisfactory in about half the 18 schools visited.

Construction was largely completed in seven months (in West Java, five months), longer than the scheduled five months which was based on GOI building schedules (but was still shorter than the program initiation and design/preparation phases). The longer period had been foreseen in the SRP draft work plan. School community issues, competition for reconstruction materials and community labour needing to rebuild their own houses contributed to the delays. Systemic issues delayed final and detailed completion of construction.

Community partnership: Community selected school reconstruction committees (SRC) managed school reconstruction and engaged with the local community. The local community and school partnership was reportedly strengthened and contributed to disaster trauma healing. Most of the estimated 2,500 construction workers came from the local community with 60-70 % being married workers with children enrolled in the school.

Initial SRP training, provision of a full time SRP construction consultant and, financial and reporting guidance from the SRP financial assurance and audit officers, was valued by the SRCs and contributed to their success. However, additional structured training was requested by ICR respondents and would have further embedded the community development processes. Community engagement and participation was indirectly assisted through the recruitment of SRP field staff with experience in post-disaster community based reconstruction. A more structured approach to community engagement through specialised inputs (particularly in the planning / assessment phase) and practical training could have reduced initial problems on some school sites and contributed to a stronger SRC and school committee which would enhance sustainability.

Economic benefits: SRP leveraged the opportunity that school reconstruction provided to support local economic recovery from the disaster. More than A\$ 11.3 million was spent directly by SRC on school reconstruction, about 20 % of this went to wages which largely entered village economy. In the period after the disaster, this injection of reliable wages income (an estimated A\$2.1 million or Rps. 18.3 Billion) into the community provided direct family income support and funds for house reconstruction and replacement of damaged household assets. The draft SRP economic impact study estimated these multiplier benefits at 3 times for outputs and 0.67 for income. In the completion survey, more than half of school principals and SRC heads interviewed reported that the increase in economic activity was the most important aspect of the community based construction program. SRC members and construction workers developed skills in a range of areas such as quality construction skills, earthquake resistant design, finance and administration, and procurement skills.

Reduced community vulnerability: The ICR team found that the construction of all schools visited was perceived by local community as very strong and would provide a safe haven during future earthquakes for nearby community members. School community preparedness has been enhanced through the provision of training to all schools on disaster

preparedness and planning. More than 2/3 of schools reconstructed under the SRP have evacuation plans and have held evacuation drills. However, ongoing support and work is required if this disaster preparedness is to be institutionalised and extended to the wider community.

AusAID-USAID Partnership: The ICR team believes the partnership has added value and provided benefits to both countries through: demonstrating successful community based construction approaches; reducing unit program management overhead costs; providing economies of scale in training and procurement; simplified interaction with GOI agencies by having one less donor implementing team taking senior GOI manager time; and, allowing greater use of standard processes.

ICR Evaluation Assessment

Evaluation Criteria	Rating (1-6)
Relevance	6
Effectiveness	5
Efficiency	5
Sustainability	4
Gender Equality	3-4
Monitoring & Evaluation	5
Analysis and Learning	4
Impact	5

Rating scale: 6 = very high quality; 1 = very low quality. Below 4 = less than satisfactory.

Conclusions and Recommendations (Numbering is consistent with the main report)

1. *Community Engagement* Communities have been mobilised successfully to manage the reconstruction process. The Program achieved a level of community management which indicates a good level of community participation. There is anecdotal evidence that the community engagement process focused on reconstructing the schools may also assist in addressing post disaster trauma stress. There were limited training on community engagement for construction consultants, district coordinators and the SRCs. The SRPMC had unsuccessfully proposed to AusAID that additional community engagement resources be included in the SRPMC team.

Recommendation: #1 AusAID continue to use the principle of community empowerment and community based construction in school and village level infrastructure activities. For future disaster reconstruction programs, more attention should be given to increased community participation (and ownership) in the planning process. The community construction committee is a key element.

2. *School Reconstruction Committees* Community engagement through a SRC structure can successfully implement a community based reconstruction activity where strong and continuous external guidance is provided. The SRC process separating school reconstruction from the ongoing responsibilities of the school committee and school principal provides effective checks and balances.

3. *Construction Quality* The schools constructed have reached a good standard of construction, particularly in the core buildings. However, construction was not completed effectively and the finishing of the schools was inconsistent, possibly because the construction consultants and community building teams did not clearly understand what was required. Several schools had used experienced skilled workers for the more complex finishing work. The SRPMC had adequate systems in place to achieve the planned quality except for items outside the core school package such as water supply and sanitation facilities.

4. *Construction and User Occupational Health and Safety* Implementation of occupational health and safety activities was variable and not consistently applied. ACMs were found on one site visited and may not be managed consistently by GOI. There were indications of under-insurance of workers for social security.

Recommendation: # 2 For reconstruction activities where site clearance is not a direct responsibility of AusAID AMCs, AusAID should review if GOI ACM removal policies (and awareness and practice) are consistent with AusAID's requirements. A similar approach to that used for reporting of possible corruption may be appropriate.

5. *Sanitation and Water Supplies* Most SRP toilets have been built to an acceptable standard. However some are not working due to inadequate (sometimes inappropriate) plumbing and, in some case, inappropriate fittings that are difficult to maintain in operating condition within the limitations of school budgets and skill level of maintenance staff. Of the 18 SRP schools visited more than half had water supplies that the ICR team considers unsustainable. The disabled toilets are mostly functioning, but underused, and the pedestal toilet is often found to be culturally inappropriate.

8. *Payment of the Block funds* The current SRP disbursement process has three tranches of payments (30 %, 50 % and 20 %) payable before the work funded by that tranche is started. This has led to some problems with construction and detailed finishing work on the school not being completed or requiring encouragement from District Education Offices and program staff.

Recommendation: #3 To encourage adequate completion of activities, a bonus payment of about 5 % of the works value should be retained until the AMC has verified that work has achieved an acceptable standard and any defects that occur in a 3 month defects liability period after practical completion have been rectified. This bonus could be funds that the SRC can allocate to their priorities such as teaching materials, security fencing, etc.

9. *'Branding', public awareness and accountability* The SRPMC has implemented awareness activities so communities know funding for the construction is provided by AusAID and USAID (in West Sumatra). Particularly for a co-financed program, these activities may have been inadequate.

Recommendations #4 AusAID develop a standard 'branding' policy for construction programs with clear guidance on the inclusion (or not) of the managing contractor's logos on documentation. This is particularly important when AusAID implements a program/ project with co-funding from other donors.

11. *Future Reconstruction Activities* The community based construction model has worked effectively for the SRP and has achieved most of its objectives. The processes now are relatively well developed but have been designed and implemented on an ad hoc basis based on lessons learned, rather than using pre-prepared structured implementation packages.

The program initiation and screening / assessment phases took more than 200 days so there could also be opportunities to streamline these processes. More realistic timeframes for implementation (150-200 days) should be included for future disaster responses with a higher priority being placed on the initiation/assessment phase.

Recommendation: #5 To facilitate earlier responses to future disasters and to provide greater flexibility for contracting by AusAID, the experience and systems from the SRP (and other recent AusAID disaster response programs) should be developed into an implementation package that could be then used by any of the AMCs with some engineering experience managing a current AusAID activity in Indonesia. The implementation package would include: community engagements processes, staffing specifications and TOR, standard documentation for staff selection, awareness and implementation training packages, quality assurance processes and systems, and implementation, monitoring and technical and financial reporting to meet GOI and AusAID needs.

12. Policy Dialogue

Recommendation: #6 Future AusAID support to disaster reconstruction activities in the education sector in Indonesia will be strengthened by policy dialogue with MONE / MORE in the following areas:

#6.1 *The structure of school reconstruction committee.*

#6.2 *Key elements of the reconstruction process:* including site clearance, building design, GOI monitoring and worker insurance.

#6.3 *Optional construction elements*

#6.4 *Occupational health and safety* Appropriate OHS measures for community based reconstruction

6.5 *Disability safeguards* Implementation of disability (and other donor priority) safeguards

6.6 *Maintenance funding* The importance of budgeted maintenance funding for schools

#6.7 *Financial management support and audit*

Lessons and Good Practice

1. Construction and Reconstruction of Community Infrastructure

- Community infrastructure construction provides opportunities for communities to learn how to manage infrastructure through a process of community empowerment and community building. This requires resources to guide construction and facilitate the community capacity building.

Training and skill development

- Implementing community infrastructure such as school buildings is made up of repeatable elements such as foundation preparation, reinforcing preparation, shuttering and installing reinforcing, etc. These elements can be explained in standard packages with a mix of practical training sessions and well prepared and tested visual aids (videos, simple guide sheets) that clearly show what is required. These could be used in other AusAID and GOI funded school building activities. The initial element of these presentations should be to illustrate the standards and detailed finish that is being targeted.

Construction quality

- Construction quality will be improved by use of defined '**hold points**' specified where construction may not proceed further until the works have been signed off by the district coordinator or more senior engineer should be considered.

Water supply and drainage

- Site specific elements such as water supply and, septic tank and drainage discharge, and retaining walls can need a higher level of design and construction skills. Future Education Partnership and post disaster reconstruction programs should have access to resources for these additional inputs, when necessary.

Administration

- Future AusAID funded community based construction programs should ensure that all workers are covered for social security for the full construction period.

2. Community engagement for Future Disaster Reconstruction Activities:

- The program design (and technical assistance budget) should include resources for training the field engineering team in community engagement and basic trauma counselling processes and providing community engagement and participation technical assistance, if required particularly in the assessment / planning phase. These may not be needed if field engineering consultants with community engagement skills can be recruited. Alternatively, NGO resources could be used as in the AusAID supported YCAP where NGOs were used as facilitators of community based projects to increase community resilience.

3. Response to Natural Disasters

- Times lags in initiating, reaching agreement on and planning / assessing reconstruction activities can delay completion just as much as construction delays. The UN disaster relief coordination groups established with the national government immediately after a major disaster may be a forum for identifying priority areas and possible funding partners.

1 Introduction

1.1 Activity Background

The September 2009 earthquakes in West Java and West Sumatra caused significant loss of life and damage to public and private infrastructure, particular in West Sumatra. The death toll from the earthquakes was more than 1,081. In addition, by the National Agency for Disaster Management estimated some 300,000 houses, 5,500 schools, 100 health facilities and 500 office buildings were damaged or destroyed. About 250,000 families (1,250,000 people) were affected through the total or partial loss of their homes, access to health and education, and livelihoods. The Australian Government (GOA) through the Australia – Indonesia Partnership, agreed to provide support to reconstruct severely damaged schools and health centres.

1.1.1 Policy Setting

The Australian Agency for International Development (AusAID) has substantial experience in post-disaster reconstruction and construction of schools throughout Indonesia. Through the Australia-Indonesia Basic Education Program (AIBEP), AusAID supported the Government of Indonesia (GOI) education system using GOI systems and processes to implement and monitor the GOI community based school construction model. More than 2,000 junior secondary schools have been constructed.

To complement this major investment in the education sector, the Schools Reconstruction Program (SRP or the Program) was to enable children in affected areas to return to the classroom by assisting GOI to reconstruct severely damaged schools. This assistance, as well as assistance in the health sector, was to ensure that development gains in health and education were not lost because of the disasters.

Drawing on lessons from reconstruction in Aceh, Nias and Yogyakarta, and the AIBEP experience, AusAID worked with GOI to develop a program for school reconstruction suited to the post-disaster context. The result was a modified AIBEP community based school construction model including strengthened technical assistance (TA) to each school site to promote construction quality, and SRP construction funds (Block Grants) channelled directly to the school (not through GOI systems) to enable faster reconstruction. The GOI school building designs used by the Ministry of National Education (MONE) and the Ministry of Religious Affairs (MORA) were slightly modified to improve earthquake resistance.

1.1.2 Project Formulation and Design

The SRP was implemented through a preparation and planning phase and then an implementation phase. The SRP was contracted to Cardno Emerging Markets (Australia) Pty Ltd (Cardno or the SRPMC), under a design and implement contract. Cardno, who were managing the AIBEP activity, implemented the preparation and planning phase from January to April 2010.

