Baseline Study
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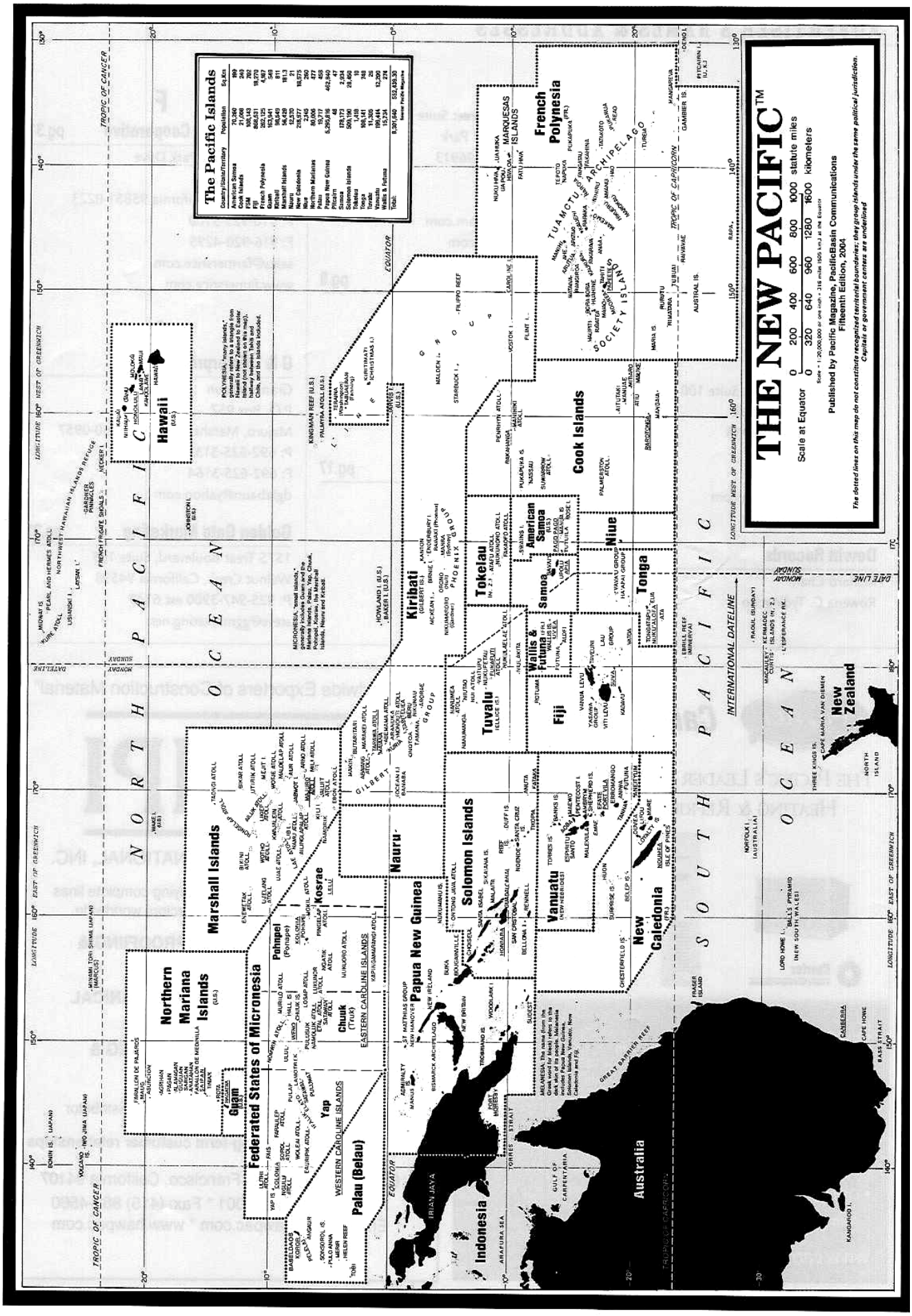
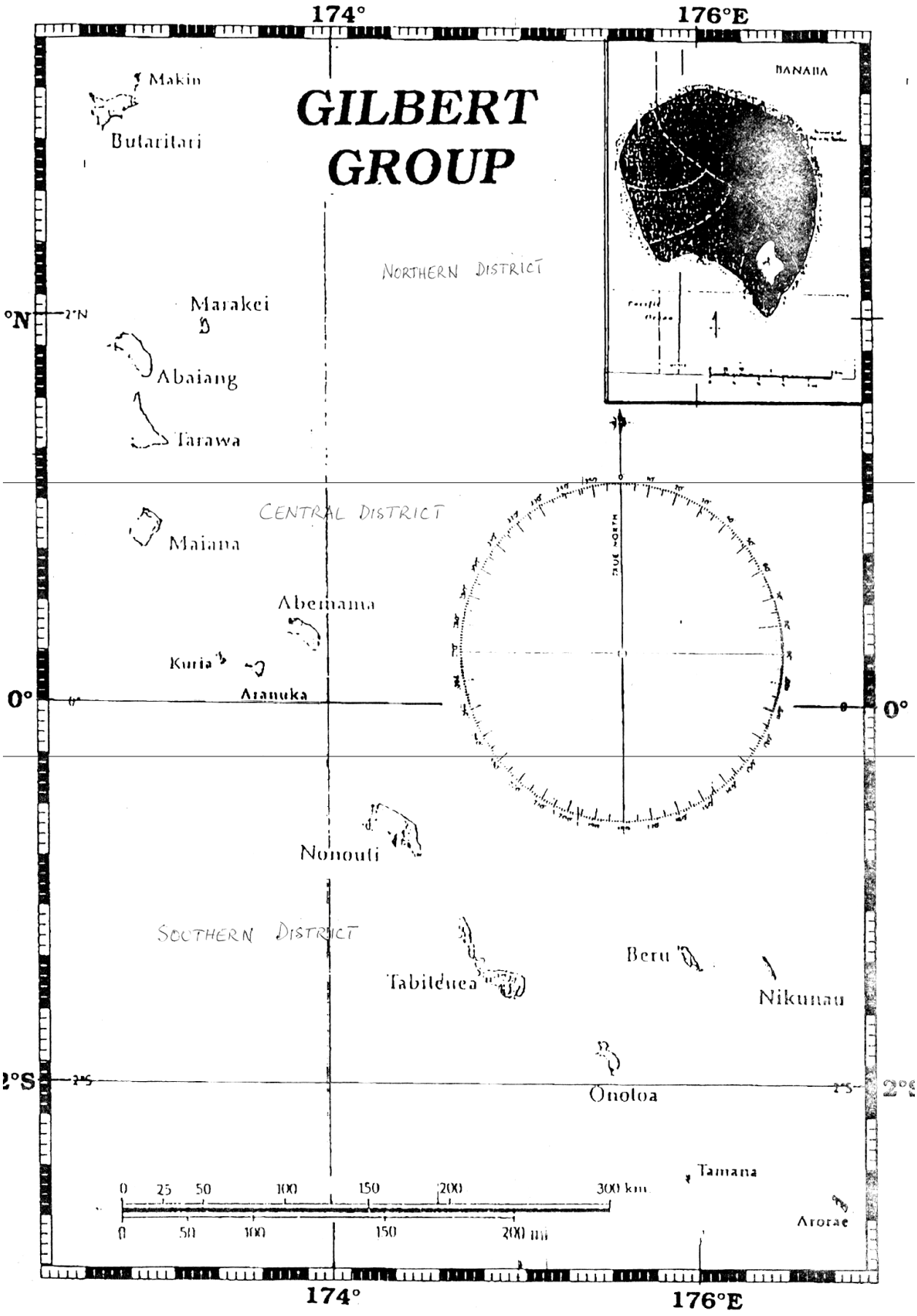
Abbreviations

AMC	Australian Managing Contractor
AusAID	Australian Agency for International Development
CDRC	Curriculum Development Resource Centre
CPRB	Central Procurement Review Board
DEO	District Education Officer
EFA	Education For All
EO	Education Officer
FMP	Facilities Management Plan
FSP	The Foundation for the People's of the South Pacific
GoK	Government of Kiribati
ICMC	Island Council Maintenance Committee
IWP	International Waters Project
JSS	Junior Secondary Schools
KEMIS	Kiribati Education Management Information System
KESP	Kiribati Education Sector Program
KHC	Kiribati Housing Corporation
MEYS	Ministry of Education, Youth and Sport
MFED	Ministry of Finance and Economic Development
MHMS	Ministry of Health
MISA	Ministry of Internal and Social Affairs
MPRC	Ministry Procurement Review Committee
MPWU	Ministry of Public Works and Utilities
NBC	National Building Code of Kiribati
NIS	National Infrastructure Standards
PNG NIG	Papua New Guinea National Infrastructure Guidelines
PS	Primary School
SAPHE	Sanitation, Public Health and Environment Program
SEO	Senior Education Officer
SIMM	PNG School Infrastructure Management Manual
TOR	Terms of Reference
VIP	Ventilated Improved Pit (Latrine)
WHO	World Health Organisation


