Independent Appraisal Report
Draft Project Design Document
Mongolia: WASH in Schools and Kindergartens

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Contents

ABBREVIATIONS, ACRONYMS and EQUIVALENTS TABLE

AUD	Australian Dollar
aimag	province
AusAID	Australian Agency for International Development
BEP	(UNICEF's) Basic Education Programme
CFS	Child Friendly School
EMIS	Education Monitoring Information System
EoP	End of Project
ger	Mongolian traditional round shaped shelter, made of felt and wood
GoA	Government of Australia
GoM	Government of Mongolia
IAR	Independent Appraisal report (this report)
IEC	Information Education and Communications
IFGI	Infrastructure for Growth Imitative
JMP	Joint Monitoring Program for Water Supply and Sanitation
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MECS	Ministry of Education, Culture and Science
MNET	Ministry of Nature, Environment and Tourism
MOH	Ministry of Health
MYWP	Multi Year Work Plan
PSC	Project Steering Committee
PDD	Project Design Document
QAE	Quality at Entry Report
RFP	Request For Proposal
soum	Sub-province
ToR	Terms of Reference
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene
WSS	Water supply and sanitation

1. Background

According to AusAID's Guideline on Independent Appraisal and Peer Review, an Independent Appraisal and Peer Review is mandatory for monitored AusAID development activities across all aid modalities and should be conducted after the draft design has been completed.

A draft Project Design Document (PDD) dated October 2011[1] and attachments were forwarded to the Independent Appraiser by email between 25 and 28 October 2011.

In accordance with Service Order 48325/1 and AusAID's "Terms of Reference for Independent Appraisal of Draft Program Design Document for Mongolia: Wash in Schools and Kindergartens" (ToR) dated October 2011, a desktop appraisal was carried out between 28th October and 14th November 2011.

This Independent Appraisal Report (IAR) summarises the results of the desktop appraisal, specifically addressing the elements identified in the ToR. A Quality at Entry Report (QAE) dated 14 November 2011, and based on AusAID's QAE Report Template,[2] is provided separately.

Note: The PDD identifies this initiative as a *Project* while other documents refer to *the Program*. This report adopts the term *Project* to describe the initiative.

2. Project Overview

Project Goal: Support Mongolia in developing child friendly schools and kindergartens to enhance achievement of the Millennium Development Goals, National Development Strategy, and the UNICEF Country Programme.

Project Objective 1: Suitable sustainable WASH facilities and appropriate hygiene behaviours by staff and children in all project schools /kindergartens by end of project. The number of sites and children targeted is: 12 schools, 12 kindergartens and approximately 7,800 children/pupils and 840 staff.

Project Objective 2: Effective GoM mechanisms for WASH in schools and kindergartens are established.

[1] Document Revision: MCO P-2011-06 UNICEF MNG School WASH Prop PreFinal-2.docx

[2] Version valid to 30 June 2012

3. Discussion of Elements identified in the ToR

The ToR identifies the following elements to be taken into consideration in the IAR.

3-1. Is the overall program design aligned with relevant Australian, Mongolian and UNICEF policies?

While there is no formal country strategy in place for Mongolia, Australia's aid program in Mongolia focuses on developing human resources[3]. The PDD aligns with this focus by improving education facilities and cites evidence of the linkage between access to adequate sanitation facilities and improved learning outcomes in Mongolia schools (e.g. PDD paragraph 32).

The PDD identifies that the Project would be supported by the Australian Government through the AusAID managed Infrastructure for Growth initiative which aims to support growth, increased productivity and employment in the Asia-Pacific region. The PDD proposes to support this aim by demonstrating improved water and sanitation governance/management in Mongolia and by investing in the education sector.

The PDD goal aligns closely with goal of AusAID's draft Water and Sanitation Initiative (2008), which is to "improve access by the poor to effective and sustainable water supply and sanitation services thereby contributing to achievement of the Millennium Development Goals" and with Objective 1 which is to "expand access to water supply and sanitation services, particularly for the poor, women and for children in schools".[4]

The PDD aligns with AusAID's strategy to ensure people with disability are a priority for Australia's aid program.[5] The PDD identifies that there is limited access to existing WASH facilities for children with mobility or other physical disabilities and proposes all WASH facilities will be constructed to ensure disabled friendly access (e.g. paragraph 98).

Project alignment with AusAID's gender and development policies and other cross cutting themes is discussed in section 2.7.

The proposed Project actively aligns with Mongolian Government policies of achieving the Millennium Development Goals as articulated in the Mongolian National Development Strategy. Project implementation will be guided by a Project Steering Committee composed of various stakeholders including provincial and central Government representatives. The role of the Committee will be co-ordination and advisory.

The PDD identifies that a working group on Water and Sanitation has been formed by two GoM Ministry Decrees in 2012 (MoH and MNET). Its main function is to coordinate Water and Sanitation issues at the national level but it does not specifically address school WASH issues. The PDD

[3] http://www.ausaid.gov.au/country/country.cfm?CountryId=37

[4] Draft WATER AND SANITATION INITIATIVE - Water, Sanitation and Hygiene Strategy for the Australian International Development Assistance Program - November 2008

[5] Development for All: Towards a disability-inclusive Australian aid program 2009-2014

proposes that the working group will make recommendations on issues related to stakeholder coordination, technical specifications and sustainability, however it will have no authority over decision making on the Project.

The PDD identifies that Mongolia has no National WASH standard for schools and kindergartens and proposes that draft standards (or framework) are developed by the end of the Project (Outcome 2.2). The Ministry of Education, Culture and Science of Mongolia (MECS) has forwarded a letter of endorsement dated 18 October 2011 in respect of the proposed Project to the UNICEF Mongolia Office that confirms the proposed Project outcomes align with Ministry targets and policies (PDD Attachment F).