GOI submitted a list of 115 priority schools to be reconstructed across 10 districts in the two provinces. These were visited by teams to assess, verify and prioritise the sites using a set of agreed criteria. At the end of the preparation and planning phase, 30th April 2010, the Grant Agreement was signed by GOA and the Government of the United States of America. The subsidiary arrangement between the GOA and GOI was signed on 7th May 2010. Implementation commenced in May 2010.

GOA committed up to A\$ 10 million to support reconstruction of damaged schools in West Java and West Sumatra (up to A\$ 5 million in each). A further US\$5 million grant was provided by the USA Agency for International Development (USAID) to AusAID managed through a co-financing agreement. The additional USAID funds were invested in MONE schools in West Sumatra.

1.2 The Schools Reconstruction Program

Although developed as an emergency response activity, the Program was structured as a development program. The program logframe is provided in Annex 1 and the objective and outcomes were:

Objective: 'To provide timely and high quality support to the Indonesian Government earthquake recovery and reconstruction operations in West Sumatra and West Java for the reconstruction of severely damaged schools.'

Outcomes:

1. Reconstruction of 59 schools in West Java and West Sumatra enabling approximately 9,500 students to return to formal education in structurally sound and safe environments.
2. School-community partnerships developed through active participation in school reconstruction.
3. Enhanced economic livelihoods and capability of school communities through involvement in school reconstruction.
4. Community vulnerability to disasters is reduced as reconstructed school buildings will meet Indonesian earthquake standards and community awareness of disaster preparedness will be developed.

1.3 Evaluation Process

As part of AusAID quality processes, an independent completion evaluation / review (ICR) to assess the achievements of the Program was commissioned, see Annex 1 for the terms of reference (TOR). The evaluation objectives were to:

- (i) Evaluate the extent to which SRP achieved its objectives (Impact);
- (ii) Assess the appropriateness of the modality used under SRP for a post-disaster assistance program (the SRP processes); and,
- (iii) Provide lessons learned that will inform and shape the early implementation of the Education Partnership and inform future Australian post-disaster reconstruction programs.

The ICR team¹ used a triangulation process to cross-reference primary and secondary data from sources including: field visits to SRP schools; visits reconstructed schools and infrastructure supported by other donors; interviews with key informants at school, community, kecamatan, kabupaten, provincial and central government levels plus other stakeholders; assessing program monitoring and evaluation (M&E), and SRPMC reports together with documents from the AIBEP review and, experience and / or reports from previous AusAID funded post-disaster program review for Yogyakarta, Aceh and Nias. The SRP Post Construction Survey (SRPPCS) and draft activity completion report (ACR) prepared by Cardno provided additional data and background information. School census information from these reports was cross-referenced with ICR team experience.

The main areas for caution are in assessments of sustainability of the buildings, particularly the water and sanitation systems, community processes and the ongoing disaster preparedness processes.

Interviews were structured around the guiding questions developed in the evaluation plan and elaborated to guide subjective assessment of the construction and community aspects of the Program. The guiding questions are provided in Annex 3.

After initial meetings with AusAID, MONE, MORA, Cardno EMG, Coffey and USAID (by telephone) from 2 May 2011, the ICR team spent eight days in West Sumatra and West Java visiting 18 Project schools, two JICA funded school reconstruction sites, two schools funded and built through MONE processes and a SDN rebuilt by a non-government organisation (NGO) associated with ANTV. The schools visited were selected to minimise duplication with schools already visited by the Independent Infrastructure Review team (IIRT) fielded

¹ Ian Teese, M&E specialist / team leader; Methodius Kusumahadi, Community development specialist; and, Rob Dewhirst, Infrastructure specialist. Ms Mia Hapsari provided valuable interpreter support in the field.

in October 2010² and the PriceWaterhouseCooper's (PWC) Compliance Review of SRPMC and 15 Random School Visits (November 2010). Feedback from the ICR team meetings and observations aligns with observations from the earlier two reviews. A list of people met is provided in Annex 4.

Provincial MONE and District Education offices and, provincial and district MORA offices were visited for discussions with key senior managers. More than 290 people (including 124 women) participated in the focus group discussions and site inspections. In addition, 16 former program construction consultants (including three women) and supervisors met with the ICR team in Padang to share their experiences. A draft aide memoire (Annex 5) was presented to more than 14 AusAID staff in Jakarta.

This report follows the AusAID guide for activity completion reports using the standard evaluation questions included in the SRP ICR TOR. In addition, AusAID included two groups of key questions in the ICR TOR. The second group of eight questions cover the first group of questions and have been addressed in this report.

2 Relevance

2.1 Objectives

The objectives and outcomes were very relevant to the reconstruction effort and provide a realistic balance of physical construction outcomes supported by activities designed to provide additional benefits to the school community and longer term sustainability. The SRP is in line with the fourth Pillar of the Australia-Indonesia Country Strategy 2003-2013, Safety and Security. The SRP has shown that Australia continues to be a reliable and effective partner in disaster response, whilst working to reduce vulnerability to future disasters. The SRP aligns with GOI policy, specifically BNPB Regulation No. 17 (2010) which prioritises reconstruction in accordance with District Government needs and corresponding requests³.

2.2 Activity Design

The iterative design process commenced with GOI listing their priority schools. The planning / assessment phase ensured that the most severely damaged schools were targeted. The long assessment period led to some priority schools being funded by other donors requiring additional schools to be screened.

Students from badly damaged schools were being taught in temporary classrooms including tents and other community facilities. Feedback during the fieldwork indicated that SRP implementation did not create significant difficulties for the relocated students.

The SRP financing arrangements directed block grants for community based construction to communities through the SRPMC and was appropriate in the post-disaster context. The Block Grant process provided a faster flow of funds to the target groups compared to GOI budgetary processes. Community based construction provided a mechanism to quickly commence construction, maximise community employment and minimise construction overhead costs reducing the funds actually used for building. Contractor based construction would have been more difficult to implement as contractors were busy on other reconstruction activities.

2.3 Links to Reconstruction and School / Education Sector Programs

As indicated earlier, the SRP is built on the experience of the AIBEP and Aceh, Nias and Yogya disaster reconstruction activities supported by AusAID, USAID and other donor organisations. The SRPMC and senior team members had very relevant school construction experience from implementing AIBEP plus Cardno had experience working on earlier disaster reconstruction activities in Indonesia. The Program also created work opportunities for engineers with experience of other disaster reconstruction activities, particularly community based construction as planned for the SRP.

² The IIRT included Andrew McEvoy, an experienced engineer, who visited 16 schools.

³ Source. SRP Draft ACR Page 18.

Information from meetings with District Education Offices indicated that large numbers of classrooms had been destroyed and GOI funds could only rebuild a proportion⁴. The 57 schools (about 350 rooms) rebuilt under SRP were a small (but valued) contribution to the reconstruction effort which will continue for several years.

2.4 Links to Other Donor Reconstruction Activities

The main link was with USAID to fund reconstruction of additional MONE schools in West Sumatra. There was informal interaction between the SRP and the Coffey International Development Pty Ltd (Coffey) team building replacement district health centres in West Sumatra; some near SRP schools. The district health centres were planned for and constructed by contractors.

3 Effectiveness

3.1 Achievement of Objectives

The schools constructed under the Program and the community engagement processes used for the construction processes are a good example of early development co-operation after a natural disaster. At each school, stakeholders almost universally consider that they had a school that is structurally sound and a quality building⁵. The school principals, teaching staff and community members are very proud of the new schools constructed. Contributions to achieving SRP objectives and outcomes are summarized in the Table 1.

Table 1 Achievements of Schools Reconstruction Program

<p>Outcome 1: SRP has reconstructed 57 schools (59 planned⁶), 18 in West Java and 39 in West Sumatra, enabling 9,412⁷ students (target 9,500) to return to school (4,536 female and 4,876 males). Reconstructed schools are listed in Annex 6. The SRPPCS completed in April 2011 highlighted⁸ that the reconstructed schools had a higher proportions of poor students than the average proportions in the two provinces. Field observations supported this. The reconstructed schools provide a significant improvement in the basic facilities (see later Table 2). Furniture and, some equipment and books, have been provided at all schools. In addition all schools have benefitted from a total of A\$ 325,000 educational resource materials including over 70,000 books that have been supplied across the Program.</p>
<p>Outcome 2: Community selected school reconstruction committees (SRC) managed school reconstruction and engaged with the local community. The SRCs were responsible for recruiting local labour, sourcing local materials and, managing and reporting on the progress of construction. Through these processes of local community engagement, the partnership between the local community and the school was reportedly⁹ strengthened. However, data is not available on community / school engagement before the disasters¹⁰. In about 84 % of the visited schools their SRCs held local community meetings at least twice a year and more than half of the SRCs held them at least quarterly¹¹. These meetings demonstrated the links of the SRC to their local communities. All SRCs reported that construction workers were mostly recruited from local community members at the same time providing them with some sort of trauma healing disaster impacts. The total number of workers employed is estimated at more than 2,500¹². Feedback during field visits indicated that most workers came from the local</p>

⁴ For example in Tasikmalaya the head of the District Education Office observed that over 4,000 classrooms had been destroyed with about 1,050 rebuilt by April 2011. The Pariaman District Education Office reported that of 185 severely damaged schools, work had not started on 70 schools due to a lack of funds.

⁵ This was for 9 of 11 schools where the questions were specifically asked. Only one school visited, SDN 21 Sungai Geringging, raised negative issues.

⁶ The number of schools was reduced from the initial target of 59 to 57 schools due to exchange rate changes when the implementation plan was being finalised. Later changes in exchange rates increased the funds available in rupiah.

⁷ SRPPCS Page 5. Information on enrolments collected by the ICR team supports the SRPPCS census data.

⁸ SRPPCS Page 25

⁹ This was directly commented on at SDNs in Caniago, Maralaksana and Banjaranyar.

¹⁰ However, anecdotal information collected during the field visits suggests there was limited engagement before the disaster due to the previous Minister of Education promoting a 'free' education policy.

¹¹ SRPPCS Page 14

¹² Calculated using an average daily rate for workers of Rps.50,000. The ICR team did not receive the final draft Economic Impact Study (EIS) until after the field work was completed. The EIS estimated 4,275 jobs (30 x 2.5 x 57 schools)

<p>community¹³ with 60-70 % being married workers¹⁴ with children enrolled in the school. These workers had actively sought to be engaged in SRP for the future benefit of their children.</p>
<p>Outcome 3: SRP leveraged the opportunity that school reconstruction provided to support local economic recovery from the disaster and development. The ICR team found that most construction workers came from near the school. The community based construction model contributed to local economies through the engagement of local labour, and using local suppliers for procurement.</p> <p>Materials for construction were purchased from suppliers within the village or sub districts and in the majority of cases within the district in which the school was being reconstructed.</p> <p>More than A\$ 11.3 million was spent directly by SRC on school reconstruction; about 20 %¹⁵ of this went to wages which largely entered village economy. In the period after the disaster, this injection of reliable¹⁶ wages income (an estimated A\$ A\$2.1 million or Rps. 18.3 billion ¹⁷) into the community for direct income support and provided funds for house reconstruction and replacement of damaged household assets. The draft SRP economic impact study¹⁸ estimated these multiplier benefits at 3 times for Outputs and 0.671 for Income¹⁹.</p> <p>The SRP assisted the development of skills as value-added to the community²⁰.</p> <p>More than A\$13.5 million would have been spent by the SRP in Indonesia.</p> <p>The SRPPC (Page 15) reported that more than half of school principals and SRC heads believed that this increase in economic activity was the most important aspect of the community based construction program.</p> <p>Workers developed skills in a range of areas such as quality construction skills, earthquake resistant design, finance and administration, and procurement skills also how to assess quality of construction materials.</p> <p>On-the-job training through discussions with workers and labourers on-site during the construction process often led to dialogue concerning the logic behind design decisions and material specifications</p> <p>The SRC developed skills in the community based construction model and members had learnt improved finance and administration skills, with the procurement of the roof trusses being the first major procurement process.</p>
<p>Outcome 4: ICR team found that the construction of all schools visited has been perceived by local community as very strong²¹ and could be a safe haven during future earthquakes for nearly community members.</p> <p>The critical elements of the enhanced design have all been met in the reconstruction of the schools, significantly strengthening the building and improving occupant safety in the event of future earthquakes.</p> <p>More than 2/3 of schools reconstructed under the SRP have evacuation plans and have held evacuation drills.</p> <p>School community preparedness has been enhanced through the provision of training to all schools on disaster preparedness and planning. Workshops were conducted in the provincial capitals and followed up through site specific training at each school. In this way, school leaders can apply the principles and skills learned at their own school site.</p>

The awareness of senior MONE and MORA staff (provincial and district level) on the advantages of community involvement is higher in West Java²² than in West Sumatra. In West Java, provincial MONE and

¹³ In several schools in West Sumatra, more skilled workers from Java were used, particularly for the finishing work.