THE NEW PACIFIC™
Scale at Equator
0 200 400 600 800 1000 statute miles
0 320 640 960 1280 1600 kilometers
Published by Pacific Magazine, PacificBasin Communications
Fifteenth Edition, 2004
The dotted lines on this map do not constitute recognized territorial boundaries; they group islands under the same political jurisdiction.
Capitals or government centers are underlined
The Pacific Islands
Country/State/Territory Population Sq.Km
American Samoa 70,260 199
Cook Islands 21,008 240
FSM 108,143 702
Fiji 856,346 18,270
French Polynesia 262,131 4,167
Guam 163,541 549
Kiribati 98,549 811
Marshall Islands 54,608 181
Nauru 12,329 21
New Caledonia 216,977 18,575
Niue 1,788 260
Northern Marianas 80,362 457
Palau 19,717 488
Papua New Guinea 5,295,816 462,840
Pitcairn 48 47
Samoa 178,173 2,934
Solomon Islands 550,196 28,450
Tokelau 1,418 10
Tonga 108,141 748
Tuvalu 11,810 26
Vanuatu 199,414 12,200
Wallis & Futuna 15,734 274
Total: 8,301,640 552,439.30
Source: Pacific Magazine
Federated States of Micronesia
Northern Mariana Islands (US)
Guam (US)
Marshall Islands
Palau (Belau)
Nauru
Kiribati
Tokelau
Tuvalu
Papua New Guinea
Solomon Islands
Vanuatu
New Caledonia
Fiji
Tonga
Samoa
American Samoa (US)
Wallis & Futuna (FR)
Niue
Cook Islands
French Polynesia
Hawaii (US)
Indonesia
Australia
New Zealand
NORTH PACIFIC OCEAN
SOUTH PACIFIC OCEAN
INTERNATIONAL DATELINE
EQUATOR
TROPIC OF CANCER
TROPIC OF CAPRICORN
LONGITUDE WEST OF GREENWICH
LONGITUDE EAST OF GREENWICH
DATELINE
SUNDAY
MONDAY


174°
176°E
GILBERT GROUP
BANABA
Makin
Butaritari
NORTHERN DISTRICT
Marakei
Abaiang
Tarawa
CENTRAL DISTRICT
Maiana
Abemama
Kuria
Aranuka
0°
Nonouti
SOUTHERN DISTRICT
Beru
Tabiteuea
Nikunau
Onotoa
Tamana
Arorae
0 25 50 100 150 200 300 km
0 50 100 150 200 mi
174°
176°E

1. Overview

1.1 Introduction

This Baseline Study examines the existing systems and resources within the Government of Kiribati (GoK) Ministries and Authorities responsible for the procurement and maintenance of primary school infrastructure and primary educational facilities. The Study explores minimum infrastructure standards and options for improving procurement and maintenance systems and resources at National, Ministry, Island Council and school level. The Study includes recommendations, which respond to historic GoK funding commitments and identifies opportunities for possible donor support. The options and strategies contained in this report will underpin the development of a Ministry of Education, Youth and Sport (MEYS) Facilities Management Plan (FMP) for Primary Schools in Kiribati.

It is noted that the Baseline Study is based on 2005 / 2006 school population and cost data. No allowance has been made for population growth, urban drift and inflation at this stage.

1.2 Program Context

The Mid Term Review of the AusAID funded *Kiribati Education Sector Program (KESP),* which is targeting practical measures to improve the quality of primary education, identified that current procedures within MEYS for the management of school facilities and maintenance required support. In January 2005 AusAID requested the KESP AMC to draft a Terms of Reference (TOR) targeting facilities management. A draft TOR was prepared in February 2005, was finalised and confirmed in consultation with MEYS and AusAID and was approved in July 2005. The Terms of Reference are provided as Annex A.

The Baseline Study incorporates Objectives 1,2 & 3 of the TOR.

The development of the FMP also supports the goals and objectives articulated in the final draft (Draft 9) of the *MEYS Strategic Plan 2005 – 2010*, specifically Goal 2;

To provide optimal and safe learning environments for education, youth and sport in Kiribati (improved and safe infrastructure, equipment and facilities). [1]

1.3 Baseline Study Team and Timeframe

The Baseline Study Team comprises two international Educational Facilities Management Advisors and the Education Officer (Primary) from MEYS who is designated as the local Team Leader. The TOR required a technical advisor from the Ministry of Public Works and Utilities (MPWU) to be included in the Team, unfortunately this person was not made available.

The international advisors were briefed by both AusAID and the KESP AMC prior to their departure for Kiribati. The in-country period for the baseline study was three weeks (4th November to 24th November, 2005).

1.4 Approach to Study

The development of the FMP has been divided into two phases. This Baseline Study is the *first phase* and has been undertaken in support of the *second phase*, which is the finalisation of the FMP for Primary Schools in Kiribati. During *phase one* the Team held discussions with key personnel within GoK and the non-government sector responsible for buildings and maintenance in the education sector, collected and analysed data to identify standards, responsibilities and procurement systems, and undertook field visits to 10 primary schools on South Tarawa, North Tarawa, Abaiang, and Maiana. A Phase 1 Wrap-up Meeting was held on 23rd November 2005 at which current data, preliminary findings and draft strategies and

[1] *Ministry of Education, Youth and Sport Strategic Plan 2005-2010, Draft 9, p1.*

recommendations were presented to GoK and other education stakeholders. The Baseline Study was finalised in Australia and forwarded to the KESP AMC in December 2005.

The *second phase* – finalisation of the FMP is to be carried out in early 2006.

1.5 Present Situation

1.5.1 Kiribati

- The Republic of Kiribati is made up of 33 coral islands and atolls located in three main island groups scattered over three million square kilometres of sea in the Central Pacific, between 4° N and 3° S, and 172° E and 157° W. The total land area is approximately 830 square kilometres;[2]
- The 2000 Census indicated a national population of 84,460, of which more than 92% live in the Gilbert Group. In 2000 the national population growth was around 1.7%, however the annual growth rate on South Tarawa was 5%. Kiribati Census 2005 was completed in November 2005 with updated statistics expected in the later half of 2006;
- The majority of the population on the outer islands live in a subsistence based economy. Development activities in the past have concentrated in urban centres, especially in South Tarawa, with the consequence of a steady drift of people from the outer islands to urban centres.

1.5.2 Government of Kiribati

- GoK revenue and expenditure is tightly controlled effecting the capacity of Government Ministries to forward plan;
- Government employees are required to retire at 50. It was observed that this policy often impacted on the ownership and continuity of government programs and initiatives.

1.5.3 Primary Education

- In 2005, there are 91 primary schools throughout Kiribati, educating 16,133 children (8,167 boys and 7,966 girls);[3]
- GoK funded primary education extends over six years, referred to as Classes 1 to 6. Children commonly enter primary school at 6 years and continue on to Junior Secondary School (JSS) at 12 years, however primary school children can be as young as 5 when they start and be as old as 13 and 14 when they finish;
- Primary Schools can vary in size from as few as 16 students (in the outer islands) to over 1000 students in South Tarawa;
- There are 654 primary school teachers. 492 (75%) are female and 162 (25%) are male.[4]
- Approximately 71% of primary school head teachers are female and 29% are male.[5]

1.5.4 Education Infrastructure Standards

- National (Education) Infrastructure Standards (NIS), loosely based on UNESCO standards, currently set the minimum performance requirements for primary school infrastructure throughout Kiribati. The Kiribati Education Management Information System (KEMIS) provides MEYS with reasonably accurate data about primary school infrastructure on an annual basis through the Primary School Survey Form. The Survey includes questions aimed at establishing each schools performance against a number of NIS benchmarks;
- The National Building Code of Kiribati (NBC) is in its final draft form and is to be presented to Cabinet in December 2005. When adopted the NBC will become the overriding

[2] *MEYS Curriculum Development Resource Centre, This is Kiribati – Sixth Edition 2003*
[3] *MEYS Department of Statistics, Digest of Education Statistics 2005, pages 5 & 6*
[4] *MEYS Department of Statistics, Digest of Education Statistics 2005, page 9*
[5] *MEYS Department of Statistics, Teachers Posting 2005*

document controlling both performance and technical requirements for new permanent, semi-permanent and traditional buildings. Until such time as the NBC is formally adopted Australian and New Zealand Standards guide these requirements;

- Few standard school infrastructure designs exist. The MPWU Technical Design Section retains a number of past school designs. The quality and appropriateness of these past designs and recent MPWU school design is variable;
- The Health-Promoting Schools Program is being introduced as a pilot program in late 2005 and is to be funded through the WHO. The aim of this Program is to assist participating schools to improve the quality of life of its students and teachers by promoting a healthy environment and lifestyle. Health-Promoting Schools have specific objectives to improve the school's infrastructure and physical environment.