The PDD identifies the Project target area (Khuvsgul aimag[6]) as one of two focal areas for UNICEF in Mongolia, as documented in the new UNICEF five year Country Strategy 2012-2016.[7] The second key target of UNICEF's Global WASH Strategy[8] is ensuring that all schools have adequate child-friendly water supply and sanitation facilities and hygiene education programmes by 2015.

The Project will be implemented using UNICEF systems, policies and procedures and UNICEF will manage the Project using internal procedures. All activities will be carried out through partners, consultants and specialised design/construction entities. The Project also aligns closely with the broader strategic priorities for the United Nations Development Assistance Framework for Mongolia (2012-2016), particularly Outcome 4 - Equitable access to safe water and sanitation services in urban ger areas and rural settlements.

In summary, the goal and objectives of the PDD align well with Australian, Government of Mongolia and UNICEF policies, strategies and initiatives.

3-2. Is Sector/Problem analysis which underpins the proposed design rigorous?

International research has established that inadequate water supply and sanitation facilities in schools are not only are a health hazard but also affect school attendance, student retention and educational performance[9].

The PDD quotes research and statistics to support the extent of the school WASH sector problem in Mongolia. For example, a 2007 study on school dormitory conditions conducted by MECS revealed that the water supply for 74% of 502 dormitories then in use was carried from outside water kiosks and wells and 46% of the water supply did not meet hygienic standards. Only 22% of the dormitories had indoor toilets and the remaining 78% had outdoor latrines – most of which were unsafe and unhygienic. The study also revealed that the learning achievement of students from grades 4, 6 and 9 staying in a dormitory with a central water supply system and indoor latrines was higher by 9

[6] Aimag = Province or second tier of Government Administration after the Central Government.

[7] Not sited

[8] UNICEF Water, Sanitation and Hygiene Strategies for 2006-2015 dated 15 November 2005

[9] Soap, Toilets and Taps - A Foundation for Healthy Children. How UNICEF Supports Water, Sanitation and Hygiene (UNICEF February 2009)

points in mathematics and 7.4 points in Mongolian language compared to that of students staying in a dormitory with no such facilities.[10]

Building on this broader research and data, the PDD describes a September 2011 inspection by members of the PDD team which visited seven (out of a total of 37) kindergartens and six (out of a total of 35) schools over a period of 4 days. Eleven recurring WASH issues were identified from the findings of the field visits, which form the basis of the problem tree in Section 2.5.3[11]. While various problems are identified, the PDD contains limited discussion on 'why' these issues are recurring. For example, the issue of "limited water quantity and access" was identified (paragraph 36) and disrepair was noted, however more discussion around the extent to which the problem is technical (e.g. limited groundwater sources), institutional (e.g. corruption or limited human resources), financial (budget constraints) or social (lack of knowledge or concern) would significantly improve the PDD.

The PDD identifies that "Integrated interventions will ….. constitute a learning area for an innovative approach for replication" (paragraph 12). The PDD would benefit from more discussion on identifying why some problems are occurring to ensure proposed actions are both targeted and sustainable outside a donor supported aid environment.

In addition, some of the problems identified in Table 2-3 could be better classified as impacts. For example, problem 2 - "Limited water supply limits hand washing…" is perhaps better identified as an impact of problem 1 – "Limited water quantity and access".

In summary, while the problem tree could be better structured and categorised it can be argued that the key problems have been identified. However, description of the proposed actions could have been significantly strengthened with more discussion on the underlying reasons behind some of these problems, particularly those problems related to limited water supply and poor or unfinished construction. The PDD states that these issues will be developed as the project progresses.

3-3. Are the incorporated lessons learned by UNICEF relevant to the Program?

The lessons learnt by UNICEF through practical support of WASH projects in developing countries worldwide is articulated in various UNICEF supported publications such as 2010 "Raising Clean hands"[12] and "Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings" [13]. The PDD cites these and several other generic international school WASH guidelines and reiterates the general principles for successful project implementation. Lessons learnt specific to this Project are covered in the PDD in Sections 2.9, 3.6 and the reader is also directed to Appendix E.

[10] The study seems significant but is not well referenced in the PDD.

[11] An overview of the problems identified during the field visit is also covered in Appendix A.

[12] Raising Clean hands. Advancing Learning, Health and participation through WASH in Schools. (Joint call to Action 2010)

[13] Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings. Edited by: J. Adams, J. Bartram, Y. Chartier, J. Sims (WHO 2009)

The PDD highlights that UNICEF has been supporting and promoting WASH Projects in the Mongolian education sector since the 1990s and during 2010-2011 UNICEF supported the reconstruction of WASH facilities in over 20 schools and kindergartens in 12 soums. The PDD describes UNICEF's approach to the design process prior to 2011, where the local school/kindergartens/communities arranged their own designs. It was found this process took excessive time and the design quality was poor and inconsistent. In 2011, UNICEF engaged MECS to prepare designs for the school WASH facilities; however this again took excessive time and gave poor quality outputs in some cases. The lessons learnt from these projects have led UNICEF to propose direct control of the design and construction supervision processes.

This approach is appropriate if a framework is established to allow quality design and construction processes to be replicated by GoM. The PDD identifies that a protocol for up scaling be incorporated into the proposed WASH framework documentation as part of Output 2.1. While not explained in detail, this approach, if successful, would be sustainable and is therefore supported in principle.