¹⁴ The balance, apart from the Javanese workers, were mostly younger unmarried men from the village.

¹⁵ Unpublished data from SRPMC.

¹⁶ Discussions with community members at Sungai Limau SDN 04 indicated that members valued the reliability of the (low) labouring income compared with the variability of the alternative, possibly higher, fishing income.

¹⁷ The SRPPCS and draft ACR do not provide estimates of the total number of workers employed or person days included. However, based on total construction expenditure of about A\$ 11.6 million from the Imprest account with about 20 % allocated to labour and 90 % of this spent on local labour, the funds injected into the local economy would have been at least A\$2.1 million or Rps. 18,3 Billion. This estimate compares with the estimated A\$ 1.88 million of direct wage income (Page 9) in the Cardno Economic Impact Study.

¹⁸ The ICR team leader based the estimates in Table 1 Outcome 3 from other program data and field interviews.

¹⁹ Multiplier or Flow-on employment / benefits are a complex area of economic analysis, however the ICR team agree with the broad approach and findings of the EIS.

²⁰ There was a range of responses from groups with one group at MTsN Sei Geringging reporting that many of the 100 construction workers had secured outside construction work while other schools reported no new outside work. Other schools noted that the SRPMC had provided certificates of employment to the workers which were used to support employment applications with construction companies outside the program area.

²¹ The enhancements to the design included lintel beams extended to the gables, increased specification of materials particularly steel reinforcement and concrete, and additional longitudinal ties between columns and brickwork.

²² The MONE Director in West Java province is a strong advocate for community based construction and is willing to issue public policy decisions to support community based approaches (personal communication).

District Education Officer staff have a better understanding of, and therefore “believing in”, the advantages of community engagement and prefer to use community approach rather than private company contractors.

The objectives and outcomes in the design document did not provide detailed indicators and targets on how the intended results (change of condition, perception, position, behaviour) would be assessed. One example of confusion created due to having no indicators, was the parameter of the intention of Outcome 4, the last part: the community awareness of disaster preparedness will be developed. ICR Team found evidence of increased awareness in the part of school community (teachers and all children) but ICR team only has anecdotal feedback on the achievement of those elements at the community level.

3.2 Standard of Outputs

3.2.1 Construction

The school facilities were reconstructed based on the GOI standard, *Facilities and Equipment Standards for School / General Education and Madrasah Infrastructure Standard (2007)*. Factors such as the pre-existing facilities, available space and community views influenced final site plans²³. The reconstructed schools provided a significant improvement in the basic facilities available at the schools as shown in Table 2.

Table 2 Proportions of Participating Schools with Basic Facilities Before and After SRP.

Item	Pre – Earthquake	Post Reconstruction	Comment
Six Classrooms	79%	100%	
Teachers Room	91%	100%	Principal's room was integrated in this room
Library	51%	70%	Depends on the land size of the location
Separate Boys and Girls toilets	48%	100%	
Toilets for Students with Special Needs	4%	100%	
Hand Washing Facilities	21%	100%	
Ramps for Disabled Access	0%	100%	

Source: SRPPCS Pages 10-11

The revised school designs met GOI Earthquake resistant specifications and other improvements included: underfloor damp proof membrane and reinforcing mesh; non-slip tiles for outside and wet floor areas; removal of teacher’s platform from the classrooms; inclusion of drainage and landscaping; and stronger concrete components, further details on these improvements are provided in the engineering annex. The SRP standard designs are simple and robust. The rectangular layout of a rigid box made from stronger concrete means that the buildings will withstand most earthquakes and in a very large earthquake the design is likely to allow ductile²⁴ deformation that will protect lives.

The quality of the schools constructed was assessed by the ICR team during their visits to and inspections of the 18 SRP schools²⁵ and are summarized in the following table. Additional analysis of engineering aspects are provided in the Engineering working paper provided in Annex 7.

Table 3 ICR Assessment of Construction Quality

	Construction Quality	School Functionality	Appearance	Construction Sustainability
West Sumatra	5.5	5.3	5.4	4.8
West Java	5.1	5.0	5.0	4.4

Ratings: Code: 6 = maximum/best result. 1=poor or nil outcome

The table highlights that construction at the schools visited by the ICR team was generally quite good with one below average example in West Java reducing the scores there. The differences between each province were

²³ For example at Banjarnayar in Ciamis district, West Java, the design reversed the school layout so that the student play area was away from the adjoining road creating a safer environment for students.

²⁴ In ductile failure, the building deforms instead of the building suddenly failing and collapsing as would occur in a brittle failure.

²⁵ This process was developed by the ICR team leader for the ICR team members using the outline questions in Annex 8 and discussed by the Team so that team members could assess both components.

relatively constant. Sustainability was rated lower than other factors as the ICR team considered the improved building quality did not offset uncertain future maintenance funding. The ICR team believes quality school buildings have been constructed in accordance with the guidelines. This construction quality has come from a mix of SRPMC training, supervision, guidelines, reporting requirements and support. The IIRT stated that “the standard design adopted by the SRP is considered suitable for the purpose²⁶”.

The ICR team found the local community perceived the SRP constructed schools as superior in terms of building quality and community ownership during and after construction to schools other donor supported schools such as the Bank Mandiri and Buddha Tsu Tzi Foundation (Pangalengan, West Java) also ANTV and TV One (West Sumatra).

Quality assurance and control The SRPMC built on their experience from AIBEP to implement a structured quality assurance system discussed further in the engineering annex. Overall these processes worked well as assessed in Table 3 and in the IIRT report. Quality was enhanced through the use of contractors to supply and install light steel roofs and roof trusses on most schools as a package with a 10 year warranty. Difficulties in construction were most often related to compliance with quality specifications that deviated from the locally accepted and traditional practices.

Possible weaknesses in the quality management processes include: limited check or hold points in construction where more senior engineers check critical construction points and the full weekly report from the construction consultants to the SRPMC central office taking too much time to prepare and monitor.

School support infrastructure While the school buildings were completed to a good standard, school support infrastructure, such as the water supply, sewerage systems, security of the school site and perimeter fencing were not always completed to an adequate standard. The main reason identified by the SRPMC²⁷ (and agreed by the ICR team) is that these items are considered by MONE as secondary components of a school building, not essential components. The ICR team observed the following weaknesses:

- (i) *Water supply:* More than half of the 18 SRP schools visited had water systems which had failed or were likely to fail due to poor design, poor workmanship or would have no dry season water supply. Also most high level water tanks installed would be disabled by future earthquakes. A failed water supply means that toilets designed to be flushed with water will not function.
- (ii) *Sewerage:* The IIRT advised that the septic disposal trenches were too small particularly in clay soils. The SRPMC reportedly made efforts to improve this with longer disposal trenches and larger soak pits within the, often constrained, school sites, but the issue has still not been resolved
- (iii) *Security:* About 30 % of schools visited had no or incomplete fencing around the school and/or insufficient security bars on the school windows. Teachers believe a fence around the school is necessary to contain children at school and provide some protection from vandalism or theft at night²⁸. At least one room needs window security bars to protect valuable equipment.

Finishing construction

Completing construction: At most SRP schools, problems were experienced finishing the construction work to a satisfactory standard. Motivation to complete work on the schools often dropped substantially after the last advance tranche payment had been made. The SRPMC prepared special budgets for 46 schools to complete identified defects work as the SRC no longer functioned after practical completion. The SRPMC were concerned about construction completion as experience during AIBEP showed that school often did not get

²⁶ Page 5 of the IIRT Report, January, 2011.

²⁷ Statement from the SRP Team Leader to the ICR team. This was subsequently confirmed during an interview with Head of Education in Tasikmalaya District who described water supply, sewerage systems, security of the school site and perimeter fencing as additional (penyempurnaan) rather than compulsory (wajib) elements for a school

²⁸ Some schools visited by the ICR team did not have night guards

completed, once the second tranche of funding was made. AusAID reported²⁹ that under AIBEP, there were 56 incomplete schools out of 2,074 schools constructed.

Communities were motivated to complete works by: encouraging principals to emphasis to the SRC the importance of completing the school so children could start using their new school and advising the SRC and principals that they would not receive their "Book money" until the school was completed.

Detailed finishing: The ICR team noted some good quality finishing work³⁰ in all schools (but in different parts of the buildings) but not many schools visited had good finishing across all the areas. This was despite additional SRP resources, including more skilled tradesmen from Java, being employed at several construction on-sites in West Sumatra. SDN Sukabungah at Pangalengan was the best finished school visited by the ICR team.

This lack of consistency suggests that the construction consultants and the construction teams did not have enough guidance on the expected standard of finish for the different parts that could be achieved within the SRP budget. Additional awareness creation and demonstration of achievable standards may improve the finish. A lack of awareness of achievable standards is a problem in community based construction where the unskilled workers have little appreciation of what is to be built and the standards that can be achieved.

Construction training focused mostly on the SRPMC staff, the SRC and construction workers. But structured training to SRCs was limited to a three day training course at the beginning of construction. On-the-job training was provided by individual construction consultants and district coordinators throughout implementation. Formal training was provided to site and supervising engineers to confirm and consolidate the desired approach and outcomes and reported they found the monthly coordination meeting a valuable tool in sharing experience and improving practices. The SRP training video and presentation³¹ were a good start but did not provide a clear vision of the planned end results and did not provide detailed construction information such as: installing damp proof membranes; bricklaying; and, plumbing and drainage works.

Occupational and site health and safety (OHS) included providing social security insurance for those working on-site and an introduction to site health and safety at the training at the beginning of construction. The SRP team in West Sumatra undertook OHS promotional activities based on experience from the CEPA project. Feedback from three sources³² indicated that the supply of work boots was useful. However ICR team discussions and photographs of four school sites indicated that few workers wore boots on-site. There was little evidence of safety sensitisation for new workers at the start of construction or displaying of warning signs for major site hazards³³. Hard helmets may not have been a high priority because only single storey buildings were constructed and the more hazardous roof construction and installation work was undertaken by suppliers with more experienced workers.

No major accidents were recorded by the SRPMC or noted during field visits. In some cases, social security insurance may not have extended past the planned 150 days construction-site and did not always cover all the workers on-site. The ICR team notes that payment of the second funding tranche was dependent on showing the social security insurance had been paid, however a coverage gap may have been created when the construction period ran past the planned 150 days. As with the school support infrastructure noted above, the SRC should be part of the decision process on how OHS is managed on their site.

²⁹ From AusAID feedback on SRP ICR draft report

³⁰ Finishing includes painting, fixing of linings for ceilings and under the eaves, safety rails, attaching blackboards, installing the partition wall between the teachers room and principal's office in SDNs, installing the large dividing doors in the double classroom, making bookcases, electrical wiring and tile laying.

³¹ It is not clear if the PowerPoint presentation 'Stories from the Field' shared with the ICR team was used for training.