1.5.5 Procurement of education infrastructure and maintenance

- The procurement of all goods and services by government agencies, including new buildings, building repairs and maintenance, is subject to the GoK *Procurement Act 2002* which identifies three separate procurement review and approval processes governed by the estimated cost of works i.e.
  - Procurement valuing $5,000 and less;
  - Procurement valuing between $5,000 and $50,000; and
  - Procurement valuing $50,000 and over.
- On South Tarawa responsibility for the maintenance of public buildings lies with the owning Ministry i.e. construction and maintenance of primary school buildings constructed in any material (permanent, semi-permanent or traditional) on South Tarawa is the responsibility of MEYS. Although no funding for building repairs and maintenance was included in the MEYS 2005 recurrent budget (due in part to the confusion over which ministry was responsible for the maintenance), in excess of $600,000.00 has been requested in their 2006 budget submission.[6]
- The Ministry of Internal and Social Affairs (MISA) is responsible for funding the maintenance of public buildings constructed in any material (permanent, semi-permanent or traditional) throughout the outer islands. Cabinet confirmed MISA's role in October 2005 and approved the provision of separate maintenance funding (in addition to MISA recurrent funding) to allow them to meet their maintenance funding responsibilities.
- Island Councils are the implementing agents for the construction and maintenance of public buildings in particular those using traditional materials, including primary school classrooms and teachers housing. Island Councils are considered as divisions of MISA and are funded through the MISA budget. In 2005 Island Council Maintenance Committees, comprising a representative from MEYS (the Senior Grade 1), the Island Health Officer and the Council Clerk or Treasurer, prioritised a scope of works identified by the MPWU and returned it to MISA prior to the release of maintenance funding. Funding for 2005 maintenance was forwarded to Island Councils through MISA in a series of instalments. MISA passed on the funds as the Ministry of Finance released them.
- The Ministry of Public Works and Utilities (MPWU) is responsible for the technical design and documentation of all permanent public infrastructure. This service is offered free to GoK Ministries funding works through their own budgets, however, where the infrastructure is procured through donor funds the MPWU charge for the design and documentation service, currently this charge varies between 15 & 20% of the cost of works. MPWU may or may not undertake the construction but in all cases is responsible for ensuring the quality of the work.

[6] *On 21 November 2005 MFED informed the FMP Team that Cabinet has directed them to remove all capital expenditure from the 2006 Budget, therefore it is unlikely that MEYS will have funding for building repairs and maintenance through their recurrent budget in 2006.*

- Procurement of education consumables including school furniture (blackboards, desks, chairs etc.) for primary schools is the responsibility of the MEYS Stores Section. The Stores Section is currently housed within the Primary Education Services Division but they are also responsible for procuring for JSS as well. Very few consumables and furniture are stored to address future demand, currently stores personnel respond to direct requests from schools as they are received. Each request, even the smallest purchase, must follow the procurement processes established under the *Procurement Act 2002* and be approved all the way up to Permanent Secretary level.
- The Kiribati Housing Corporation (KHC) is responsible for the construction and maintenance of permanent housing for government employees (including primary school teachers) in South Tarawa, they have no responsibility for housing constructed in traditional materials or for housing of government employees on the outer islands. Rents for KHC housing are fixed by Cabinet and have not increased for over 10 years (the current rates were set in January 1994). This has become a problem for the KHC with maintenance costs now exceeding rental income.
- Primary School head teachers are not tasked with organising and implementing routine basic maintenance at schools nor do they have the management and technical resources to do so. The new head teacher's handbook produced by the Curriculum Development Resource Centre (CDRC) does not provide head teachers with resources in this area. Head teachers do procure maintenance using existing systems i.e. through Island Councils.
- The concept of voluntary support from school communities no longer applies to Kiribati schools. Whilst most schools have school committees, made up of school parents and other members of the community, committee members are paid (either by the school or Island Council) to sit. Most maintenance assistance from the community and community sourced materials, whilst readily available, also costs money, this has become an important source of cash for many villages.

1.6 Major Issues

1) There is limited flexibility within the GoK recurrent budgeting system to allow forward planning, all funding appears to be reactive and subject to the whims of Cabinet. Regular and appropriate funds must be forthcoming if the maintenance issues facing primary school infrastructure are to be addressed.
2) Until 2005 MEYS included funds within their Primary Education Services budget for building repairs and maintenance (approximately $1.75 million during the period 2001 to 2004). However, in combination with the absence of efficient maintenance systems, and variable skills within the Ministries to manage infrastructure procurement and maintenance, these funds have not been sufficient to prevent a serious decline in the condition of MEYS permanent buildings on South Tarawa and in many of the outer islands. Maintenance where carried out has been reactive, not pre-planned;
3) GoK's retirement policy may impact on the ownership and continuity of any new maintenance initiatives within MEYS, MISA and MPWU;
4) The MEYS NIS do not cater for the variety in size and locations of primary schools throughout Kiribati. The minimum infrastructure requirements of a 1000 student primary school with 33 teachers will be very different to those of a 30 student primary school with 2 teachers and schools on South Tarawa have different needs to most schools on the outer islands with regards to security, sanitation and the like;
5) Many of the technical requirements of the MEYS NIS will be made redundant by the adoption of the NBC later in 2005, unfortunately in some cases the NIS is more appropriate for the delivery of primary education services than the NBC;

6) MEYS Stores, a major player in the procurement and distribution of consumables and furniture to primary schools, lacks the resources and management skills necessary to plan to meet future primary school needs. Procurement is reactive, not pre-planned;

7) Routine (daily) maintenance at primary schools is poorly developed, with the result that many schools are untidy and others unsafe for students and teachers;

8) Environmental management, in particular where it relates to water and sanitation, is poorly developed in most schools with the result that health and hygiene are often neglected.

1.7 Response to Major Issues

1) Primary schools to be categorised in accordance with their size, expected resources and location, into small, medium and large schools and realistic minimum facilities for each size and location of school incorporated into the MEYS NIS. The NIS should avoid where possible setting technical minimum standards, it is more appropriate for the NBC to address these issues. Minimum infrastructure standards should be informative rather than proscriptive. The NIS should concentrate on establishing benchmarks that will allow each primary school to obtain the appropriate range of facilities needed to support MEYS primary education strategic goals and the goals and objectives of the Health-Promoting Schools Program.

2) Technical minimum standards within MEYS NIS to be coordinated with the NBC to ensure that the NBC is more responsive to the needs of primary school students of all ages and does not cause the over specification of education infrastructure requirements.

3) The Primary School Survey Form to be updated to reflect any changes to the MEYS NIS.

4) A fully prioritised and costed Facilities Management Plan (FMP) for Kiribati primary schools be prepared to enable the staged upgrade of primary school facilities to meet the MEYS NIS. The FMP will incorporate:

   - Existing scopes of work and construction / maintenance budgets established by the MPWU during 2004 and 2005;
   - MEYS NIS developed to respond to school size and location categories;
   - An implementation strategy utilising procurement systems and personnel already in place within MEYS, MISA and MPWU; and
   - Develop an implementation program based on historical GoK and MEYS budget data to ensure its sustainability.

   The following complimentary resources will be developed:

   - A technical design handbook comprising standard plans and specifications for appropriate school infrastructure including facilities for storage, water supply and sanitation that responds to the size and location of schools.

5) To ensure sustainability of the FMP MEYS will need to:

   - Have the FMP endorsed by Cabinet to ensure that it can funded through the MEYS recurrent budget; and
   - Identify an appropriate management strategy and clearly allocate roles and responsibilities for the procurement of infrastructure and maintenance within MEYS.

1.8 Implications outside the TOR

1) KEMIS to review the current method of presenting results to eliminate misleading summary statistics. A weighting system to be developed to identify individual school and Island performance against the NIS benchmarks.

2) MEYS / CDRC to develop a separate head teachers maintenance handbook detailing their responsibilities for routine maintenance and environmental management within primary schools. The handbook should compliment any resources developed through the WHO Health-

Promoting Schools Program and provide teachers with useful information to assist in the development of simple ways to carry out routine repairs and maintenance, including water supply and sanitation, that is sensitive to the schools relationship with the local community.

3) MEYS Stores Section – capacity building in procurement and management in particular budgeting and forward planning be provided to encourage cost efficiencies. MEYS Stores buildings should be made secure and weathertight.

2. Analysis

2.1 Introduction

This analysis is based on meetings and discussions held with stakeholders at National, Ministry, Island Council, school and community level as well as field visits to 10 primary schools on South Tarawa, North Tarawa, Abaiang, and Maiana. A Phase 1 Wrap-up Meeting was held in South Tarawa at the end of the in-country field mission to validate analysis and explore strategies and recommendations.