Lessons learnt also address the issue of child discomfort when hand washing due to the extreme cold weather. The Project proposes a relevant suite of strategies and the letter of support from MECS in Appendix F specifically endorses the Project focus on indoor WASH facilities.

Lessons learnt on the sustainability of the Operation and Maintenance (O&M) of facilities is largely covered by reference to a formal handover process similar to the one adopted by a UNICEF project in Sri Lanka[14] however no details are provided. While the risk of poor maintenance of WASH facilities is identified in Table 4-3, the solution is inadequately addressed and institutional responsibility for maintenance of WASH facilities (including costs) is not clearly explained. It seems an omission not to discuss UNICEF experiences with ongoing O&M in Mongolia, given that this is one of the most critical elements of any successful WASH project.

Crucially, the PDD makes limited mention of UNICEF lessons learnt in Mongolia with different toilet construction material (concrete, timber, tiled surfaces) nor experiences with waste disposal (septic tanks, absorption trenches). Likewise, poor hygiene practices are identified as a key risk however strategies to mitigate the risk refer to generic wash education / hygiene behaviour change programs which do not seem to draw on specific lessons from Mongolia.

In summary, while the PDD contains extensive discussion on generic lessons learnt on school WASH projects internationally, discussion on lessons learnt through UNICEF's long association with WASH projects Mongolia is limited. Of particular concern is the lack of relevant discussion around design, construction materials, responsibility for ongoing O&M, strategies for ongoing hygiene promotion and strategies for replication by GoM. While it can be assumed that UNICEF in Mongolia retains a wealth of institutional experience from previous successful and unsuccessful school WASH projects since the 1990s, the limited discussion on these specific experiences in the PDD seems a missed opportunity.

[14] UNICEF Sri Lanka's WASH in Child Friendly Schools (WCFS) 2011-2013 under AusAID funding

3-4. Are the proposed Program Objectives, Outcomes and Outputs relevant to the local needs and achievable?

The PDD defines the Objectives, Outcomes and Outputs in the text and in the Logical Frame (Attachment B) however the PDD uses different terminology to that described in AusAID guidelines.[15]. Table A below summarises terminology used in PDD compared to the AusAID terminology.

Table A – Comparison between AusAID and PDD Logframe Terminology

AusGuideline – "Activity Design 3.3		**PDD**	
Term	**Description**	**Term**	**Example from PDD**
Goal	The long term development impact (policy goal) that the activity contributes at a national or sectoral level	Goal	Support Mongolia in developing child friendly schools and kindergartens to enhance achievement of the Millennium Development Goals, National Development Strategy, and the UNICEF Country Programme.
Outcome	The medium term result(s) that the activity aims to achieve – in terms of benefits to target groups.	Objective	**Objective 1** - suitable sustainable wash facilities with appropriate hygiene behaviours
Output	The tangible products or services that the activity will deliver.	Outcome/Output (terms used in PDD interchangeably)	**Outcome 1.1** - Water Facilities – Sufficient fit-for-purpose water and water facilities available and accessible at all times for drinking, personal hygiene, food preparation, cleaning and laundry by the end of project in 24 schools and kindergartens with 75% complete by year 3
Task	The specific tasks to be undertaken as part of the planned delivery of the activity to achieve the required outputs	Activity	**Activity 1.1.1** - Prepare feasibility and designs

Note: The terms 'output' and 'outcome' interchanged in the PDD between Table 3-1 and Attachment B. In addition there is a discrepancy between some the Outcome descriptions in Table 3-1 and those in Attachment B. It's recommended that the PDD be reviewed to achieve consistency.

Table B summarises the Logframe and provides comment on each element.

[15] AusGuideline Activity Design 3.3 – The Logical Framework Approach

Table B– Comments on Objectives, Outcomes and Outputs

	PDD Narrative / Description	PDD Assumptions and Comments	Relevance / Achievable	Independent Appraiser Comments
GOAL	Support Mongolia in developing child friendly schools and kindergartens to enhance achievement of the Millennium Development Goals, National Development Strategy, and the UNICEF Country Programme	National Education Monitoring and Information System (EMIS) will be developed concurrently during the project	Not asked to comment	EMIS not defined in PDD. Is this the same as IMIS in Figure 4-1?
OBJECTIVE 1	**SUITABLE SUSTAINABLE WASH FACILITIES WITH APPROPRIATE HYGIENE BEHAVIOURS**	Other components of Child Friendly Schools are successful	Yes / unclear	See comments below Note Outcomes (Table 3-1) are identified as an Outputs in Appendix B
Outcome 1.1	**Water Facilities – Sufficient fit-for-purpose water and water facilities available and accessible at all times for drinking, personal hygiene, food preparation, cleaning and laundry by the end of project in 24 schools and kindergartens - 75% complete by year 3**	No assumptions	Yes / Partially No	Drinking water outcome is overly optimistic. See discussion in Section 3.6.1 of appraisal report.
Activity 1.1.1	Prepare feasibility and designs	Select and brief designers Designer to visit each site and develop design and cost estimates Obtain approval from MECS	Yes / Yes	PDD mainly focuses on generic design principles.
Activity 1.1.2	Procure and construct facilities	Select constructor using UNICEF bidding procedures Manage construction demonstrating good quality control and management and handover to	Yes / Yes	Assumes water sources will be available.