³² Pers. comm. West Sumatra Provincial consultant. Feedback from SRC s at MTsN Sungai Geringging and SDN Sukabungah

³³ As on the JICA multi-storey school construction-site in Padang.

Risks to Students During the visits, some risks to children were observed in the completed schools. The main risks were from deep open drains inside the room perimeter / quadrangle which children could step into, risking severe bruising or a broken bone. This risk was accentuated in most cases by the relatively high (> 150 mm) step at the edge of the walkways outside the classrooms³⁴. In several schools on sloping sites, for example MTsN Sungai Geringging, higher drop-offs into drains or lower levels had been left unprotected. Several schools had constructed safety rails as part of the disabled access provision which prevented children accidentally running (or being pushed) off a higher step. The best examples had put safety rails at all likely student traffic pressure points such as where students walked between buildings and outside toilets.

Hazards from earthquakes The school internal walls are very hard so, to secure items such as blackboards / whiteboards and fire extinguishers to the wall, holes must be drilled into the wall and screws screwed into rawplug placed in the drill hole. Some blackboards are held up with nails ineffectively hammered into the wall and would fall in an earthquake (or tremor). Large cupboards located in most classrooms are not fixed to the walls so if the cupboards are closed and full of books / material, they may fall in an earthquake. Falling cupboards or blackboards could cause serious injuries.

Respondents at several schools close to sea level raised the issue of tsunami protection. The program design did not consider this as the plans were for single level schools. Tsunami protection would have required multi-storey construction, as used for the JICA funded schools in Padang, at a much higher unit cost.

Disabled access and disabled toilets have been provided at all SRP schools. The toilets are mostly functional but underused. Feedback at many school sites was that the pedestal flush toilet was inappropriate and teachers were unwilling to use the disabled toilet as a 'teachers' toilet³⁵. The disability toilet unit is expensive, around Rps. 2,000,000 compared with Rps. 170,000 for a squat pour flush toilet. AusAID's insistence that disabled toilets be installed is contrary to the concept of community driven development where communities should be part of the planning process.

Financial assurance and audit support was provided by three FAOs reporting to an internal audit and compliance manager. They provided a dual function of audit together with the necessary financial and administrative support to the SRCs. There was consistent feedback to the ICR team³⁶ that SRCs could not have completed the construction program without productive guidance from the FAOs.

In feedback to the ICR team and in the SRPPCS, the SRCs strongly supported the benefits from the SRP field team with 75 % of SRCs³⁷ advising the presence of the construction consultant led to improvement in the quality of completed buildings, and 94% of SRCs³⁸ supporting the FAO's role and their impact in SRP and future similar programs.

Asset management and maintenance All SRP school principals and/or school committees and staff reported that they had received asset management training and they were aware of maintenance tasks and the documents that had been provided to assist the school in maintaining the school. However it is difficult to estimate how effective this approach has been. There were indications that asset management documents

³⁴ In most non SRP schools visited, this step was < 100mm. Some difference is needed to prevent heavy rainfall ponded in the quadrangle reaching the walkway levels. However, the drains included in the SRP design should have minimised this problem.

³⁵ In two cases, this was expressed explicitly. In a third, the respondent responded that the teachers used the toilet sometimes but c/would not explain why, even though the toilet was in good condition and clean.

³⁶ For example: SDN 27 Sunggai Geringging. The Principal and the head of the construction committee stated that the FAO gave very useful training. The ICR team received feedback from several SRC's treasurers in Padang, namely from SDN Sungai Geringging (Maria Lita) and SDN 16 Cancang Randah (Rosnilawati) They claimed 'the assistance was so effective to make her understood the job better and able to present financial report properly.'

³⁷ SRPPCS Page 20.

³⁸ SRPPCS Page 21

may be filed away and never used³⁹. District and provincial GOI authorities are in the best position in the long term to effectively support schools to sustainably maintain their school. This will require support from GOI.

3.2.2 Community Engagement

In terms of participation and engagement, there were no clear and detailed standards compared to the physical infrastructure. From the assessment phase through to the handing over of the building after construction, limited guidelines on the community element have been identified and included in the manual or other documents produced by the SRPMC from the MONE and MORA guidelines except for some community elements on engagement which relate to the SRC.

Fortunately, the SRPMC recruited several construction consultants, district coordinators and provincial coordinators with experience in community based reconstruction in Aceh and Nias. They had received training in community based approaches⁴⁰ so could use these skills to facilitate solutions to community based constraints found during SRP implementation.

The SRC is the main link to the community element or engagement in the program. The absent of community elements, beyond the SRC functions, may be attributed a lack of clarity in what is meant by community based construction at the central levels of MONE and MORA which produce the implementation guidelines. At the early stages of the SRP design, the SRPMC had proposed more inputs to address community motivation and participation issues it had identified but AusAID declined to allocate additional resources to these issues⁴¹.

The ICR team developed criteria to assess community involvement and ownership including the communities' views on school construction (see Table 3 and Footnote 19 earlier). The following table shows the ICR team assessments and, for most schools, the community's assessment of the same aspects.

Table 4 Assessment of Community Participation in the SRP

	Success of Community Involvement		Sustainability of Community based Initiatives		Flow-on Benefits to Community		Safety - 'Fit for Purpose'	Use for Civil defence
	Team	Comm	Team	Comm	Team	Comm		
A. West Sumatra	5.4	5.6	5.1	5.0	5.1	5.4	5.3	5.5
B. West Java	5.7	6.2¹	4.7	5.2	5.8	6.3¹	5.3	5.6

Ratings: Code: 6 = maximum/best result. 1=poor or nil outcome

Note: 1. Some community respondents gave ratings of 10 – extra good, rather than the proposed maximum of 6.

Generally community involvement and follow-on benefits to the community were rated highly with sustainability rated lower (as in the construction assessment).

As noted in the later Gender section, there were limited guidance for selecting SRC members apart from the request to invite local leaders to the meeting. A feature of the ICR team school meetings were the schools⁴² where the heads and/or members of the SRC undertook their tasks as part of their community obligations rather than through a direct interest through having children attend the school. This inclusion of village 'elders' – respected older people, in the SRC, could have assisted in dealing with local problems that arose.

In addition to improved infrastructure, teaching resources were enhanced through the provision of funding for education resource materials for each of the schools. In excess of 70,000 books and other educational items were provided. The items were selected by school principals at 'book fairs' held in Tasikmalaya and Padang and were distributed in May 2011.

³⁹ In at least two of the nine schools visited by one ICR team member, the documentation was not kept at the school.

⁴⁰ From groups such as HABILAT which had implemented community based house reconstruction.

⁴¹ AusAID sought advice from a member of its former infrastructure monitoring team (that was in place during reconstruction in Aceh and Nias) in reviewing the proposed design.

⁴² Including Kampung Cianiang, Cacabang Randah, Margalaksana and Sukabungah.

Community engagement Community based construction is an appropriate model for post disaster school reconstruction program as each community has unique characteristics and peculiarities. The levels of community engagement need to be understood so an appropriate level can be targeted. Initially, community engagement is a community education and community empowerment process to increase community position vis a vis other partners in development. Community approaches⁴³ can be described in several ways. One model uses five stages of community involvement: community mobilization; community consultation; community participation; community management; and, community led.

Based on the characteristics identified above, the SRP process could be classed as being between community participation and community management, however the SRP was prescriptive on the detailed designs of the school (see above), rather than actively seeking community inputs. Given the need to quickly rebuild the schools as students were being taught in crowded temporary accommodation, the balance was appropriate.

For future disaster reconstruction programs, more attention could be given to increased community inputs and decision making during the short implementation period. This could include communities selecting from a menu of optional additions to the basic earthquake resistant school buildings provided through the program such as security fencing, water supplies, playground facilities, sliding doors between classrooms, alternative types of toilets, safety grilles on deep internal drains (a significant safety risk), prepared gardens, class room ventilation and class room light levels, and school teaching resources.

Role of school principal Some school principals⁴⁴ stated they felt disconnected from the implementation process due to the GOI requirement that they must not be part of the SRC. They believed the construction consultant and SRC operated with too much autonomy. However, in most stakeholder meetings, there was agreement that the principal should not have a direct role in the reconstruction activity. There was also wide spread support for having a SRC separate to the school committee so that the principal and school committee can monitor and supervise⁴⁵ the SRC functions.

Training Training focused mostly on the SRPMC staff and the communities including the school principal, some teachers and the SRC. Government officials and community representatives were invited to training given at provincial level. There were large numbers of trainees⁴⁶ and the training was usually for three days. Although some training had been provided on program processes, many respondents expressed reservations on the quality of that training and the training processes used. There were complaints that the three day introductory training at provincial levels was too short and that most participants were provided with all subjects prepared, without considering their specific needs. For example, administration people only get a few hours out of the three days because they have to attend all subjects which have no direct relevance to them, also training topics were mainly in the areas of constructions and administration. Insufficient time was available for SRC and other field level participants to absorb all those topics.

Participant feedback indicated that some training did not address their real needs as they expected to get some new topics about increasing community participation, community engagement, community conflict resolution, but they have been given techniques for facilitation. The training on gender issues was theoretical so most participants could not understand what it was about or how to apply it.

⁴³ Adapted from: Zenaida, G. 2004. Community Based Disaster Risk Management: A Frame That Holds, a frame that Works' in Workshop Proceedings of Third Disaster Management Practitioners' Workshop for South Asia. Asian Disaster Preparedness Centre, Bangkok, Thailand. Also from Saha. S. & Epper, P. 2002. Facilitators Manuals: Community Management Promotion in Development (2000), in Water and Sanitation Partnership Project. Joint Publication of DASCOP, SDC, South Asia Regional water sanitation group of UNDP and WB –Bangladesh.

⁴⁴ As expressed by the principal of SDN 21 Sungai Geringging (Mrs.Nur Evanita) who now has to solve problems created by the now disbanded SRC. The principal at SDN 6 Cigadong specifically stated that it would be better if the principal was more involved.

⁴⁵ This also aligned with comments from MONE and District Education Office managers that block grants from outside GOI financial systems should not be managed by the school principal who is a public servant.

⁴⁶ The SRPPCS and draft ACR do not provide information on the total numbers trained. Three representatives of each participating school attended the initial provincial level socialisation / training.

The training material reviewed by the ICR team⁴⁷ covered the required explanations on the processes relevant to the program implementation such as: financial, procurement, documentation requirements, transparency requirements, fraud corruption, complaints handling system, quality of construction, and computer training.

3.3 Other Benefits

3.3.1 Construction

In addition to the achievements outlined in Table 1, other benefits identified by principals, school staff and communities during the ICR field visits included:

- The new schools provided a very positive learning environment for those involved in school construction. There was anecdotal evidence that students learning in some SRP schools had improved⁴⁸;
- The new school buildings are perceived to be of very high quality; much higher than any other building the communities and school staff have ever seen. In particular many communities expressed a high level of comfort in knowing that they had one building in their community that was built to withstand an earthquake and would provide a safe haven; and,
- Many communities expressed appreciation in having the opportunity to observe and to be involved in the construction of a quality product i.e. their new school provided employment opportunities.

3.3.2 Community Engagement

Additional benefits to those already outlined include: increased community self-confidence; work during the construction when business activities declined due to the earthquake; people gained some trauma healing through involvement; local workers received additional income⁴⁹ for 5-7 months for living expenses and to buy construction materials to rebuild their own damaged houses; training and experiences on new type of construction resistant to earthquake, plus new construction techniques⁵⁰; and, the school and local community members gained experience in constructing buildings resistant to earthquakes.

These benefits would increase if future activities similar to the SRP have improved community education and empowerment activities through the adoption of the community engagement principles. The absence of community engagement specialists at the national and regional levels have limited the use of a systematic approach to community capacity building, community education and community empowerment implemented during the course of the SRP.