Formal consultations were held with MISA and MPWU Permanent Secretaries and MEYS Heads of Departments (in the absence of the MEYS Permanent Secretary) followed by consultations and informal discussions with relevant divisional personnel within each Ministry and Ministry of Finance personnel. Relevant groups, organisations and NGO's such as the International Waters Project (IWP), Sanitation Public Health & Environment Program (SAPHE) and The Foundation for the People's of the South Pacific (FSP) and relevant technical agencies, such as the Kiribati Housing Corporation and USP Kiribati, were also identified and canvassed. Views were gathered on existing infrastructure, existing procurement systems, implementation roles and responsibilities and how existing systems and resources could be improved to ensure the effective maintenance of primary school facilities. A summary of meetings held during the in-country field mission is attached as Annex E.

The TOR required a range of schools on South Tarawa and the outer islands to be visited to assess current facilities against NIS benchmarks, to confirm KEMIS school infrastructure data and to review the implementation of current maintenance programs. The MEYS FMP Team Leader identified a program of field visits within the Northern and Central Districts as follows:

Table 1 – Summary of Primary Schools visited

DISTRICT	ISLAND	SCHOOL	URBAN/RURAL	ENROLMENT
Northern District	South Tarawa	Bareaumai Primary School	Urban	354
		Bikenibeu West Primary School	Urban	718
		Tabontemaneaba Primary School	Urban	695
	North Tarawa	Bwan Nei Kanna Primary School	Rural	67
		Nein Tebwara Primary School	Rural	70
	Abaiang	Sunrise Primary School	Rural	130
		Unity of Tateta Primary School	Rural	168
Central District	Maiana	Abitabu Primary School	Rural	150
		Karewea Primary School	Rural	16
		Urintebura Primary School	Rural	171

Source: Project records
A record of primary school field visits including site plans, photographs and KEMIS and NIS assessments are attached as Annex B.

The consultative process during these school visits involved formal meetings with the Head Teachers, followed by informal discussions with teachers and school committee members (where available) and school site and building inspections. Views were gathered on the suitability of existing school infrastructure, water supply and sanitation facilities, on the NIS benchmarks, on how infrastructure could be improved at the school and how building repairs and maintenance is funded and carried out. On each of the outer islands discussions were also held with Island Council Clerks and Treasurers to identify existing maintenance implementation strategies i.e. how maintenance is prioritised, carried out and paid for by the Council.

The information and views gathered from stakeholders, groups, organisations, NGOs and technical agencies have been incorporated into the Baseline Study.

2.2 Technical

2.2.1 Review of the National Infrastructure Standards

As far as the FMP Team can determine KEMIS personnel developed the National (Education) Infrastructure Standards (NIS) based loosely on UNESCO minimum standards, in an 2003 initiative supported by KESP. The Team has been unable to find either an electronic or hard copy of a full NIS document. None of the KEMIS, MEYS and MPWU personnel we spoke to during the in-country consultations (including both Permanent Secretaries) had a copy or could recall having seen a formal NIS document.

Extracts of the NIS for Primary Schools, JSS and Combined Secondary Schools were found in the *MEYS Annual Statistical Report – 2003*. The FMP Team have used these extracts as well as questions found in the annual KEMIS *Primary School Infrastructure Survey* to undertake a review of the scope and nature of the NIS for Primary Schools. The NIS is compared against similar primary school infrastructure standards recently adopted in Papua New Guinea (PNG) [7] and the technical requirements which are included in the draft National Building Code of Kiribati (see Section 2.2.3).

Table 2 – Review of National (Education) Infrastructure Standards for Primary Schools

ITEM	KIRIBATI NIS	PNG NIG	NBC	COMMENTS
Purpose and Context	Not identified in extract	Included		A simple description of the purpose of the minimum standards how they will address MEYS education strategies and how the standards fit into established procurement strategies for primary schools.
Principles	Not identified in extract	Included		An overview of government and stakeholder expectations.
Responsibilities	Not identified in extract	Responsibilities of each stakeholder included		An overview of those responsible for the procurement and maintenance of primary school infrastructure.
Categorising Schools	Not identified in extract	Method to categorise schools included		A simple means to assess appropriate infrastructure benchmarks for schools of different sizes, locations and development needs.
Health and the Environment	No specific requirements identified in extract	The PNG NIG encourages schools to look after their physical environment.		The PNG NIG incorporates objectives arising from the Health-Promoting Schools Program to improve and manage school infrastructure and local environment. It is noted that this program will be piloted in Kiribati in late 2005.
Infrastructure Design & Targets				
Types of buildings	Traditional, Semi-Permanent, Permanent,	Traditional, Traditional + Store bought, Store bought.	The requirements of all building Classes will apply to school infrastructure	The NBC catagorises school infrastructure as follows: Teachers houses – Class 1 if permanent, Class 1A if traditional materials are used; School buildings - Class 3 if permanent or 3A if traditional materials are used; Maneaba - Class 2 or 2A.

[7] *National Infrastructure Guidelines for Primary and Community Schools, PNG Department of Education,2005*

Table 2 – Review of National (Education) Infrastructure Standards for Primary Schools

ITEM	KIRIBATI NIS	PNG NIG	NBC	COMMENTS
Building condition	G – Good, F – Fair P - Poor	Building condition described as Routine maintenance (good), Minor repairs required, (fair) or Urgent, major repairs required (poor).		NIS Condition benchmarks give no indication of the amount of work required to fix each condition. The PNG NIG refers to a companion document, the *PNG School Infrastructure Management Manual (SIMM)*, which identifies condition by the amount of work required, buildings in good condition still require routine maintenance.
School Sites	The school site shall beat least 2.5 x the space occupied by all other school facilities (excluding play areas, gardens farms etc.). Playground & School Gardens are encouraged.	No minimum size. Includes practical ways to ensure that school physical environment is healthy, secure & safe.	Applies to all Buildings: Section B – Structure, Sections DF & NF – Health and Amenity	The Health-Promoting Schools Program introduced into PNG in the early 1990's has influenced the requirements in the NIG. The NIG companion document, the *SIMM,* gives details for an annual *School Grounds Inspection* to help head teachers identify and fix problem areas on their school sites. The NBC includes provisions to prevent damage to sites during construction activities i.e. to prevent damage to the water table, neighbouring property, site drainage etc.
Natural light & ventilation	No requirements identified in extract	Good natural lighting and airflow in and around buildings should be incorporated in accordance with *PNG Building Code*	Applies to all Buildings: Class 1 & 1A, Section DF – Health and Amenity & Class 2,2A,3 & 3A, Section NF – Health and Amenity	The NIS should make similar reference to the NBC once it is adopted. The NBC has the following requirements: Teacher Housing: Class 1 & 1A, DF 4 – Light & Ventilation • natural light to be minimun 10% of floor area for teachers housing, • natural ventilation (unobstructed opening) to be minimum 30% of floor area of habitable room, 25% of all other rooms, • buildings setback minimum 1000mm from boundaries. Maneaba & school buildings: Class 2, 2A, 3 & 3A, NF 4 – Light & Ventilation • natural light to be minimum 10% of floor area, • natural ventilation (unobstructed opening) to be minimum 15% of floor area • buildings setback minimum 1000mm from boundaries.
Water Supply	No requirements identified in extract, however, the Primary School Survey requests	Identifies the provision of a safe and reliable water supply for both drinking and hand	Sections DF & NF – Health and Amenity provides technical details for the	The PNG NIG refers to a companion document, the *PNG School Infrastructure Resource Book (IRB)*, which recommends minimum water usage requirement of 7 litres per child / per day (3 litres for drinking & 4 litres

Table 2 – Review of National (Education) Infrastructure Standards for Primary Schools

ITEM	KIRIBATI NIS	PNG NIG	NBC	COMMENTS
	information on the type of supply, its capacity and adequacy	washing as an essential requirement. Encourages installation of rainwater tanks.	installation of water supply systems.	for hand washing) and provides details for the installation of rainwater collection and storage systems. In Kiribati well water is appropriate for hand washing, rainwater usage should be governed by drinking requirements only. NBC DF 5– Water Supply and Plumbing • gives requirements for piped water supply, • DF 5.5 discusses options for rainwater storage, • DF 7 gives requirements for roof drainage and rainwater collection, • Specification DFS 3 gives details for acceptable rainwater collection and storage systems.
Toilets	No requirements identified in the extract. The Primary School Survey requests information on the type of WC and their number & condition. It also identifies if school children use the local beach.	Identifies the provision of a good and secure sanitation as an essential requirement. Recommends: 1:40 girls, 1:60 boys, 1:25 staff & special facilities for older girls.	Sections DF & NF – Health and Amenity Table NF 2.3	The PNG NIG acknowledges that the PNG Health Department requires higher toilet numbers than those in the NIG, however the NIG recognises that for a variety of reasons these higher numbers are not often achievable. The NIG also recognises the special sanitary needs of older girls and encourages schools to provide facilities that will allow older girls to continue at school rather than stay at home. NBC, Table NF2.3 establishes the number of fittings require: • WC's for girls & female staff: 1:20, 2:40 + 1 for each extra 30, • WC's for boys & male staff: 1:30, 2:70 + 1 for each extra 70, • Urinals for boys & male staff: 1:30, 2:70 + 1 for each extra 35, • Hand basins for boys (same for girls): 1:60, 2:140 + 1 for each extra 140. It is the FMP Teams opinion that these figures are too high and will be difficult to achieve.
Classrooms	Class numbers set at 30 per class. School entitlement: Number of students x 1.6m2 No minimum size but maximum set at 64m2	Class numbers set at 40 per class. No maximum size Minimum – not less than 54m2, Ideal minimum 64m2 (i.e. 1.6m2 / student) increased to	Class 3 & 3A Table ND 1.10 Minimum requirement: 2m2 per person	PNG NIG bases its classroom sizes on minimum widths of 7.8m for permanent buildings and 6m where simple, locally made collar tie trusses are used. NIG includes sample classroom layouts using standard two student desks. The NIS does not set minimum dimensions for classrooms. Standard traditional classrooms in the outer islands are 40m2, this provides 1.3m2 for class of 30 students.