	PDD Narrative / Description	PDD Assumptions and Comments	Relevance / Achievable	Independent Appraiser Comments
		school and kindergartens		
Outcome 1.2	**Sanitation facilities - Sufficient, accessible, private, secure, clean and culturally appropriate latrines/toilets for school children and staff by the end of project in 24 schools and kindergartens with 75% complete by year 3**	No assumption or comments	Yes / Yes	Specific details on proposed design options and their relative merits in the Mongolian cultural context would have improved the technical aspects of the PDD.
Activity 1.2.1	Prepare feasibility and designs	Select and brief designers Designer to visit each site and develop design and cost estimates Obtain approval from MECS	Yes / Yes	Limited detail in PDD which mostly focuses on generic design principles.
Activity 1.2.2	Procure and construct facilities	Select constructor using UNICEF bidding procedures Manage construction demonstrating good quality control and management and handover to school and kindergartens	Yes / Yes	Tight schedule given site access constraints. Achievable if construction tenders awarded before construction season starts in May each year. Will require strong Project Management.
Outcome 1.3	**Hygiene behaviour and maintenance Correct use (esp. hand washing) and maintenance of WASH facilities is ensured through targeted sustained hygiene promotion and facility maintenance procedures in 24 schools and kindergartens with progress matching construction.**	Commitment to maintain hygiene promotion and maintenance is secure Asset ownership and responsibilities are clearly defined	Yes / Unclear	Incentives and funding arrangements should be elaborated on in Inception Report Would benefit from inclusion of Lessons Learnt at other UNICEF school WASH sites
Activity 1.3.1	Establish Child Development Centres in each site	Utilises UNICEF's procedure Need assessment, design, establishment, procurement of	Unclear/unclear	Objective and nature of Child Development Centres not well defined in PDD.

	PDD Narrative / Description	PDD Assumptions and Comments	Relevance / Achievable	Independent Appraiser Comments
		equipment and trainings		
Activity 1.3.2	Conduct training activities	Develop training programmes on safe water supply, proper sanitation and hygiene practices and operation and maintenance. Program includes community engagements e.g. building capacity for school Parent-Teacher Associations (PTAs) and promoting good home hygiene practices	Yes / Yes	Carried out by UNICEF team and project partners. Training should fit within a broader strategy to build institutional responsibility, capacity, and incentive at soum and aimag level. Also see above Outcome 1.3. Are PTAs to be responsible for O&M?
Objective 2	**EFFECTIVE GOM MECHANISMS**	GoM commitment is maintained	Yes / Unclear	PDD contains limited discussion on strategies and this should be clarified in Inception Report. Would benefit from inclusion of experience from other UNICEF sites in Mongolia
Outcome 2.1	**Best Practice documentation at the end of project (from PDD Table 3-1)** **OR** **Broad WASH mechanisms framework (PDD Attachment B)**	Commitment by other actors and GoM	Yes / Yes OR Yes / Yes	Discrepancy in narrative in PDD Limited details in PDD
Activity 2.1.1	Evaluate and analyse project outcomes and produce framework	Evaluate and analyse project outcomes and findings together with local communities, local and central governments Develop framework (See Log Frame notes for more details of content).	Yes / Yes	No Comments

	PDD Narrative / Description	PDD Assumptions and Comments	Relevance / Achievable	Independent Appraiser Comments
Outcome 2.2	**Draft National WASH standard for schools and kindergartens at the end of project (Table 3-1)** **OR** **Effective advocacy for adoption of improved mechanisms (Attachment B)**	Commitment by other actors and GoM	Yes / Yes OR Yes / Unclear	Two Outcomes defined in PDD. Both Outcomes as defined are relevant however unclear Institutional responsibility for adoption of improved mechanisms should be clarified in Inception Report
Activity 2.2.1	Promote key stakeholder buy-in by study tours and trainings	Study tour, trainings will be organized for key decision makers /stakeholders on "WASH in Schools" and CFS generally	Yes / Yes	No comment
Activity 2.2.2	Promote and publicise findings	Work in collaboration with the government and other participating agencies Prepare a policy brief for decision makers based on the best practices and lessons learned from the specific interventions Arrange relevant meetings/forums and press-trips etc	Yes / Yes	Check Activity numbering in Attachment B
OBJECTIVE 3	**PROJECT MANAGEMENT**	No comments	Yes / Yes	
Outcome 3.1	Steering Committee formation and on-going support	See Proposal Section 4.1 for more details	Yes / Yes	No comment
Outcome 3.2	Implementation management and project documentation	Includes selection and management of project partners, consultants and specialised design/construction	Yes / Yes	No comment

	PDD Narrative / Description	PDD Assumptions and Comments	Relevance / Achievable	Independent Appraiser Comments
		entities		
Outcome 3.3	Monitoring and Evaluations	Selection of detailed indicators Baseline data collection/survey Annual progress monitoring (activities, and annual data survey) Mid Project and Final Evaluation	Yes / Yes	See Section 3.5 of Independent Appraisal Report
Outcome 1.0	Common to all Outputs ??	No comments	na	Not common to all outputs
Activity 1.0.1	Select sites	Agree and finalise selection criteria Design and collect standardised data Review and select Write up best practice	Yes / Yes	Should belong under Objective 1
Activity 1.0.2	Customised guidelines for WASH in schools and kindergartens	No comments	Yes / Yes	Seems to belong under Outcome 1.3 if guidelines are school specific, or Outcome 2.2 if national

3-5. Is the Monitoring and Evaluation Plan appropriate and adequate to measure the achievements of the Program?

The Monitoring and Evaluation (M&E) approach is described in Section 4.4 of the PDD. It is proposed that project monitoring will be integrated into the GoM / UNICEF Integrated Monitoring and Evaluation Plan. Section 4.4 describes a general approach M&E, which addresses the key issues and is structured around sound baseline data collection, monitoring activities and evaluation that integrate well with National M&E strategies. The PDD notes that a detailed M&E plan will be developed on the Project.