4 Efficiency

4.1 Timeliness and Appropriateness

Preparation and implementation times were similar to other GOI and donor reconstruction activities and were regarded by stakeholders as good. The nature of government to government assistance and the comprehensive initial screening and assessment process (plus finalising an implementation contract with the SRPMC) created some delays to the start of construction. The initiation and screening / assessment phases took more than 200 days so there could be opportunities to streamline these earlier processes. These delays led to some selected schools being replaced as they had accepted offers of support from other organisations. Construction times for several community infrastructure programs are presented in Table 5.

⁴⁷ Program guidelines for the School Reconstruction Program, June 2010 page 23 and 24

⁴⁸ For example from teacher and SRC interviews: SDN 19 Kampung Olo: came second in a school disaster preparedness competition; SDN Taruna Jaya: Has gone from 11th ranking (academic) to 2nd in the Kecamatan; SDN Mandalakasih: A student from the school came first in the Kabupaten exams.

⁴⁹ The ICR Team was told at least 25 skilled and unskilled workers from one school, MTS Sungai Geringging, visited had received increased salaries by about 50% through having a certificate of employment provided by the SRPMC.

⁵⁰ The head of the Margalaksana SRC was very enthusiastic about the improved construction techniques introduced by the Program.

In all SRP schools, the community, principals and teachers were satisfied with the time it took to complete their school. The implementation period for SRP schools is considered reasonable compared with other similar size projects. The ICR team believes the planned 150 day construction period was optimistic, this reservation was also noted in the SRPMC draft work plan which suggested a probable longer construction period⁵¹.

Table 5 Comparison of Implementation Times

Project and Year	Location	Description	Construction Period (days)
SRP AusAID & USAID 2011	West Sumatra	Construction of single level primary schools and five madrasah	Mean 203 days ¹ Maximum 245 days Minimum 170 days
SRP AusAID 2011	West Java	Construction of single level primary schools and one madrasah	Mean 155 days ¹ Maximum 161 days Minimum 145 days
NRP AusAID 2008	South Nias	Construction of single level district offices	More than 200 days (est.)
SDN School JICA - 2011	West Sumatra	Construction of single level primary school (still under construction 7 th May 2011)	Planned 180 days ²

Sources: 1. SRP provincial coordinator⁵². 2. Personal comm. Mr Kase, JICA consultant

The construction period in West Sumatra was longer than in West Java for a combination of reasons including: less well organised SRCs; some community disputes; slower site clearance partially due to unclear direction from the District Education Offices⁵³, difficulties in securing skilled workers, particularly for finishing work, due to high demand from contractors undertaking other reconstruction work, community workers taking time off to rebuild their own homes when GOI funds came available, reduced SRC motivation after the final advance tranche payment and some difficulties obtaining building materials. Measures to address these issues should be included in planning for future disaster responses.

In West Java, the disaster was not as severe leading to less competition for reconstruction resources, site clearance work was quickly implemented by the community and skilled labour was more accessible, so the program was completed in just over the planned time frame. This is despite much of the construction taking place in a very wet dry season⁵⁴ and materials sometimes having to be transported into less accessible areas than the sites in West Sumatra.

4.2 Value for Money

A summary of program costs is provided in Annex 8.

4.2.1 Unit Construction Costs

The costs of recent community infrastructure construction projects in Indonesia are presented in Table 6. The data indicates that SRP construction costs are more than competitive with the cost of schools built by other donors. Even if the unit costs are increased by 30 % to allow for the management and overhead costs of the SRPMC, the unit costs of Rps. 2.3 – Rps. 2.4 million per m² are still more than competitive with the estimated costs of schools provided by other disaster reconstruction donors, but are above those for 'normal'

⁵¹ SRPMC Draft Work Plan, March 17 2010 (Page 19, Section 3.1.6) Also "Experience from the AIBEP indicates that whilst achievable in ideal circumstances this target was likely to be optimistic, particularly given mobilisation during the rainy season, the likelihood of material availability issues in the post-disaster context, as well as the remote nature of many of the potential sites. The assessment and verification team have estimated construction periods for each school assessed, with timeframes ranging from 6 to 9 months of actual construction (commencing from the payment of the first tranche)".

⁵² Communication and summary table from SRPMC engineering coordinator. Completion was defined as the period from payment of the first funding tranche to when the letter of completion (SP4) was provided.

⁵³ Some District Education offices in West Sumatra claimed that there were no funds available to support site clearance and, in the case of Agam wanted any funds generated by the sale of scrap material returned to the District Government.

⁵⁴ The SRC at Margalaksana reported that it rained almost every day during the construction period and materials had to be carried in small lots up the last 4 km of steep access road not suitable for trucks.

school construction under the AIBEP. In addition, the SRP schools were better constructed than the NGO supported schools and comparable in standard to the JICA schools⁵⁵.

Table 6 Estimated Infrastructure Building Costs¹

Project & year	Location	Description	Estimated Cost ¹ (Rps. '000,000)	Mean Footprint (m ²)	Mean Unit Cost (Rps.,000,000/m ²)
SRP AusAID & USAID 2011	West Sumatra	Construction of single story primary schools and one madrasah	1,564	650	2.40
SRP AusAID 2011	West Java	Single story primary schools and five madrasah	1,310	565	2.32
AIBEP MONE 'new' school units	SMPN1 – Oemofa NTT		1,300	768(est.)	1.69 ²
ANTV SDN school	West Sumatra	Single storey 8 room primary school. Contractor	2,800 (incl. fitting out and computers)	650 (est.)	3.84 ³
Buddha Tzi Foundation SDN, SMP school	Pangalengan West Java	Large school with 20 + rooms plus multipurpose rooms and laboratories	7,000	1, 500 (est.)	4.66 ³
YCAP Schools 2006 - 2010	Yogyakarta	Schools built with 6 or more classrooms only	1,156	604	1.91 ⁴
NRP AusAID 2008	South Nias	Construction of single level sub-district offices	1,736	750 (est.)	2.31 ²
SDN School JICA - 2011	West Sumatra	Construction of single story primary school. Contractor	2,430	550 (Est.)	4.41 ³
Health Clinics AusAID 2011	West Sumatra	New two storey health clinics. Contractor	2,000	542	3.69

Note: 1. Estimated costs are for building only – Supervision and school/office/clinic equipment cost not included
 2. Based on information provided by SRPMC.
 3. Consultants' estimates based on anecdotal information.
 4. YCAP built schools and kindergartens ranging from 1 to 12 classrooms. The average cost was Rps. 2,020,000.
 5. Rehabilitation included 3 new class rooms, new toilets, new teacher's room, new parking area and new fence.

The SRPMC analysed the costs of the main improvements to the GOI standard school design in Annex 3 of the draft ACR. The ICR team agrees with the analysis and the estimated impacts on construction costs, particularly for strengthening the concrete components.

4.2.2 Program Management Costs

The other aspect of program costs are the program technical assistance, supervision and managing contractor costs. For the SRP, an estimated A\$11.4 million was spent on construction materials from a total budget of A\$ 15.8 million - 72 % for construction. For the health centre building program in West Sumatra, the construction (by contractor) and equipment costs (from the Imprest account) were estimated at \$3.27 million from a total budget of A\$4.5 million - 73 % of funds to construction and equipment. JICA⁵⁶ estimate that the management and supervision costs for their contractor implemented school construction activities are about 10 % of the capital costs which are estimated to be much higher than SRP construction costs.

For the AusAID funded Nias Reconstruction Program⁵⁷ with a total budget of A\$ 8.6 million, 48 % was spent on construction of sub-district offices and community infrastructure including water supplies, access tracks and bridges with the balance spent on supervision, management and program overhead costs. This program had field level community facilitators in each village plus field engineers covering 2-3 villages. The planned ILO

⁵⁵ The JICA schools were built to improved earthquake resistant standards similar to the SRP schools.

⁵⁶ Personal communication Mr Kase, JICA consultant

⁵⁷ Source: Nias Reconstruction Program draft ICR 2009.

supported Community Infrastructure Component of the Livelihood and Economic Development Project⁵⁸ in Nias allocated 61 % of the US\$ 7.2 million budget to construction.

Overall, the cost data indicates that SRP program non-construction costs are in-line with the health centre reconstruction project in West Sumatra and are lower than for other community level reconstruction activities on Nias. Unfortunately, the YCAP ICR did not include any analysis of program management or other costs.

4.2.3 Other Cost Areas

Roof construction costs A distinctive feature of AusAID/USAID funded schools are the high quality colour steel tiled roofs on lightweight steel frames⁵⁹. The SRPMC advised the ICR team that the costs of these roofs are comparable to conventional roof structures with timber frames and clay tiled roofs⁶⁰.

Community worker payments Discussions at the schools indicated that most schools⁶¹ set their payment rates (Rps. 35-50,000 per day) for unskilled workers at rates comparable to the amount that these workers could earn in their normal work in the village. Thus the Program did not distort the labour market in the areas.

Payments to SRC members Several SRC members raised the issue of payments to SRC members. The ICR team acknowledges that the rates paid (about Rps. 1 million per month) are not high⁶² but, given the benefits that reconstruction by AusAID/USAID provides to the community, these rates are reasonable.

4.3 Implementation

Construction issues are discussed in Sections 4.1 and 4.2. In a program like the SRP where community involvement is central to successful implementation, time is required to socialise the construction process and requirements, and to deal with dynamics within the community. On problem sites, most delays related to community conflict such as land ownership (where land certificates did not exist)⁶³, unfair competition to become construction materials suppliers or corruption issues. The initial assessment / planning period of four months provided time for some of these issues to be addressed. Eventually less than 10 % of sites had significant community issues. In several cases, District Education Office staff solved problems the SRC and local SRP staff could not resolve.

The ICR team did not find evidence of community contributions to materials or cash financial contributions to construction. Voluntary inputs were limited to those by the school principal and additional time inputs from the modestly rewarded SRC members.

4.4 AusAID Management and Monitoring

AusAID took a proactive role to field monitoring with AusAID program management staff undertaking several field visits with the SRPMC to assess progress and gain feedback from stakeholders. Several of these missions were joined by the Supervisory Infrastructure Development Advisor from USAID who provided different perspectives from his experience in infrastructure activities.

⁵⁸ Source: In NRP draft ICR 2009 extracted from LEDP project appraisal document July 2009.

⁵⁹ The much lighter weight of these steel roofs places less static load on the building structure which is then much less likely to suffer from future earthquake damage. The roofing material is also fixed together so it does not fall apart when shaken.

⁶⁰ One of the non-program MONE schools built as part of the WB schools project in the past five years visited by the Team already had leaking roof tiles contributing to damaged classroom ceilings

⁶¹ A notable exception was at Margalaksana where the unskilled workers could only earn Rps. 10 -15, 000 per day for unskilled farm work. This reflects the poverty in the village where much of the land was owned by absentee owners.

⁶² Based on a 22 day working month, unskilled labourers would earn Rps. 770,000 – Rps. 1,100,000 per month compared the Rps. 1 million per month for the SRC members. As the construction consultant was on-site most of the time, the SRC inputs were not as time intensive. For future community based reconstruction activities, a reduction in construction consultant inputs could justify a higher honorarium for the SRC members.

⁶³ In contrast, at Cacang Randah, the community arranged to exchange the unstable original school site with a more suitable site.

AusAID commissioned the IIRT mission in October 2010 to review engineering aspects of the Program. Given that most SRCs were well into their construction programs, this visit possibly should have been scheduled earlier so that agreed recommendations could be incorporated into the later starting activities⁶⁴.

4.5 Sector Stakeholder Monitoring

Under GOI school reconstruction programs the provincial MONE, District Education Offices and MORA offices have supervision responsibilities. The SRPPCS noted (Table 10) supervision and monitoring inputs by the District Education Offices and showed that 18 % of schools had not had any monitoring visits while 25 % were visited at least once per month. This data aligns with the experience of the ICR team which found that District Education Offices inputs depended on the senior management interest in the Program and site needs. No specific program funding was provided for District Education Offices / MORA supervision visits which were expected to be undertaken as part of their mandated responsibilities.