Table 2 – Review of National (Education) Infrastructure Standards for Primary Schools

ITEM	KIRIBATI NIS	PNG NIG	NBC	COMMENTS
		74m2 if classroom is also used as a library		NBC governs all structural, fire protection, access and egress, health and amenity requirements including: • Performance of building materials, • Number of exits – 1 per classroom, • Minimum ceiling heights, • Disabled access requirements – disabled access is required to Class 3 buildings if they are more than 500m2 or to Class 3 buildings less than 500m2 if the floor level of the building at the entrance is not more than 190mm above the ground, • Fire fighting equipment – portable fire extinguishers required, etc.
Maneaba	All schools to have a Maneaba. School entitlement: Number of students x 0.75m2 Maximum size 100m2	Considers communal buildings as an option – up to the school and the local community	Class 2 & 2A Table ND 1.10 Minimum requirement: 1m2 per person	Maneaba are commonly provided to schools by local villages at no cost to the school. Given this it would be more appropriate for the NIS to encourage rather than mandate their need. NBC governs all structural, fire protection, access and egress, health and amenity requirements
Library	A library is not mandatory. A library can only be established in a permanent building. The Primary School Survey requests information on libraries, their size, construction type & condition.	PNG NIG encourages the establishment of a library / resource centre at all primary schools. Options suggested for schools of different sizes.	Class 3 & 3A	In order to support the Primary Education Curriculum the FMP Team believe that the NIS should encourage libraries and not limit their installation. PNG NIG suggests classrooms be increased by 10m2 if they incorporate a library corner. Indicative layouts provided for stand alone library facilities. NBC governs all structural, fire protection, access and egress, health and amenity requirements. However there are no specific requirements governing minimum size etc. Table ND 1.10 has the following (which could apply): • General classroom: 2m2 per person; • Trade or practical area (primary): 4m2 per person.
Storeroom	No requirements identified in extract. The Primary School Survey requests information on storerooms, their size, construction type & condition.	PNG NIG encourages the establishment of a storeroom at all primary schools. Options suggested for schools of different sizes.	Class 3 & 3A	PNG NIG gives no minimum or maximum sizes but suggests that storerooms should be big enough to include shelves and where it doubles as an office it should be big enough for a desk or side benches. NBC Table ND 1.10 has the following (which needs checking by MPWU): • Storage space: 30m2 per person;

Table 2 – Review of National (Education) Infrastructure Standards for Primary Schools

ITEM	KIRIBATI NIS	PNG NIG	NBC	COMMENTS
Head Teachers Office	All schools to have an office for the Head Teacher. Minimum size: 10m2, Maximum size: 15m2	Not mandatory for small schools but should be provided for in medium and large schools	Class 3 & 3A Table ND 1.10 Minimum requirement: 10m2 per individual staff room	PNG NIG gives no minimum or maximum sizes and suggests the following: • Small school: HT use classroom; • Medium school: HT use classroom or share space in storeroom; • Large school: HT office provided.
Staff Room	All schools to have a staff room. Minimum size: 10m2 (for up to 5 teachers) + 2m2 for each extra teacher up to a Maximum size: 30m2	Not mandatory for small & medium schools but should be provided for in large schools	Class 3 & 3A Table ND 1.10 Minimum requirement: 2m2 per person	PNG NIG gives no minimum or maximum sizes and suggests the following: • Small school: not required; • Medium school: not required; • Large school: separate room with good access to staff toilet. NBC Table ND 1.10 has the following minimum (but sets no maximum): • Common staff room: 2m2 per person i.e. 30 staff will require a room 60m2, well over the NIS maximum;
Teacher Housing	All teachers shall be housed (in either permanent or traditional accommodation).	Not mandatory	Classes 1 & 1A requirements will apply. Section DF – Health and Amenity	NBC governs all structural, fire protection, access and egress, health and amenity requirements including: • Performance of building materials - constructed to resist the spread of fire, • Number of exits – 2 per building, • Minimum ceiling heights, • Natural light and ventilation, • Water supply, and • Sanitation.
Furniture				
Student	A chair and writing surface (either table or desk) shall be provided for every student	A chair and writing surface (either table or desk) shall be provided for every student		PNG NIG recommends a combined seat and desktop because it can be clearly identified as school property (harder to steal or 'borrow'). These desks should be provided at the rate of 1 per 2 students and be sized to suit the different development rates of primary school children.
Teacher	A chair and table or desk shall be provided for every teacher	A chair and table or desk shall be provided for every teacher		
Classroom equipment	Every classroom will have: 1 x blackboard, 1 x locker, cupboard or bookcase	Every classroom will have: 1 x blackboard, 1 x pin board		PNG NIG suggests that the minimum size for a blackboard as 1.2m ht. x 3.6m long, however, it recommends that longer boards 4.8m are better. Pin boards should be minimum 1.2m ht. x 2.4m long.

Sources: MEYS Annual Statistical Report – 2003, National Infrastructure Guidelines for Primary and Community Schools, PNG Department of Education,2005 and National Building Code of Kiribati – Final Draft, 2005.

Upon review the FMP Team believe that the MEYS NIS is an useful infrastructure management tool. Unfortunately, stakeholder knowledge of the NIS is poor and its benefits are not fully understood. This is understandable given that the NIS appears to be buried within MEYS statistical documentation, is not reproduced in any stand-alone form and distributed to relevant stakeholders, and MEYS does not have a clear policy to regularly review the NIS for its relevance and appropriateness.

Table 2 highlights a number of advantages and disadvantages, these are summarised in Table 3 below:

Table 3 – Summary of NIS Review

ADVANTAGES	DISADVANTAGES
The NIS is an useful infrastructure management tool Where they are applied NIS minimum standards compare favourably with those established in the PNG NIG and if met will provide infrastructure appropriate to Kiribati's needs; The annual Primary School Survey provides MEYS with a good opportunity to inform primary school head teachers about NIS minimum standards and the benefits arising from having appropriate infrastructure in good condition; The information generated by the Primary School Survey provides MEYS with useful information about the capacity of primary school infrastructure to support its operational strategies and curriculum goals and objectives.	NIS does not appear to fully support primary school operational strategies and curriculum goals and objectives, in particular the suggestion that libraries are not mandatory. The NIS should identify appropriate infrastructure and encourage primary schools to obtain this infrastructure in accordance with their particular needs; The role of the NIS is not reinforced by linking it to the MEYS Strategic Plan; The NIS has been written as one size fits all. This does not cater for the variety of needs arising in primary schools of different sizes (student and staff populations) and in different locations (urban and rural); The NIS sets no benchmarks for primary schools with regard to the important infrastructure such as store rooms and libraries, nor for environmental, health and amenity issues such as safe water supply, good sanitation and light and ventilation; The technical requirements of the NIS will be made redundant by the adoption of the NBC. However, in some cases the NIS benchmarks are more appropriate to the delivery of primary education services than those found in the NBC.

Source: Project Records

2.2.2 Assessment of selected schools against NIS Benchmarks

During the school field visits school facilities were assessed against the primary school NIS benchmarks highlighted in the *MEYS Annual Statistical Report - 2003* to determine compliance. The following benchmarks were looked for:

- School Site: the space provided for all purposes (other than play areas, gardens and farms), shall equal 2.5 times the total space occupied by the school facilities.

  The FMP Team looked for a surplus or deficit of site area available to schools. Schools complied if 2.5 times the area of all their school facilities was less than the area of the school site. The FMP Team relied on information provided by school staff as to the location of boundaries.

- Classrooms: The whole school enrolment shall be multiplied by 1.6m^2 to establish the school classroom area entitlement. Individual classrooms shall not exceed 64m^2 , however, no minimum is established, the NIS only requires that the classroom provide approximately 1.6m^2 for the class enrolment.