This proposed M&E plan will be an important Project output that should be raised in status in the PDD. For example, Table 4-1 describes the responsibilities and timeframes for M&E and the development of the M&E plan should be included in this table as an activity category. Likewise, the development and approval of the M&E plan should be included as an activity in the Logframe under Objective 3 – Project Management, with the Verifiable Indicator including AusAID approval.

Links between the M&E plan and the Logframe are described in Attachment B, Logical Frame and verifiable indicators are identified for some elements of the Project. The links between M&E and the Logframe are not well defined in Attachment B and the extent to which the Logframe matrix will be used as a Monitoring and Evaluation tool during the Project is not clear. Note – comments on the Logframe are also covered in Section 3-4 of this IAR.

In summary, the approach to M&E is in alignment with AusAID principles. A detailed M&E plan is still to be developed and it's recommended that this plan should be identified as a Project Activity in the PDD, with AusAID approval as one of the Verifiable Indicators.

3-6. Are the proposed activities and management arrangements likely to lead to successful implementation?

Management arrangements are described in Section 4 of the PDD. UNICEF will manage the entire Project using internal procedures and all activities will be carried out through partners, consultants and specialised design/construction entities.

A Project Steering Committee (PSC) will be established and will meet at six monthly intervals. Membership will consist of several stakeholders including AusAID as described in paragraph 116. The role of the PSC will be co-ordination and advisory rather than decision making. Likewise, the existing GoM working group on WASH will have no authority over decision making.

This approach appears to be based on lessons learnt by UNICEF in Mongolia as described in Sections 2.9 and 3.6 of the PDD which have led UNICEF to propose direct control of the design and construction processes. While this approach is supported by the Independent Appraiser, two questions emerge.

Firstly, strategies for integration of the approach back into GoM systems for future replication are not clearly defined in the PDD (although development of a framework and a handover procedure based on Sri Lankan experience is discussed). It is recommended that the Project develop a strategy for the integration of successful elements into the GoM processes to be explored and better defined

as the Project develops. For example, the institutional setting for facility maintenance needs to be defined (responsibility, incentives, accountability and funding).

Secondly, while the PDD describes a participatory approach with local stakeholders (paragraph 107 and Attachment E), the proposed middle ground between UNICEF control and stakeholder participation is not clearly identified. The term 'participation' is often used as a catchall phrase and a common agreement on the definition of 'participation' between different individuals and organisations is rare. For example, stakeholder participation can mean simple consultation or partnerships or even beneficiary control of outcomes and each level of increased participation comes with increased Project resource requirements. It is recommended that the Project includes an explicit statement that clarifies the proposed level of participation at school and community level, perhaps using the "Arnstien Ladder of Participation" [16] or similar structure to guide the wording of the statement.

In summary, the PDD provides an adequate definition of success through a combination of the objective statements and the details in the planned activities. However, the detail of how success will be achieved is limited, with generic descriptions of proposed initiatives dominating the PDD. For example, discussion on WASH facility design, construction materials (wood, concrete, tiles?) , waste disposal, integration of O&M and hygiene training, all unique to Mongolia customs and geography, receive limited discussion which limits the technical appraisal. This report also covers proposed Project activities in detail in Section 3.4.

3.6.1 Technical Activities

Some discussion on technical solutions in the PDD can be found in both Section 3.3 and in Attachment B. Paragraph 97 acknowledges that site selection has not taken place and details will emerge as the Project progresses, so it is assumed that several issues discussed below will be resolved during the implementation process. Paragraph 97 also states that it is not possible to be precise about details of infrastructure to be provided, while Appendix B (page 2) states that customised standards will be developed during the project in consultation with MECS. Despite these constraints, and as previously noted, the PDD could have contained more discussion on technical issues. Based on the information provided, several recommendations are discussed below.

a) Project Objective 1.1 aims for "water facilities available and accessible at all times for drinking…" This would require water treatment systems to achieve water quality standards identified in Attachment B page 5. Given the remote locations, limited local experience, and costs associated with maintaining and testing water treatment facilities, a drinking water outcome seems unsustainable. The PDD notes that drinking water is usually boiled (paragraph 29) and it is recommended that Objective 1.1 be reworded to reflect this practice, as a first step.

b) Paragraph 98 proposes that indoor water flushed toilets are proposed as standard. While indoor facilities are specifically supported by MECS (Attachment F of PDD), if cistern based flushing is proposed as standard the wisdom of this approach is challenged. Toilets in

[16] Arnstein, Sherry R. "A Ladder of Citizen Participation," JAIP, Vol. 35, No. 4, July 1969

schools receive a high level of wear and tear and cistern quality is critical. However, even with the most robust cisterns, regular maintenance, spare parts and skills are required to keep the cisterns functioning. Without focused maintenance, cistern failure, water leakage and septic overload are common problems. It is recommended that pour flush toilets be adopted as a standard to minimise water use and maximise O&M sustainability.

c) Paragraph 98 states that "drainage fixtures (e.g. sinks and toilets) will be plumbed to outside the building into soak pits or septic systems to ensure that groundwater is not contaminated". Firstly, soak pits are not suitable for toilet waste disposal as, by their nature, they drain effluent with only primary treatment directly into the ground /groundwater. Soak pits should only be used for greywater (i.e. handwashing) when no alternative is available. Secondly, it is important to note that soak pits and septic systems do not prevent groundwater contamination. The appropriate strategy is to locate these disposal systems away from groundwater sources. However, if this is impossible the only available strategy may be placing septic tanks a minimum distance from the water source. Assuming favourable groundwater levels and soil conditions, 50m would be an absolute minimum separation.