Feedback from the SRPMC, school SRCs and the District Education Offices indicates that District Education Office staff did respond quickly to requests for assistance at school construction sites when local efforts to resolve issues slowing or stopping construction were not successful. The Program was not disadvantaged by current GOI supervision and monitoring requirements although more structured site monitoring and clearer guidelines may improve outcomes. The important aspect is that the District Education Offices and MORA offices should supervise school reconstruction policies rather than implement reconstruction.

5 Sustainability

The Program outcomes will be more sustained than those achieved through normal GOI school or Indonesian NGO funded reconstruction processes for the reasons outlined in the following sections. Community ownership and inputs are stronger and will contribute to the community being aware of better standards and being able to implement maintenance activities⁶⁵.

5.1 School Buildings

The school buildings have been built to a good standard so that building maintenance costs should be low and the buildings should last for a long time with regular maintenance (see Section 5.3 Recurrent costs). Unfortunately, issues affecting the water supply, sanitation and drainage activities will reduce facility effectiveness. The uneven standard of finishing of construction will reduce the effective life of some buildings.

Improved building techniques used for the SRP schools such as higher strength concrete specification (with the same materials) and high yield reinforcement rods plus non-slip tiles are low cost ways to improve sustainability of schools built under future reconstruction or new classroom construction programs. The steel framed and clad roof system (with 10 year warranty) used by SRP should also be assessed a cost-effective addition to future school building programs.

5.2 Institutional Capacity

Based on discussions with MONE and MORA at central level the SRPMC has good relationships with the MONE and MORA. MONE staff prepared the MONE guidelines and the SRPMC through consultation developed the MORA guidelines with MORA at central government level. This relationship and strong involvement particularly with MONE at central government level continued throughout SRP implementation.

The Program was consistent with the GOI institutional approach to school construction and rehabilitation and the ICR team believe this facilitated acceptance and support from district and sub-district level government partners. However, the process was not described consistently in the three sets of guidelines: MONE, MORA and the SRP. The SRP technical guidelines were used for school level implementation. The school

⁶⁴ This was also noted in the report of the IIRT (page 21)

⁶⁵ Particularly when the school staff and community raise additional maintenance funds from parents through small daily contributions (Rps.100 / child) as used at the SDN 019 Kampung Olo.

reconstruction guidelines produced by MONE⁶⁶ and MORA⁶⁷ did not address the important element of sustainability.

Clear directions were not provided in the MONE guidelines on the involvement of MONE at provincial level or at district and sub-district education offices in site clearance, granting land permits (when required) and processing of damaged assets on the MONE asset registers⁶⁸. The ICR team did not find examples of district or sub-district regulations (SK)⁶⁹ being prepared to guide the agreed tasks such as site clearing.

Sustainability at community level is most likely small or low, as the Program was too short to embed various elements needed to increase or assure community sustainability and disaster preparedness.

5.3 Recurrent Costs

Recurrent costs are likely to be reduced in the SRP schools as: rooms will be cooler as they have good ventilation and roof insulation; energy saving light bulbs are used throughout; the light steel roof construction with colour steel tiles has a low maintenance requirement backed up by the 10 year warranty; the moisture barriers installed at all SRP school will prevent moisture rising into the floors and walls causing premature deterioration of floor and wall material and wall paint work; and, the schools have been built to Indonesian earthquake standards so will suffer little damage from future earthquakes.

Recurrent costs are likely to be similar or more than non- SRP schools as some plumbing fixtures e.g. the disabled toilet and the urinal flushers are expensive to maintain and replace, if they are broken. Local plumbers are also unfamiliar with these technologies and spare parts may not readily be available. Overall, recurrent costs in SRP schools should be less than in similar MONE funded schools.

Discussions during the field work indicated that a complicating issue for securing parent support for school maintenance was the promotion of a 'free' education policy by the previous Minister for Education⁷⁰ which reduced the motivation for parents to contribute. The new Minister for Education is promoting a policy of 'affordable' education. Before the 'free' education policies, parents and communities made significant financial and labour contributions for building and maintaining schools (and still do for madrasah).

6 Crosscutting Issues

6.1 Gender and Disadvantaged Groups

Only one GOI community based construction guideline document highlighted gender as one of the cross cutting issues⁷¹ to be included in the Program. Thus, the gender perspective has been understated in the Program. There was insufficient guidance provided on why, how and what instruments can be used to support gender perspectives during the Program.

The GOI (and SRP) guidelines for implementing community based construction including forming the SRC did not suggest any gender criteria for selection of the SRC⁷². In many cases, the treasurer of the SRC, who was specified in the guidelines as being a teacher, was a female teacher. However, because of the less structured

⁶⁶ Implementation Guidelines Disaster Affected School Building Reconstruction- Ministry of national Education-2010

⁶⁷ Implementation Guidelines Disaster Affected Madrasah Building Reconstruction- Ministry of Religious Affairs-2010

⁶⁸ The ICR team found widely different approaches to asset write-offs which are a major issue for GOI asset managers. In Agam district, the MONE director Mr. Erwin Umar wanted formal writeoff procedures to be followed with funds from selling material from the damaged schools returned to the district government. In Ciarnis, the director Mr. Muhammad Zen had no concerns about writing off the damaged buildings and the school being able to retain the funds from selling material.

⁶⁹ In most developing countries including Indonesia, public servants require formal regulations (and funding) before legislation or MOUs will be implemented.

⁷⁰ Banners supporting this were seen on at least one school during the field visits.

⁷¹ SRP West Sumatra and West Java Draft Work Plan March 17, 2010 no.1.4.2. no.23

⁷² The SRPPCS Figure 1 indicates that 30 % of SRC members were women. This was not found in the schools visited by the ICR team.

criteria for electing an SRC from 'community' members, the ICR team found that this was often the only SRC position filled by a woman.

The construction of separate toilets for boys and girls was the main way that gender perspective and female access to facilities have been addressed. Similarly, disability is not mentioned in the GOI guidance but the SRP designs included toilets and ramp facilities for people with disabilities.

A gender specialist delivered the gender training modules provided to all field staff (SRC, construction consultant, district coordinators). Unfortunately the topic was presented in a highly theoretical way and there was no time or extra inputs to convert these training topics into practical operational instruments and practices that increased access, participation and the decision making influence of women involved in the Program.

6.2 Environmental Issues

As the Program is reconstructing existing school buildings, formal GOI environmental approvals (AMDALs, etc.) were not required. The school designs were environmentally acceptable and limited impacts to adjoining properties and the school users. No significant environmental issues were observed during the ICR field work except at Maroko.

During the last ICR team field visit, old ACM roofing materials from the demolished school were found near a SRP school site (SDN 2 Maroko, a remote school in West Java) and were being used to cover the school water well. The extent of the issue could not be checked as there were no further opportunities to check with District Education Office staff. The SRPMC⁷³ advised the ICR team that ACMs had been present in damaged / destroyed school buildings at all SRP reconstruction sites in West Java (19 sites) and at the SRP Madrasah reconstruction sites in West Sumatra (5 sites). The management and disposal of ACMs was the responsibility of District Education Offices as part of site clearance⁷⁴ activities. Based on correspondence with the SRPMC, the ICR team understand at district level there is still a low level of awareness about the dangers of ACMs⁷⁵.

As an extension of the earlier issues of water system design, some of the sites⁷⁶ visited had tried to retain septic tank drainage and storm drainage water within the limited area of the school site. This created problems in wet weather with the school area becoming waterlogged and limiting the effectiveness of the septic system.

6.3 Anti-corruption

The process of delivering funds through Block grants direct to the SRCs has worked effectively with the SRPMC financial management and reporting processes restricting possible problems. The processes for reporting and investigating possible problems were well documented and there was no feedback during the ICR field work indicating unknown problems or concerns⁷⁷. The transparency of SRP financial processes was good although could be improved through displaying planned and actual expenditure to date for the main expenditure categories on the main signboard outside the work site.

MONE and District Education officers emphasised to the ICR team the value of community based construction processes in improving construction quality by reducing the risk of corruption reducing funds available for materials.

⁷³Pers. Comm., SRPMC

⁷⁴ As provided in the agreements between GOI and AusAID.

⁷⁵ The ICR team also understands *the SRP MC is not aware of ACM management measures put in place by GOI agencies during the demolition of buildings containing ACMs.* (Pers. comm. SRPMC).

⁷⁶ SDN04 Sungai Limau was an extreme case but the issue was noted at other sites.

⁷⁷ Although in one case, the head of an SRC that had been investigated for corruption only wanted to participate in the start and finish of the ICR team discussions.

7 Monitoring and Evaluation

7.1 M&E Processes

The regular reports from the field included: the construction consultant weekly reports, SRC monthly reports, and FAAO reports provided the SRPMC with sufficient information to properly monitor program implementation (percentage of construction progress, issues related to the work construction and financial management aspects, as well as action plans to be implemented).

The reporting process was comprehensive but created higher workloads for the construction consultant and SRC treasurer. Reports were submitted weekly (from the construction consultants to the SRPMC central office), monthly (from the construction consultants to the central office and from the SRCs to MONE and MORA, also reviewed by the construction consultant), and bi-monthly (from MC program manager to AusAID), which provided enough time for the SRPMC and AusAID to monitor the implementation of the Program. In addition, issues that arise during implementation of the Program were reported by direct communication in any form (by phone or e-mail) through the SRC, construction consultant, district coordinator or provincial coordinator to the SRPMC (central office) to be addressed in due time. The monthly meeting with the construction consultants and district coordinators worked well to address emerging issues.

The FAAOs supported sound financial recording and reporting as confirmed in the audit results done by PriceWaterhouseCoopers.

Overall, the monitoring activities were very comprehensive but may have taken too much construction consultant and SRPMC time, particularly in the weekly SRPMC reporting processes. In future, reporting by exception against the weekly targets with more detailed monthly reporting may be more efficient. The use of photographs to track progress was a good initiative but may not have targeted key structural elements such as the installation and fixing of reinforcing bars before concrete is poured.

7.2 Contribution to Improved Recovery Processes

Information provided during field work indicates that the AusAID / USAID funded activities were the largest single contribution from outside donors to school reconstruction, but still were only a small (< 5 %) of the total school reconstruction program.

However, most District Education Offices raised the issue of providing funds for reconstructing only partly damaged schools. Meetings with District Education Offices and provincial MONE and MORA offices indicated that all districts visited still had a large number of damaged school rooms that needed to be rebuilt⁷⁸. The Ciamis District Education Office⁷⁹ district highlighted that they had insufficient budget to build new classrooms to meet increasing student numbers without taking account of the classrooms damaged during the earthquake that needed to be rebuilt.

8 Analysis and Learning

AusAID has provided substantial relief and reconstruction assistance to the major natural disasters in Indonesia over the past 10 years. All Indonesian SRP stakeholders gratefully acknowledged the support. The SRP design has taken account of experience⁸⁰ from the earlier disaster response activities including:

- (i) Increased community inputs into the reconstruction activity (YCAP L10)
- (ii) Direct granting of construction funds to the school to reduce time delays in funds flows through GOI systems

⁷⁸ An example of this was found at Margalaksana where a neighbouring school where the wife of the head of the SRC was a teacher still had three unusable class rooms, even though the Margalaksana school had been fully rebuilt.

⁷⁹ Discussion with Director of MONE Ciamis, Mr.Akasah and the Deputy Bupati of Ciamis, Mr.Ling Syam Arifin.

⁸⁰ The ICR team has not been able to ascertain which organisations contributed specific lessons to the SRP design.

- (iii) Use quality checklists and construction reporting system, and can draw upon the Complaints Handling System (AIBEP).
- (iv) Use of community construction rather than contractors for construction to provide greater control over the construction process, an increased proportion of grant funds allocated to construction and more assured economic inputs to the community through the use of local labour.
- (v) Provision of construction supervision/engineering support to support the SRCs to improve construction quality (expanded from AIBEP).
- (vi) Provision of financial management support to the SRCs in addition to auditing SRC expenditure.