  The FMP Team looked for a surplus or deficit of classroom area. Schools complied if their actual classroom area equalled or exceeded their entitlement. Two enrolment figures were obtained, the first from the head teacher and the second from MEYS statistical data (see

Table 3 below). When these enrolment figures varied the classroom entitlement was calculated using the larger of the two.

With few exceptions the traditional classrooms at the schools visited were a standard size, around 40m^2, and whilst this was fine for the class enrolments at most of the schools, it would not meet the NIS benchmark for a full class of 30 students, only providing 1.3m^2 per student.

- Maneaba: a Maneaba shall be provided. The whole school enrolment shall be multiplied by 0.75m^2 to establish the school Maneaba area entitlement. Maneaba will not exceed 100m^2

  Schools complied if they had a Maneaba. The FMP Team also looked for a surplus or deficit of Maneaba area. As the Maneaba is most often constructed and paid for by the surrounding villages (at no cost to the school) those that exceeded the maximum area entitlement were not noted as non complying, those with less than the required area partially complied.

- Library: provision of a library is not mandatory. If a school has a library it must be housed in a permanent building.

  The FMP Team are of the opinion that the provision of a library is essential to a schools capacity to meet the primary education operational strategies and curriculum goals and objectives. The NIS should encourage schools to provide libraries, not impede them. In this case schools complied if they had a library, of any kind, housed in a permanent or semi-permanent building.

- Head teachers office: a head teachers office shall be provided. Minimum size 10m^2 , maximum size 15m^2 .

  Schools complied if they had a separate Head teachers office. Schools that had the head teacher sharing space within a store room or staff room do not technically comply, however the FMP Team believe that in most cases these facilities were appropriate, these schools have been noted as partially complying.

- Staff room: a staff room shall be provided. Minimum size 10m^2 (for up to 5 staff) plus 2m^2 for each additional staff up to a maximum size of 30m^2 .

  Schools complied if they had a separate staff room close to the nominated minimum. Schools with staff rooms exceeding the maximum entitlement are noted as partially complying.

- Store rooms: although not a NIS requirement the FMP Team looked at the schools capacity to store instructional materials in a separate, secure and watertight facility.

- Teachers housing: all teachers shall be housed in either traditional or permanent accommodation.

  The FMP Team concluded that schools in the outer islands complied with this benchmark if they had staff housing for each member of staff on the school site. It is recognised that alternate housing arrangements are often available so in some cases housing for all staff on site may not be required, however, given the rotational teacher posting policy of MEYS the FMP Team believes that schools in the outer islands should meet the NIS benchmark. In urban situations housing on the school site is not always practical (or possible) and alternate housing arrangements for teachers are the norm. Urban schools have been noted as complying.

- Student Furniture: all students will be provided with a chair and a surface to write on, either a table or a desk.

  Schools complied if they had sufficient and appropriate furniture for students in good condition.

- Teacher Furniture: all teachers will be provided with a chair and desk.

  Schools complied if they had sufficient and appropriate furniture for teachers in good condition.

- Classroom Equipment: a blackboard must be provided for every classroom. A locker or bookcase must be provided in every classroom.

  In most schools visited classrooms had only had the blue storage boxes provided by AusAID. These schools were noted as partially complying.

Table 4 – Summary of NIS Benchmark Compliance

● School complies ◗ School partially complies ○ School does not comply

DISTRICT	ISLAND	SCHOOL	NIS BENCHMARKS											
			SCHOOL SITE	CLASSROOMS	MANEABA	LIBRARY	HEAD TEACHERS OFFICE	STAFF ROOM	STORE ROOM	TEACHERS HOUSING	STUDENT FURNITURE	TEACHER FURNITURE	BLACKBOARDS	LOCKER / BOOKCASE
Northern	South Tarawa	Bareaumai	●	○	○	●	●	●	●	●	○	○	●	○
		Bikenibeu West	●	●	○	○	●	○	◗	●	○	○	●	◗
		Tabonte Maneaba	●	○	●	●	◗	●	●	●	○	○	●	○
	North Tarawa	Bwan Nei Kanna	●	●	○	●	◗	●	●	○	○	○	●	◗
		Nein Tebwara	●	●	●	●	◗	●	●	●	○	◗	●	◗
	Abaiang	Sunrise	●	●	◗	○	○	○	◗	●	○	●	●	◗
		Unity of Tateta	●	●	●	●	◗	●	●	○	○	○	●	◗
Central	Maiana	Abitabu	●	○	●	○	●	◗	●	●	○	○	●	◗
		Karewea	●	●	○	○	○	○	◗	○	◗	◗	●	◗
		Urintebura	●	●	●	●	◗	●	●	●	○	◗	●	◗
		Number of schools visited	10	10	10	10	10	10	10	10	10	10	10	10
		Number of schools fully complying with NIS Benchmarks	10	7	5	6	3	6	7	7	0	1	10	0
		% of schools complying	100	70	50	60	30	60	70	70	0	10	100	0
		% of schools partially complying	-	-	10	-	50	10	30	-	10	30	-	80

Source: Project records

A record of primary school field visits including site plans, photographs and KEMIS and NIS assessments are attached as Annex B.

Table 4 highlights that primary schools are not complying with the NIS benchmarks. Although schools performed well against some of the benchmarks, scoring more than 70% compliance in 5 of the 12 examined, they also scored 50% or less in 5 of the 12. The Table identifies school furniture and equipment as the area of most concern. This was confirmed by head teachers when asked to identify the priority works required at their schools, see Annex B.

- School Site: according to site investigation all schools complied with this benchmark. The FMP Team questions the relevance of this benchmark to schools on the outer islands. However, on South Tarawa where schools have limited area and no scope to increase this benchmark will be useful in establishing maximum enrolments for each site;
- Classrooms: 70% of schools have the required classroom area. Two of the schools that have deficit areas are located on South Tarawa, both require a significant increase in

classroom area, see Annex B & D. The non complying school on Maiana Island has chosen to use one of its permanent classrooms as a staff room, reallocating 40m^2 of this room to a classroom and the rest to a staff room would make this school comply with both benchmarks. The FMP Team believe that the results of this survey confirm the appropriateness of the 1.6m^2 space requirement;

- Maneaba: 60% of schools had a Maneaba. Bareaumai PS has the slab and columns in place but requires a new roof structure, it cannot be used in its current condition so has been noted as non complying, of the three schools that did not have a Maneaba only one, Bikenibeu West PS, saw it as a priority and was actively pursuing funds for its construction. Karewea PS has such a small enrolment that construction of a school Maneaba seems an excessive requirement;
- Libraries: 60% of schools had complying libraries in spite of the lack of encouragement in the NIS. Of those that did not have a library only one, Sunrise PS, had only traditional buildings, all the other schools had permanent buildings on their sites.
- Head teachers office: Only two of the schools visited had no facilities at all for the head teacher and one of these, Karewea PS, has an enrolment of 16, so use of a classroom in this case seems appropriate. In the view of the FMP Team the remaining schools had facilities appropriate to their size and complied with the intention of the NIS if not the detail.
- Staff room: 70% of schools had staff rooms, of these one, Bareaumai PS had a room that was just under the NIS benchmark, and another, Abitabu PS had a room that was well over the NIS benchmark. One of the schools with no staff facilities was Karewea PS, again given its size, this is appropriate.
- Store room: All schools had storage in some form or another. 70% of the schools visited had a separate, secure and watertight store. Of the remaining three schools only one had no permanent buildings, very little work is required at the other two schools to upgrade their existing storage to comply;
- Teachers Housing: in most cases the non-complying schools were shore by a single residence. In each case the head teacher indicated the teacher had alternative accommodation in a nearby village.
- Furniture: during the site visits procurement and retention of school furniture was seen as one of the major issue facing schools. MEYS Stores is under resourced and is unable to address the school furniture procurement needs of primary schools. Some schools are now seeking assistance outside the Ministry from such sources as New Zealand Aid (in 2005 The New Zealand High Commission provided in excess of $60,000 towards the provision of primary school furniture and classroom equipment). Another issue facing schools was retention of the furniture once they received it with many head teachers complaining of theft and vandalism.

2.2.3 Assessment of selected schools against Environmental Benchmarks

Many of the schools visited rated poorly in terms of environmental hygiene. Teachers interviewed were often aware of health risks and of the theories of contamination, but in many cases did not put them into practice. In most cases urban schools have access to piped water and town sewer or at the very least are accessible to sewer services such as septic pump out trucks etc. In rural locations schools are faced with a number of problems which limit both water supply and sanitation options including no water collection systems, limited fresh water lenses, high water tables and cultural objections to the handling of human waste (required with the use of composting type toilets).