d) Design standards like number of students per cubicle (boys, girls, urinals) are not yet defined in the PDD. This information is fundamental to assessing cost estimates.

e) Proposed construction materials are not identified. Photographs show wooden floors in cubicles however these are quite difficult to clean, given the nature of wood to absorb liquids. Ideally tiled floors and splash walls or at least concrete floors are recommended as standard for cleaning/maintenance.

f) WASH facilities in schools need to be constructed of particularly robust materials to withstand wear and tear and there is a danger that domestic standards will be adopted for items like taps, doors and hinges etc. It's recommended that commercial quality materials be adopted as standard for high use items.

g) Appendix B proposes 30m maximum distance of toilets from users. This seems a high benchmark and an unnecessary constraint on the designers. Provided indoor facilities are adopted as standard, with disability access, this should be sufficient.

Given the limited discussion on technical solutions in the PDD, it is also recommended that a proposed 'standard' or 'typical' WASH facility design specific to Khuvsgul aimag be developed early in the Project and this design be included as an Output with approval by stakeholders as the verifiable indicator. Perhaps this could be included in the Inception Report proposed in paragraph 139 of the PDD.

It is assumed that financial management arrangements are outside the scope of this Independent Appraisal and therefore are not addressed in this appraisal.

3-7. Has gender issue (and other cross cutting themes) been adequately addressed ?

The PDD identifies that inequity in Mongolia is rooted in a complex mix of political, social and economic factors, including discrimination targeting women, ethno-linguistic minorities and people with disabilities. Despite the reported high enrolment rates at 94.3 % and 89.8 % in 2009 respectively for primary and basic education, the dropout rate was high and the majority of those who are left behind the education system are children with disabilities, children of poor migrant families and the ethno-linguistic minorities (paragraph 16 of PDD). The PDD identifies that the inclusion of marginalised groups as key result area expected by UNICEF.

Promoting equal opportunities for women and men as participants and beneficiaries of development is a goal of Australia's gender and development policy.[17] The PDD identifies that improved WASH facilities specifically empower girls to attend school and recognises the usual high burden of women and girls in water-related chores. The PDD also identifies that appropriate WASH systems reduce barriers of girls' attendance by providing appropriate menstrual hygiene management facilities, and reducing the potential for sexual harassment in school toilets. For example, the PDD identified that only one school out of 13 inspected in September 2011 addressed the issue of menstrual hygiene management.

The PDD proposes a participatory planning approach will be a key mechanism for ensuring the needs of female staff and students are incorporated into the Project. Female participatory sessions will be held separately from the boys and men so that the girls and women can speak more freely. Strong efforts will be made to avoid gender-biased division of responsibilities during design, construction, operation and maintenance through selection of partners / consultants and by content of training programs and development of the operation and maintenance plans. These strategies are based on UNICEF's international experience.

The PDD includes specific approaches to incorporate gender perspectives in selection and/or training of the designers and involvement of children and adults in the design. Baseline Data and Project indicators are to be disaggregated by gender and monitoring indicators for toilets construction success include that they be gender and disability appropriate based on UNICEF international experience.

The PDD also identifies that none of the 13 schools/kindergartens in September 2011 had special arrangements for disabled access to WASH facilities and the PDD proposes all WASH facilities will be constructed to ensure disabled friendly access. This will be achieved by ensuring that selection briefs for facility design partners will require an understanding of disability perspectives, and through the participation of staff and children with disabilities (including those not attending schools) to seek input on achieving disabled access. It is recommended that design guidelines be prepared during year 1 that specify minimum standards including standards for disabled access (e.g. maximum slopes, hand rails etc). However, given that children live in dormitories, sometimes several stories high, it would be worth noting in the PDD whether the Project aims to address disabled access

[17] Gender Guidelines: Water Supply and Sanitation. Supplement to the Guide to Gender and Development (AusAID March 2000, Updated April 2005).

within the WASH facilities only, or whether access from, say dormitories to WASH facility, will also be addressed.

The PDD identifies that there are no known activities which would suggest non compliance with AusAID's legal obligations under the Australian Environment Protection and Biodiversity Conservation Act 1999 (*Commonwealth*). The Project identifies groundwater pollution from sanitation facilities as a low to medium risk. The discussion of mitigation strategies in paragraph 98 suggests a lack of understanding of groundwater pollution risks and this issue is discussed further in section 3.6.1 of this IAR. The PDD also identifies that potential climate change impacts will be considered in the choice of energy efficient technologies for heating and lighting, although no details are provided.

Child protection issues will be addressed in the Project by following the UNICEF Child Protection Strategy (2008), which includes ensuring implementing partners also comply with UNICEF policies and UNICEF Code of Conduct.

In summary, the PDD adequately mainstreams gender and other cross cutting issues throughout the Project and includes data collection strategies to allow the success of the initiatives to be monitored. It is recommended that some specifics on addressing groundwater pollution and energy efficient technologies be identified in the design guidelines (see recommendations).

3-8. Are the costings appropriate to the implementation plans?

The implementation plan is described in Section 4.3 and Attachment C of the PDD. The implementation strategy recognises several physical constraints to Project implementation such as difficult road transport links on unformed un-gravelled roads, long travel times between soum centres, harsh climate and limited construction season (5 months per year).

The PDD appropriately proposes to use the first year to focus on site selection, design and finalising the details of various project elements. Years two and three will focus on construction and hygiene promotion, with hygiene promotion and consolidation of replication strategies the focus for the final year.