A lesson from the YCAP ICR on the balance of highly earthquake-resistant construction standards with educational aspects of DRR has not been incorporated, particularly the benefits of innovative construction techniques or materials. However, introducing innovation is difficult in response to a disaster if GOI designs and construction specifications are to be used. The YCAP ICR also raised issues on the balance of disaster risk reduction activities.

The early response was achieved by contracting Australian management contractors (AMC) for existing programs or projects in similar technical areas (Cardno with AIBEP and Coffey with the Eastern Indonesia health program for district health clinic reconstruction). Cardno had been involved in the earlier disaster reconstruction activities but the AIBEP implementation managers who prepared the program design had less experience in post-disaster reconstruction.

As the Australia – Indonesia Partnership will continue to have substantial budget allocations and Indonesia will be subject to ongoing major natural disasters (earthquakes, volcanic eruptions, tsunamis and extensive flooding) in regional areas, a more systematic approach to planning and implementing disaster reconstruction should improve the responsiveness and cost-effectiveness of AusAID funded interventions.

As AusAID further integrates its programs into GOI systems, it will become more difficult to quickly access currently contracted AMCs with up to date technical and disaster reconstruction experience and access to experienced senior local consultants. Coffey in the NRP and now the health centre reconstruction project has used senior local engineers and project managers with experience in disaster response and reconstruction and community participation.

9 Impact

Fifty seven schools with 9,412 (and increasing) students have been completed. Community members and students are very proud of the new schools which have energised teachers and students with the children's education environment improved.

AusAID and USAID have funded an implementation modality based on earlier disaster reconstruction activities and included many lessons learned from these earlier disasters. The community construction processes are a good example for reconstructing village level infrastructure as part of donor funded support after a disaster.

10 Conclusions, Recommendations and Lessons Learned

10.1 Overall Assessment

Table 7 ICR Evaluation Assessment

Evaluation Criteria	Rating (1-6)
Relevance	6
Effectiveness	5
Efficiency	5
Sustainability	4
Gender Equality	3-4
Monitoring & Evaluation	5
Analysis and Learning	4
Impact	5

Rating scale: 6 = very high quality; 1 = very low quality.
Below 4 = less than satisfactory.

10.2 AusAID Key Questions

The following summarizes the responses to the eight key questions asked in the ICR terms of reference. More information on these responses is provided in the text, the following conclusions and recommendations and in Annex 2.

1. *Has the Project achieved the impact that was expected at program design and are the outcomes sustainable?*

57 schools completed to high standard with increased number of students attending. There has been good community participation in construction and implementation and the construction provided skills and income (approximately A\$ 2.2 million) for >2,500 workers from the community. The new buildings are much stronger through improved design and better quality construction. Sustainability has been increased by better quality construction but limited progress has been made towards increased routine maintenance funding from GOI budgets (or parent contributions). Disaster preparedness training has been implemented in the schools with many schools running associated evacuation drills but the training has not extended to the community.

2. *Is delivering post-disaster school reconstruction program through managing contractor channelling the funds to school reconstruction committee (SRC) with endorsement of central government (MONE and MORA) best practice?*

For single level schools, the SRP modality (with some improvements to community engagement) is best practice. The program processes have been successful and align with GOI systems. There are conflicting directions from Central MONE on reconstruction modalities but the lower education administration levels are more flexible. The AusAID approach is liked by all MONE levels and provides a 'pillar' for provincial and district governments to 'manoeuvre' around conflicting directives.

3. *Is community based construction an appropriate model for post disaster school reconstruction program and, if not, why not? This should include an assessment of alternative mechanisms.*

SRP experience reinforces good experience from earlier community based reconstruction projects. Community based construction provides immediate work and income for community members as well as skill improvement. GOI processes do not emphasise community engagement processes so these need strengthening with program support. Community based construction provides immediate work and income for community members as well as skill improvement. MONE at all levels prefer the community based approach

and have much experience in it in, for example: the SD Inpres school construction program and World Bank and Asian Development Bank school projects.

Schools reconstructed by contractors were not constructed as well as SRP schools and had minimal community inputs to the process. Community based reconstruction is suited to village level infrastructure reconstruction based on standard designs needing minimal site adaption. More specialist inputs are required where site specific infrastructure is required e.g. water supply from a distant source or sanitation drainage in heavy clay soils with limited space.

4. *Do GOI's role and responsibilities need to be strengthened in order to ensure program ownership and sustainability and recommend strategy to do that?*

Current agreed GOI roles and responsibilities for implementation are appropriate. However the agencies are largely reactive rather than proactive. SRPMC feedback and field discussions indicate that District Education Offices and MORE provided inputs to resolve problems, when needed. Site clearance policies, awareness and processes (an agreed GOI responsibility) needs to be reviewed and updated based on SRP experience. An issue with ACMs was found on one site (see Sec. 6.2), so management of site clearance debris should be included in these reviews.

Some school principals wanted more involvement in SRC / reconstruction activities (this may be contrary to GOI financial management guidelines for Block Grants). Any review of the GOI school reconstruction processes should include this issue.

5. *What was the impact and quality of the additional services provided by the contractor to help safeguard Australia and the USA governments' investments ... ?*

Engineering design and support through improved designs and improved building quality thorough full time inputs by the construction consultants and their supporting senior engineers was valued by most respondents, usually without qualification on the additional costs. **Training** was limited to a formal three day workshop and then on-the-job support for the SRC treasurers and construction supervision / implementation teams. Most participants requested additional more detailed training. Support from the construction consultants, district coordinators and FAAOs was highly regarded. **Occupational and site health and safety policies** such as wearing of protective equipment and systematic induction and training processes were not clear. No serious accidents occurred but appropriate risk based measures (awareness, warning signs, basic protective equipment) should be included in future reconstruction implementation. **Financial management** The accounting and auditing systems used by the SRPMC helped minimise problems. The FAAO support to the SRCs was valued and was not reported to complicate their audit functions⁸¹. **Inclusion of disadvantaged groups** Community construction created work opportunities for poorer male⁸² community members. The disabled toilets and supporting access have not been widely used and do not reflect the priorities of the school communities. **Gender issues** are not given attention in GOI implementation guidelines. The inputs by women were mainly as SRC treasurer. Greater inclusion of women could improve community ownership and encourage a better outcome.

6. *What improvements can be made in these areas for Australia to consider adopting in the school construction component of the Education Partnership?*

Construction training could be strengthened by providing construction (and OHS) training packages including detailed videos and display material. **Random construction monitoring** should cover key stages of construction, not just the start and finish. The key stages are in the first half of the construction phase. **Outcome based disbursement** could be considered to encourage better construction (Random checking for Pass / Fail). **Hold points** could be used to focus construction management and trigger the disbursement of funds. **A final retention** of 3-5 % (for books, teaching materials) may provide an incentive for better finishing of construction.

⁸¹ The SRPMC also rotated the FAAOs for their audit functions.

⁸² No examples were found of women construction workers being used.

7. *How effective was the public diplomacy/branding of the Program and whether government / communities identified the program as a joint approach with US Government or more Australian Government?*

The most valuable branding outcome is the significantly higher quality of the school building construction noted by all stakeholders. Stakeholder and community feedback indicated awareness that the Australian Government and US Government provided the funds. In West Sumatra, it was clear that the SRPMC had been informing communities of the co-funding at all stages of the joint funding. However, community members may have perceived⁸³ the SRPMC as an Australian company so not appreciated the equal USAID contribution. For branding purposes, plaques located within the school compound is less effective. Larger distinctive national logos (kangaroo, etc.) outside the school entrance would highlight the GOI, Australian and USA contributions and links (found on at least two schools). Particularly for co-financed programs, the only logos on clothing should be for the program and co-financing (GOI-Aust-USA) partners.

8. *How effective was the partnership with the US Government under the SRP?*

The partnership has worked relatively effectively. USAID made several field visits and provided valuable additional perspectives – for example, OHS issues. Indications are that both parties would consider further partnerships (depending on personalities / processes to initiate opportunities). The ICR team believes the partnership has added value and provided benefits to both countries through: demonstrating successful community based construction approaches; reducing unit program management overhead costs; providing economies of scale in training and procurement; simplified interaction with GOI agencies by having one less donor implementing team taking senior manager time; and, allowing greater use of standard processes.

AusAID has had partnership with GTZ which implemented the AusAID funded AMAP project in Aceh. Structured processes are needed to identify opportunities and reach initial agreement between the partners, particularly how the partners have ongoing inputs to monitoring and review processes. The short time frame for the SRP made this more difficult.

In May 2011, USAID has proposed making a grant of US\$ 10 million to AusAID to be used in the Indonesia Infrastructure Initiative managed Water Hibah activity facilitating output based grants to local government water companies to improve water supplies for poor communities.

10.3 Conclusions and Recommendations

Recommendations on areas for policy dialogue between AusAID and GOI are grouped in Section 12.

1. Community Engagement

Communities have been mobilised successfully to manage the reconstruction process. The Program achieved a level of community management which indicates a good level of community participation. There is anecdotal evidence that the community engagement process focused on reconstructing the schools may also assist in addressing post disaster trauma stress. There were limited training on community engagement for construction consultants, district coordinators and the SRCs. The SRPMC had unsuccessfully proposed to AusAID that additional community engagement resources be included in the SRPMC team.

Community members have benefited from construction employment, development of construction skills and some flow-on economic benefits to small and medium traders/ business in the region. However, there was little evidence of cash or in-kind contributions from community.

The SRP is comparatively successful but cannot be categorized as best practice as the level of community engagement are not clearly defined in the ongoing MONE / MORA school reconstruction guidelines.

⁸³ Team assumption supported by field observations.

Recommendations: #1 AusAID continue to use the principle of community empowerment and community based construction in school and village level infrastructure activities. For future disaster reconstruction programs, more attention should be given to increased community participation (and ownership) in the planning process. The community construction committee is a key element.

2. School Reconstruction Committees

Community engagement through a SRC structure can successfully implement a community based reconstruction activity where strong and continuous external guidance is provided. The SRC process separating school reconstruction from the ongoing responsibilities of the school committee and school principal provides effective checks and balances. The current election processes for the SRC do not encourage wider community involvement. The inputs of consultants (construction consultant, district / provincial coordinators and FAAO) have enhanced the effectiveness of the SRC functions, especially for construction guidance, quality of materials, anti corruption processes and construction scheduling.

3. Construction Quality

The schools constructed have reached a good standard of construction, particularly in the core buildings. However, construction was not completed efficiently and the finishing of the schools was inconsistent, possibly because the construction consultants and community building teams did not clearly understand what was required. Several schools had used experienced skilled workers for the more complex finishing work. The SRPMC had adequate systems in place to achieve the planned quality except for items outside the core school package such as water supply and sanitation facilities.

4. Construction and User OHS

Implementation of occupational health and safety activities was variable and not consistently applied. ACMs were found on one site visited and reported as not being managed consistently by GOI. In addition, there were indications of under-insurance of workers for social security. Due to the differing sites and school layouts, drains in the school area and insecurely fixed furniture and structures can create ongoing health and safety risks for school children, teachers and parents.

Recommendation: # 2 For reconstruction activities where site clearance is not a direct responsibility of AusAID AMCs, AusAID should review if GOI ACM removal policies (and awareness and practice) are consistent with AusAID's requirements. A similar approach to that used for reporting of possible corruption may be appropriate.

5. Sanitation and Water Supplies

Most SRP toilets have been built to an acceptable standard. However some are not working due to inadequate (sometimes inappropriate) plumbing and, in some case, inappropriate fittings that are difficult to maintain in operating condition within the limitations of school budgets and skill level of maintenance staff. Of the 18 SRP schools visited more than half had water supplies that the ICR team considers unsustainable.

The disabled toilets are mostly functioning, but underused, and the pedestal toilet is often found to be culturally inappropriate. Individual ceramic urinals with pushbutton flushing and pedestal flush toilets are not appropriate technology for primary schools with young tinkering users and limited maintenance funding.