During the school field visits the FMP Team looked at the provision of the following facilities:

- Water supply: looked at the schools existing capacity to provide reliable, safe drinking water for their students. Alternative collection systems available and the capacity of these systems;

- Sanitation facilities: looked at the facilities schools provided to meet their children's sanitation needs including hand washing and facilities to meet the special sanitary needs of older girls.

Table 5 – Summary of Environmental Benchmark Compliance

● Have the facility and it is safe and reliable i.e. well drinkable, rainwater tanks with water, toilets working

◉ Have the facility but it is NOT safe or reliable i.e. well water needs to be boiled, rainwater tanks are empty or use of beach is a problem

◗ Have the facility but it is broken, not working or not used i.e. pit toilets full, rainwater tanks or water collection system broken

○ Don't have the facilities

DISTRICT	ISLAND	SCHOOL	WATER SUPPLY				SANITATION							
			TOWN SUPPLY (URBAN ONLY)	WELL	RAINWATER TANKS	TANK CAPACITY IN DAYS *1	STUDENT - FLUSHING	STUDENT - WATER SEAL	STUDENT - PIT TOILETS	NUMBER WORKING *2	OCEAN OR LAGOON	TEACHER – PIT TOILETS	HAND WASHING	FACILITIES FOR OLDER GIRLS
Northern	South Tarawa	Bareaumai	◗	◉	●	16	○	●	○	4	○	●	◗	○
		Bikenibeu West	○	◉	◉	8	○	◗	○	1	◉	○	◗	○
		Tabonte Maneaba	○	◉	●	8	◗	●	○	1	◉	○	◗	○
	North Tarawa	Bwan Nei Kanna		◉	◉	28	○	○	○	0	●	●	◗	○
		Nein Tebwara		◉	●	25	○	○	○	0	◉	●	◗	○
	Abaiang	Sunrise		◉	○	0	○	○	○	0	●	◗	◗	○
		Unity of Tateta		◉	◗	23	○	○	○	0	●	●	◗	○
Central	Maiana	Abitabu		◉	○	0	○	○	○	0	◉	◗	◗	○
		Karewea		●	○	0	○	○	○	0	●	●	◗	○
		Urintebura		◉	○	0	○	○	○	0	●	●	◗	○
Number of schools visited			3	10	10		10	10	10		10	10	10	10
Number of schools with reliable and safe facilities			-	1	3		-	2	-		5	6	-	-
Number of schools with facilities that are not reliable or safe			-	9*	2		-	-	-		4	-	-	-
Number of schools with facilities that don't work			1	-	1		1	1	-		-	2	10	-
Number of schools with no facilities			2	-	4		9	7	10		1	2	-	10

Source: Project records

Notes: *1 Assumes rainwater tanks are full and 2 litres a day / person is required for drinking. Refer to Annex B.

*2 Toilets working and available to STUDENTS.

Table 5 highlights that all schools visited had problems with their water supply and in particular student sanitation. It should be noted that the 2005 KEMIS responses from many of the schools visited to queries about their water supply indicated that all schools had a safe and reliable water available – this is clearly not the case. During the site visits most head teachers nominated improving water supply as a school priority. However, only one head teacher nominated provision of student toilets as a priority, refer to Annex B.

The following general observations can be made with regards to water supply:

- Urban schools are not utilising the available town water supply. Only one of the urban schools visited had a connection and that was in the teachers housing area;
- All schools had access to wells. All but one head teacher complained about the quality of water from their wells. Most indicated that their wells were not reliable especially at low tide, were brackish or required boiling before drinking. In urban schools wells were generally used only for bucket flushing and hand washing;
- 60% of the schools had rainwater tank systems. Of these schools 2 indicated that their tanks had recently run dry and another had a broken collection system. Only one of the schools that did not have tanks had only traditional buildings i.e. no roof to collect water. Rainwater catchment is the only realistic alternative water source available to schools. The NIS should encourage their installation;
- Taps located on the tanks were often damaged, left on or leaking. Head teachers reported that these tanks were also used by local villages to supplement village water supplies. Ideally taps should be located in an area where access to the water can be controlled such as the head teachers office or the staff room;
- Rainwater tank capacity does not meet acceptable minimums. Annex D looks at providing schools with sufficient tanks to provide 2 litres a day for students and teachers for 60 school days. There is no quantitative assessment of the quantity of water needed for basic purposes. 2 litres per person per school day is an estimate based upon discussions with head teachers and observation of the quantities of water students were bringing with them to school, it is also similar to the quantity nominated in the PNG NIG. The 60 day period is based on anecdotal evidence as to the average period between rain. According to the NBC this capacity would provide for an average risk of failure of no more than once in any five year period.

Table 6 – Average annual rainfall throughout Kiribati

GROUP	ISLAND	ANNUAL AVERAGE RAINFALL (mm)	GROUP	ISLAND	ANNUAL AVERAGE RAINFALL (mm)
Gilbert	Makin	2,872	Phoenix	Kanton (Canton)	952
	Butaritari	3,106		Nikumaroro (Gardner)	1,319
	Marakei	2,050		Orona (Hull)	1,171
	Abaiang	1,743		Phoenix	800
	Tarawa (N)	1,943		Manra (Sydney)	1,045
	Tarawa (S)	1,943		MacKean	1,045
	Maiana	1,543		Birnie	1,045
	Abemama	1,518		Enderbury	1,045
	Kuria	1,518			
	Aranuka	1,518	Line	Teraina (Washington)	3,021
	Nonouti	1,507		Tabuaeran (Fanning)	2,107
	Tabiteuea (N)	1,418		Kiritimati (Christmas)	974
	Tabiteuea (S)	1,418		Malden	676
	Beru	1,355		Starbuck	-
	Nikunau	1,242		Vostok	-
	Onotoa	1,230		Caroline	-
	Tamana	1,425		Flint	-
	Arorae	1,826			
	Banaba (Ocean Is)	1,860			

Source: National Building Code of Kiribati, Final Draft

- At the Phase 1 Wrap-up Meeting the MPWU Permanent Secretary indicated that water tanks were not included in current MPWU maintenance activities. It will be necessary to determine who is to be responsible for tank maintenance;

The following general observations can be made with regards to sanitation:

- All urban schools visited had toilet blocks with flushing or water seal toilets connected to the town sewer or septic tanks. Only 6 toilets within these blocks were working and available to students, 4 of these at Bareaumai PS (at the rate of 1 toilet to 90 children) and 1 each at Bikenibeu West PS (1:718) and Tabonte Maneaba PS (1:695);
- At Bikenibeu West PS and Tabonte Maneaba PS in excess of 1400 students are using ocean beaches to go to the toilet;
- No rural school provided toilets for their students, all relied on nearby ocean beaches or returning to their homes to go to the toilet. Given the relatively small school enrolments in most rural locations the ocean beach is an environmentally acceptable sanitation method if used correctly, however, it appears that most children actually go to the toilet in the vegetation areas immediately above the beach, these areas are not flushed out;
- Many head teachers expressed their concern over their lack of control over the children when they used the ocean beach, which were often over 100 metres from the school buildings;
- Pit toilets are used by teachers and are most likely available to children at their homes. Standard pit toilets can be provided through the Island Council. Annex D looks at providing rural schools with standard pit toilets based on 1:40 for girls and 1:60 for boys. These ratios are similar to those nominated in the PNG NIG, but are substantially under those required by the NBC;
- Most head teachers interviewed indicated that children used well water to wash their hands after going to the toilet but there was no way they could police hand washing and most head teachers indicated that in spite of having teachers reinforce the practice it most probably did not happen. The most likely reason for this is the inconvenient location of most wells to the route children followed to and from the beach.
- None of the schools visited identified older girls as having special sanitation needs, even though 8 of the 10 head teachers being female most were unaware of possible problems. Anecdotal evidence would suggest that student absence for sanitation reasons occurred.

2.2.4 Review of access for disabled students

Both the *MEYS Strategic Plan 2005 – 2010* and the *MEYS Ministry Operation Plan 2005 – 2006* include the development of an *Inclusive School Policy* as a primary goal. Access requirements for disabled students are not included in the MEYS NIS, however, they will be governed by the NBC when it is adopted. In terms of school buildings the NBC will require purpose made disabled access to school buildings (see Table 2);

- that are over 500m^2; or
- to each school building less than 500m^2 that has a floor level at its entrance no more than 190mm above ground level;
- disabled toilet facilities will be required if a school building exceeds 1,000m^2. Although the NBC could be interpreted as the total of school buildings exceeding 1,000m$^{2.}$

The school field visits highlighted a number of issues:

- Many existing classrooms will fall into the second category above and require upgrade to allow disabled access;
- The majority of traditional classrooms were constructed at ground level and are accessible, however, some had a 50mm high threshold and restricted head heights at their entry which will present a problem for some disabled;
- Most permanent classrooms were at least one step above the ground. Some had more than one step, ramped access to these would not be required;

- Restricted head heights to Maneaba will make access for some disabled a problem; and
- Many schools have more than 1,000m^2 of buildings and could be required to provide facilities for the disabled. The majority of rural schools have no toilets at all and it will be difficult to provide appropriate facilities for disabled students.