The narrative for Outputs 1.1 and 1.2 states that 75% of construction will be complete by year 3, presumably leaving 25% of construction to be completed in year 4, which is probably realistic given the nature of remote area work. However Attachment C shows no budget for construction in year 4 and this inconsistency should be rectified.

Assuming the construction target remains at 75% complete in years 2 and 3, this suggests 18 construction sites are to be completed within 10 months (given the short construction season). The PDD notes that schools and kindergartens are usually located near each other, so in reality there would be construction at 9 locations to be supervised to completion within 10 months. This construction schedule is feasible if construction tenders are awarded before the start of the construction season each year, and tight project management processes are in place.

As noted in the PDD, quality control during construction is crucial for sustainability and this schedule will place a considerable time burden on the UNICEF appointed design and construction supervisor (paragraph 108), given the challenges with transport between sites. The PDD (attachment B and Table 4.3) identifies local school community and 'project committee' support for construction

supervision between the UNICEF staff member visits, which is appropriate. Note - resolving WASH facility ownership and maintenance responsibility early is the key to identifying appropriate local support for quality control during construction.

The total budget is AUD $3.19 million. With a total number of 8,640 direct beneficiaries (7,800 students and 840 staff)[18], at 24 schools (12 schools and 12 kindergartens) a breakdown of average project costs per student and per site are summarised in the Table C over the page.

Referring to Table C, the average project cost is A$369 per direct beneficiary or $133,000 per school. Average construction costs are A$236 per student/staff or $85,000 per school while average hygiene promotion costs are A$15 per person or $5,500 per school.

As noted in the PDD, costings are broad estimates only until site surveys are completed during year 1, and designs are finalised. The PDD would have benefited from information of proposed designs and costs from past UNICEF projects so that average costs could be better appraised. The cost estimates could also be better assessed if the PDD contained data on the proposed construction material, number of cubicles per student etc.

Making a number of assumptions about the proposed design, a similar basic school toilet in Australia would cost more than double[19] the PDD estimate of $65,000 per school (toilet and handwashing construction only). It should be stressed that different contexts and without detailed design guidelines in the PDD, the value of this comparison is provided as a point of interest only.

Given that the GNI for Mongolia is US$1,890 [20] and the poverty rate in rural areas at 50%, this Project represents a significant investment relative to incomes in the targeted community. While the flow-on economic and social benefits would be significant, a full economic cost benefit analysis is outside the scope of this appraisal. However, the high cost relative to local incomes raises a question about the potential for replication by GoM, even without including project management and UNICEF costs. It would be useful to see more discussion on this issue as the Project unfolds.

The PDD identifies that Mongolia has soaring inflation of around 20% and the potential impact on cost estimates should be included as a risk in table 4.10 of the PDD. If high inflation is demand driven, the risk of cost increases should be identified as high. If the inflation is due to currency devaluation, the risk would be lower and could be managed by strategic timing of currency conversions over the life of the Project.

[18] Note – Numbers suggest 35 staff per school or kindergarten or over 1 staff member for every 10 students. This seems high by standards in other countries but is a positive if numbers are accurate.

[19] Based on the PDD, there is an average of 360 staff and students per school, and assuming 16 cubicles (male and female), 5 male urinals and 8 handwashing basins, (typical Australian figures) a floor area of 60 m2 would be required. Using Australian construction cost guidelines for basic public toilets (Australian Construction Handbook page 37, Rawlinsons 2009) the construction cost per square meter is A$2,250/m2 or A$135,000 per school. Allowing for inflation of 3.5%pa, for 2 years total for basic school toilet is estimated at $145,000/school.

[20] Gross National Income - World Bank Economy Profile: Mongolia (World Bank 2012)

Table C – Summary of average costs

Outputs[21]	Description	Total Cost (AUD)	Average Cost per Direct Beneficiary	Average Cost per School or Kindergarten
Output 1.0	Site Selection and customised guidelines	$ 21,000	$ 2	$ 875
Output 1.1	Design Water Supply Facilities	$ 18,720	$ 2	$ 780
	Construction Water Supply Facilities	$ 480,000	$ 56	$ 20,000
Output 1.2	Design Water Supply Facilities	$ 57,600	$ 7	$ 2,400
	Construction Handwashing and Sanitation Facilities	$ 1,560,000	$ 181	$ 65,000
	Subtotal Design Construction	**$ 2,040,000**	**$ 236**	**$ 85,000**
Output 1.3	Hygiene and facility maintenance education and training components	$ 132,000	$ 15	$ 5,500
Objective 2	Effective GoM mechanisms for WASH	$ 102,000	$ 12	$ 4,250
Output 3.1 & 3.2	Project Management	$ 20,000	$ 2	$ 833
Output 3.3	Monitoring and Evaluation	$ 30,000	$ 3	$ 1,250
Output 3.4	UNICEF Staff costs	$ 560,000	$ 65	$ 23,333
	Subtotal	**$ 2,981,320**	**$ 345**	**$ 124,222**
	UNICEF Recovery cost (7%)	$ 208,692	$ 24	$ 8,696
	TOTAL	**$ 3,190,012**	**$ 369**	**$ 132,917**

[21] As defined in the PDD

4. Conclusion

This is clearly a relevant WASH Project that aligns with AusAID WASH Initiatives and has significant benefits for the targeted communities in particular, and potential benefits for the country as a whole. The Project enjoys the considerable advantage of management by UNICEF who have extensive experience with school WASH programs both internationally and in Mongolia.

In general, the PDD defines school WASH problems at the international, country and targeted aimag level and general principles for the proposed solutions are covered. The Project is well aligned with AusAID, UNICEF and Mongolian strategies and policies. Gender issues are addressed and the implementation plan appears feasible (note recommendation on costings). The M&E strategy is not fully developed but is sound in principle with good strategies for baseline data collection and indicator analysis.