6. Long Term Maintenance Funding

Most schools have limited BOS funding for ongoing maintenance. A small number of schools are asking parents to make small regular payments to supplement their BOS funding.

7. School Security

Many schools did not have enough funds available to build at least a childproof fence around the school and/or fix security bars on windows in at least one room or a store room. This makes schools vulnerable to theft.

8. Payment of the Block funds

The current SRP disbursement process has three tranches of payments (30 %, 50 % and 20 %) payable before the work funded by that tranche is started. This has led to some problems with construction and detailed finishing work on the school not being completed or requiring encouragement from District Education Offices and program staff. Schools were encouraged to complete their work by the later grant of funds for books and teaching materials.

Recommendation: #3 To encourage adequate completion of activities, a bonus payment of about 5 % of the works value should be retained until the AMC has verified that work has achieved an acceptable standard and any defects that occur in a 3 month defects liability period after practical completion have been rectified. This bonus could be funds that the SRC can allocate to their own priorities such as books and teaching materials, security fencing, etc.

9. 'Branding', public awareness and accountability

The SRPMC has implemented awareness activities so communities know funding for the construction is provided by AusAID and USAID (in West Sumatra). Particularly for a co-financed program, these activities may have been inadequate.

Recommendations: #4 AusAID develop a standard 'branding' policy for construction programs with clear guidance on the inclusion (or not) of the managing contractor's logos on documentation. This is particularly important when AusAID implements a program/ project with co-funding from other donors.

10. *Monitoring and Evaluation*

The SRPMC has implemented a comprehensive M&E program including detailed reporting from the construction sites based on its AIBEP experience. The monthly reporting requirements for the SRCs required production of very large reports although some variations were found in the content. These reports require substantial time inputs from the SRC treasurer (and their assistants). The SRPMC weekly reporting requirements may have been too onerous and comprehensive.

The baseline and completion surveys collected and reported useful information. However, baseline data gathering and the initial school assessments did not include adequate gender and community engagement perspectives to guide an effective community empowerment process.

11. Future Reconstruction Activities

The community based construction model has worked effectively for the SRP and has achieved most of its objectives. This flows on from successful implementation in Aceh, Nias and Yogyakarta after their natural disasters. The processes now are relatively well developed but have been designed and implemented on an ad hoc basis based on lessons learned, rather than using pre-prepared structured implementation packages.

The program initiation and screening / assessment phases took more than 200 days so there could also be opportunities to streamline these processes. More realistic timeframes for implementation (150-200 days) should be included for future disaster responses with a higher priority being placed on the initiation/assessment phase.

Most District Education Offices raised the issue of AusAID supporting the reconstruction of parts of schools. AusAID's decision to focus on full reconstruction of schools is appropriate, given the managing contractor implementation modality. However in limited situations, assistance to reconstruction of parts of school could be provided cost-effectively.

Recommendation: #5 To facilitate earlier responses to future disasters and to provide greater flexibility for contracting by AusAID, the experience and systems from the SRP (and other recent AusAID disaster response programs) should be developed into an implementation package that could be then used by any of the AMCs with some engineering experience managing a current AusAID activity in Indonesia.

This would allow rapid mobilisation after a disaster and does not depend on having to use AMC working on a similar sector program / project. Up to five current AusAID AMCs should have the capacity to implement a documented disaster reconstruction activity. The implementation package would include: community engagements processes, staffing specifications and TOR, standard documentation for staff selection, awareness and implementation training packages, quality assurance processes and systems, and implementation, monitoring and technical and financial reporting to meet GOI and AusAID needs.

12. Policy Dialogue

Recommendations: #6 Future AusAID support to disaster reconstruction activities in the education sector in Indonesia will be strengthened by policy dialogue with MONE / MORE in the following areas:

#6.1 *Structure of school reconstruction committee:*

- (i) All community members, not just community leaders, should be encouraged to participate in the SRC selection process. Traditional leaders or respected village 'elders' can be a valuable resource.
- (ii) At least one member should be from the school council;
- (iii) The treasurer be selected from teaching or school administration staff;
- (iv) At least one (preferably two) positions on the SRC should be allocated for a female member; and,
- (v) Community engagement and participation expectations and guidelines.

#6.2 *Key elements of the reconstruction process:* including site clearance, building design, GOI monitoring and worker insurance.

#6.3 *Optional construction elements*

- (i) Subject to available funding, optional additional elements of a school reconstruction package that the SRC and school committee could select from. These include: toilet design closely linked to water supply reliability and quantity; fencing and security; class room ventilation and class room light levels.
- (ii) Implementation of site specific water, sanitation and / or drainage activities. On difficult sites, these elements will require site specific designs in order for sustainable solutions to be developed (also #8).

#6.4 *Occupational health and safety* OHS measures for community based reconstruction activities for schools appropriate to cultural norms and, GOI, AusAID and funding partners' safeguard policies. These measures may vary with the type and complexity of construction.

6.5 *Disability safeguards* Implementation of disability (and other donor priority) safeguards to ensure they are in line with MONE / MORA reconstruction guidelines, remain fit for purpose, are culturally appropriate and represent best value for money.

6.6 *Maintenance funding* The importance of budgeted maintenance funding for schools supplemented by regular contributions by parents.

#6.7 *Financial management support and audit* The balance between future inputs from a program funded FAAO position and the use of GOI audit organisations which can also provide financial support. For disaster response, the FAAO is more important. For a longer term school construction program, greater use should be made of GOI audit organisations and systems, possibly with some program support to travelling and capacity building activities.

11 Lessons and Good Practice

11.1 Construction and Reconstruction of Community Infrastructure

- (a) Community infrastructure construction provides opportunities for communities to learn how to manage infrastructure through a process of community empowerment and community building. This requires resources to guide construction and facilitate the community capacity building

Training and skill development

- (b) Implementing community infrastructure such as school buildings is made up of repeatable elements such as foundation preparation, reinforcing preparation, shuttering and installing reinforcing, etc. These elements can be explained in standard packages with a mix of practical training sessions and well prepared and tested visual aids (videos, simple guide sheets) that clearly show what is required. These could be used in other AusAID and GOI funded school building activities. The initial element of these presentations should be to illustrate the standards and detailed finish that is being targeted.

Construction quality

- (c) Construction quality will be improved by use of defined '**hold points**' specified where construction may not proceed further until the works have been signed off by the district coordinator or more senior engineer should be considered.
- (d) The inspections before final Block Grant instalment payments should include assessment (and agreed reduction) of earthquake hazard risks such as insecurely fixed heavy objects, including enclosed cupboards, black boards and fire extinguishers, roofing over escape routes and inadequately secured water tanks.
- (e) The light steel roof structure and roofing material with its 10 year warranty guarantee provide a cost-competitive high standard of materials and implementation quality.
- (f) Funds should be included to make at least one room secure for storage of more valuable equipment such as computers and teaching materials.
- (g) Site specific elements such as water supply and, septic tank and drainage discharge, and retaining walls can need a higher level of design and construction skills. Future Education Partnership and post disaster reconstruction programs should have access to resources for these additional inputs, when necessary.
- (h) The deployment of construction consultants and district coordinators should take into consideration the above lessons. It may not be necessary to have one construction consultant on-site all the time during construction but a construction consultant with technical support should be on-site during implementation of site specific elements e.g. foundation preparation, initial concrete pours, retaining walls, septic tank discharge systems, etc.

Water supply, sanitation and drainage

- (i) The design of flushing toilets with washing facilities needs an integrated approach to water supply and waste water management. Each school water supply and water disposal system needs to be assessed and, in more challenging situations, site specific engineering designs provided. For more complex designs / situations, an experienced, qualified plumber should be used to advise and train local plumbers and school maintenance staff on appropriate plumbing equipment and techniques.
- (j) In future school designs, the use of deep, straight walled drains next to pedestrian walkways should be minimised. At a minimum, strong grilles should be installed at all natural traffic flow points over and next to open drains⁸⁴, for example, outside toilets.

Administration

- (k) Future AusAID funded community based construction programs should ensure that all workers are covered for social security for the full construction period.
- (l) The SRC's accountability toward the community who selected them should be enhanced. This can be achieved by including on the project billboard placed in front of the school, a summary financial report of planned expenditure on the compared regularly updated actual expenditure.

⁸⁴ Alternatives include: swales, wide shallow drains, or where deep drains have to be used, the drains around the area between the buildings should be provided with open grille or similar covers made with material strong enough to support heavy adults. Attention must be paid to ensure the covers do not create additional hazards such as sharp edges.

- (m) For disaster reconstruction activities managed for AusAID by an AMC, the number of payment tranches could be increased. This may require providing additional computer resources and training to the community reconstruction committee treasurers.
- (n) For the new Education Partnership program using the two-tranche process, an additional control could be used such a third signature from an independent assessor (engineer) to control release of funds from the SRC bank account based on successful completion of work to a hold point. Otherwise the bonus payment outlined in #10.2 above could be used.

Monitoring and evaluation For future reconstruction programs:

- (o) AMC internal weekly reporting be on an exception only basis highlighting problems arising and resolved from the previous weeks. The monthly report would provide the update on implementation progress.
- (p) Reconstruction committee monthly reporting requirements should be streamlined so that most reports can be generated by computer⁸⁵ (with photocopies of supporting information).
- (q) Protocols for taking photographs of construction should include detailed photos of key stages and activities, eg. fixing of reinforcing bars before a concrete pour.

11.2 Community Engagement For future disaster reconstruction activities:

- (r) Program implementation teams, during at least the early stages, include at least one community engagement / participation specialist to coordinate field activities, train field staff and provide field technical support when needed. Additional inputs will depend on the experience and capacity of the provincial engineering coordinators and field construction consultants recruited.
- (s) The program design (and technical assistance budget) should included resources for training the field engineering team in community engagement and basic trauma counselling processes and providing community engagement and participation technical assistance, if required particularly in the assessment / planning phase. These may not be needed if field engineering consultants with community engagement skills can be recruited. Alternatively, NGO resources could be used as in the AusAID supported YCAP where NGOs were used as facilitators of community based projects to increase community resilience.

11.3 Response to Natural Disasters

- (t) Times lags in initiating, reaching agreement on and planning / assessing reconstruction activities can delay completion just as much as construction delays. The UN disaster relief coordination groups established with the national government immediately after a major disaster may be a forum for identifying priority areas and possible funding partners.
- (u) The current community based model is very effective for post disaster school reconstruction. However it needs to be compiled / consolidated into a package that can be transferred to an AMC with some engineering experience to implement with instructions not to make changes but rather for the AMC to highlight opportunities for improvement during and after implementation.
- (v) In future reconstruction activities, AusAID could leverage greater impact and a higher profile by encouraging the AMC to identify situations where limited funding (say to 5 % of the total budget) could be cost-effectively directed to supporting reconstruction of 2-3 badly damaged classrooms in other schools. These additional schools should be close to the school selected for fully reconstruction (less than ½ hour travel) so that community labour working on the two schools can easily work on both sites to share experiences and the construction consultant can easily move between the sites.

⁸⁵ A spreadsheet based accounting package should be supplied to each SRC treasurer with a notebook computer, printer and necessary training Internet access has reached the stage in Indonesia where it should be possible to automatically upload SRC and construction consultant reports directly to a central database for collation and processing.

11.4 Strengthening of Implementation and Sustainability

- (w) During the post disaster implementation stage, greater involvement of provincial, district and sub-district representatives is required to better stream line implementation. This should avoid ad hoc implementation arrangements developing during field implementation.
- (x) Strategies for addressing recurrent costs i.e. school operation and maintenance costs, should be negotiated by AusAID with GOI. In this way the strategies will be longer term in nature, can be reinforced during construction and the likelihood of a sustainable outcome greatly increased.
- (y) Aligning closely with the GOI systems meant that even when problems arose because GOI systems were being used solutions could be quickly found.
- (z) AusAID should explore opportunities for district and sub-district education offices to develop asset management and school maintenance skills that they could then use to support schools.