However, the document lacks detail of the specific lessons learnt in Mongolia. Perhaps as a consequence, the proposed technical, O&M and hygiene education solutions and the proposed strategy for replication also receive limited discussion. This does not imply that the problems have not been considered or even resolved, only that the PDD does not adequately describe the proposed specific solutions in many areas. In some cases these issues may simply be a case of harmonising AusAID and UNICEF approaches to PDDs.

5. Recommendations for PDD

The nature of an independent appraisal means that, inevitably, negative issues will receive greater text space than the positives. While noting the strengths of the PDD and the significant effort to date, the following recommendations, if implemented, would strengthen the PDD:

1. The discrepancy between Outcome descriptions in Table 3-1 and those in Attachment B should be corrected, specifically the descriptions for Outcome 2.1 & 2.2.

2. The narrative for Outputs 1.1 and 1.2 state that 75% of construction will be complete by year 3, presumably leaving 25% of construction to be completed in year 4, which is probably realistic given the nature of remote area work. However, Attachment C shows no budget for construction in year 4 and this inconsistency should be rectified.

3. The PDD identifies that Mongolia has an inflation rate of around 20% and the impact of inflation on cost estimates should be included as a risk in table 4.3 of the PDD. If high inflation is demand driven, the risk of cost increases should be identified as high. If the inflation is due to currency devaluation, the risk would be lower and could be managed by strategic timing of currency conversions over the life of the Project.

4. Project Objective 1.1 aims for “water facilities available and accessible at all times for drinking…” This would require water treatment systems to achieve the water quality standards identified in Attachment B. Given the remote locations, limited local experience, and costs associated with maintaining and testing water treatment facilities, a drinking water outcome seems unsustainable. The PDD notes that drinking water is usually boiled

(paragraph 29) and it is recommended that Objective 1.1 be reworded to reflect this practice.

5. If cistern based flushing is proposed as standard (Paragraph 98) the wisdom of this approach is challenged. Toilets in schools receive a high level of wear and tear and without specialised maintenance cistern failure, water leakage and septic overload are common problems. Pour flush toilets should be adopted as a more appropriate technology to minimise water use and maximise sustainability.

6. The PDD (paragraph 98) states that "drainage fixtures (e.g. sinks and toilets) will be plumbed to outside the building into soak pits or septic systems to ensure that groundwater is not contaminated". Firstly, soak pits should be used as a last resort for greywater and are not suitable for toilet waste disposal. Secondly, it is important to note that soak pits and septic systems do not prevent groundwater contamination. The appropriate strategy is to locate these disposal systems away from groundwater sources. The paragraph should be re-worded.

7. Appendix B proposes 30m maximum distance of toilets from users. This is an unnecessary constraint on the designers. This should be reworded to providing indoor facilities accessible to all students, including access for children/adults with disabilities.

8. Development and approval of the proposed M&E plan (paragraph 132 of PDD) should also be included as an output in the Logframe under Objective 3 – Project Management, with one of the Verifiable Indicators including AusAID approval. Table 4-1 on M&E responsibilities should also highlight the AusAID monitoring roles that are described paragraph 173 of the PDD.

9. The Inception Report (PDD paragraph 139) should be included as an activity in the Logframe under Objective 3 – Project Management, with AusAID approval as a Verifiable Indicator. The Inception Report will become an important document to support the PDD as more information becomes available. The PDD should identify that the Inception Report will be delivered before the end of Year 1 and in addition to revised budgets, schedules etc, the Inception Report should cover at least the following;

    a. Proposed institutional setting, accountabilities and funding arrangements for ongoing O&M of completed WASH facilities, particularly for funding of costs like soap, toilet paper, cleaning products, repairs, electricity costs, septic waste disposal and future asset replacement costs.

    b. Proposed institutional setting, incentives and funding arrangements for ongoing and hygiene promotion.

    c. Strategies for replication of Project processes by GoM, noting the high estimated cost of the initiative relative to rural incomes.

    d. A 'standard' or 'typical' WASH facility designs, specific for the Project, detailing issues like building material (wood, concrete, tiles), equipment quality standards (e.g. commercial quality taps), student numbers per cubicle, water supply standards, disabled access requirements, menstrual hygiene management facilities, energy efficient technologies for heating and lighting etc. Non technical sketches also

suggested so that school community can better understand the proposed design principles and standards.

e. School selection process and results

f. Identify proposed implementation partners, their roles and responsibilities.

g. Clarification of the proposed level of participation at school and community level (see discussion in Section 3.6 of appraisal report).

h. Clarify whether the Project aims to address disabled access within the WASH facilities only, or access from, say dormitory to WASH facility will also be addressed (see discussion Section 3.7).

10. The terms 'outcome' and 'output' are used inconsistently between Attachment B and the Table 3.1 and should be corrected.

11. Outcome 1.0 is identified as "common to all outputs". However Activity 1.0.1 (select sites) belongs under Objective 1 while Activity 1.0.2 "customised guidelines…" seems to belong under Outcome 1.3 if school specific.

12. Some typographical errors although this was not a focus of the independent appraisal. Some acronyms are missing from the contents pages (e.g. IMIS, MNET, MICS, VIP)

13. The Objective and nature of Child Development Centres (Activity 1.3.1) needs to be defined.

14. Given that there are a number of outstanding specifics to be resolved as the Project develops, a TAG at the end of year 1 to review the project progress generally with specific focus on the M&E plan, Inception Report and facility design guidelines.

Vince Keogh

14th November 2011