The Kiribati National Disability Survey undertaken in 2004 / 2005 identified 3,480 people with 4,358 disabilities. Approximately 38% of disabled people live in South Tarawa. 38% of the under 25 age group reported having attended school. There are 563 children in the 6 to 14 year age group separated into 8 disability types, refer to Table 7 below [8]. The survey has yet to incorporate data from the Line Islands.

Table 7 – Disabilities within the 6 to 14 age group

DISABILITY	NUMBER
Physical Disability (including paraplegic, tetraplegic, hemiplegic, kyphosis, amputees, torticollis, talipes, scoliosis, cerebral palsy, filariasis, general weakness & cleft palate)	108
Blind / Vision Impairment	69
Deaf / Hearing Impairment	179
Intellectual Disability	140
Epilepsy	46
Psychiatric / Mental illness	7
Multi disabled	11
Speech / Language	2
	563

Source: Kiribati National Disability Survey Report

At the conclusion of the field mission the FMP Team visited the School for the Disabled on South Tarawa. Discussions with the Head teacher and teaching staff confirmed that whilst the provision of disabled access will provide opportunities for some children with disabilities to attend Government primary schools, unless it is supported by appropriate technical resources and the provision appropriately trained staff and aides, the majority of disabled children will still miss out.

[8] *Kiribati National Disability Survey Report, May 2005*

2.3 Institutional

2.3.1 Responsibility for funding Primary School Infrastructure and Maintenance

It became clear during the FMP Team's early consultations with GoK Ministries that there was confusion among ministry personnel as to which Ministry was responsible for funding primary school maintenance. Among other things the Team were initially informed that:

- MEYS did not allow for building repairs and maintenance in their 2005 recurrent budget because MISA was responsible for funding the maintenance of public buildings, including primary school infrastructure throughout Kiribati;
- Someone else within MEYS informed the FMP Team that MEYS was responsible for funding the maintenance of schools on South Tarawa and have included funding for building repairs and maintenance in their 2006 recurrent budget, however MISA was responsible for funding maintenance of schools everywhere else;
- MISA informed the FMP Team that they were only responsible for funding maintenance of public buildings constructed in traditional materials on the outer islands. Permanent buildings on the outer islands and all buildings on South Tarawa were the responsibility of the owning ministry.

These and other views were discussed at the Phase 1 Wrap-up Meeting at the completion of Field Mission No. 1. It is now understood that prior to 2004 / 2005 funding responsibility for new buildings, building repairs and maintenance rested with the owning ministry i.e. MEYS was responsible for funding maintenance of primary school buildings throughout Kiribati. During 2004 / 2005, in what appears to be a move to encourage cost efficiencies and to strengthen the role of Island Councils, Cabinet approved a number of changes to procurement systems including the funding of maintenance.

The Phase 1 Wrap-up Meeting confirmed that responsibility for the provision of new primary school facilities, school building repairs and maintenance is now shared between MEYS and MISA, roles and responsibilities are determined by the location of the work i.e. whether the work is to be carried out on the outer islands or on South Tarawa.

Primary school maintenance on the Outer Islands

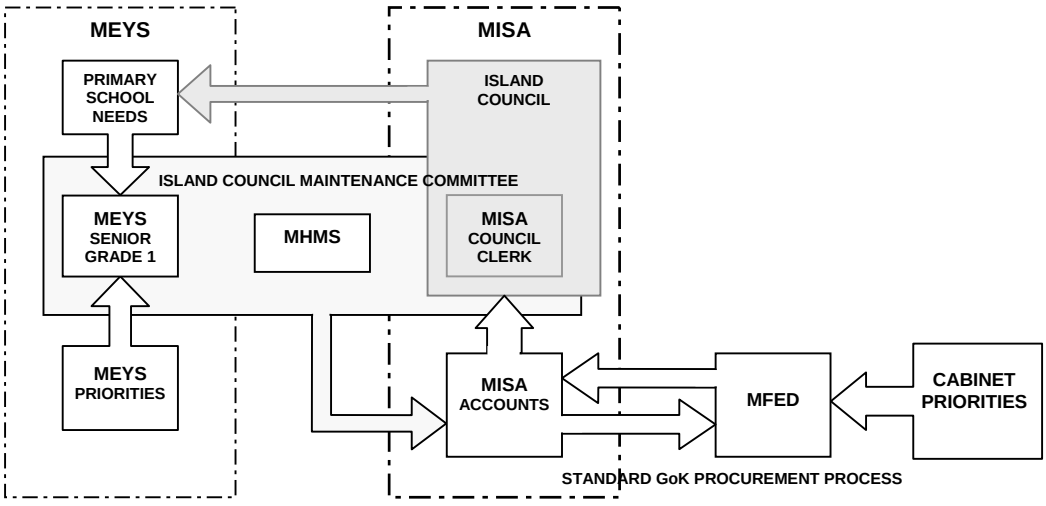


Figure 1. Primary school maintenance funding for Outer Islands

- Throughout the outer islands MISA is responsible for funding building repairs and maintenance of primary school buildings in whatever material they are constructed i.e. traditional, semi-permanent or permanent;

- Maintenance work is prioritised on each island by an Island Council Maintenance Committee (ICMC) comprising the Council Clerk or Treasurer (MISA), the Senior Grade 1 Teacher (MEYS) and the Island Health Officer (MHMS). Although MEYS has no control over the ICMC priorities, they are represented on the Committee and can convey MEYS priorities through the Senior Grade 1 Teacher. Individual primary school maintenance requirements are also addressed through the Senior Grade 1;
- MISA follows standard GoK procurement guidelines to obtain maintenance funding in accordance with the prioritised scopes of work from each ICMC. In October 2005 Cabinet approved the provision of separate maintenance funding, in addition to MISA recurrent funding, to allow MISA to meet their maintenance funding responsibilities and it is expected that this funding will continue.
- Island Councils are responsible for implementing the work on buildings using traditional materials through local communities. The MPWU are responsible for implementing the work on buildings using permanent materials either utilising MPWU resources or through the Island Councils.

During the FMP Teams field visits to the outer islands it was observed that primary schools were having their traditional buildings repaired and replaced under this system.

Primary school maintenance on South Tarawa

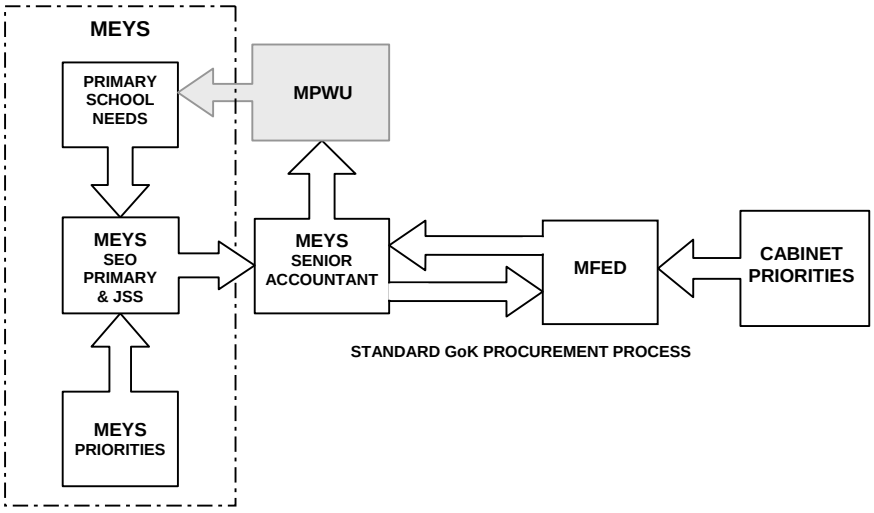


Figure 2. Primary school maintenance funding for South Tarawa

- On South Tarawa MEYS is responsible for funding building repairs and maintenance of primary school buildings in whatever material they are constructed i.e. traditional, semi-permanent or permanent;
- There is currently no planned maintenance being carried out on primary school buildings on South Tarawa. All maintenance is reactive where the Ministry is responding to individual requests if funds are available. Maintenance requests are currently received by DEOs, the EO (Primary & JSS) and the SEO (Primary & JSS), in other words no single person within the Primary Education Services Division has been identified as being responsible for maintenance planning, however, ultimately all requests must go to the SEO (Primary & JSS) as head of Primary Education Services;
- Prior to MEYS procuring funds all maintenance requests are passed on to the MPWU for costing. In some cases schools are submitting fully costed requests after obtaining their own quotes for labour and materials in an effort to speed up the process;
- Funding for the maintenance of primary school buildings is through the MEYS recurrent budget. All fully costed requests are taken to the Senior Accountant MEYS to determine if there are sufficient funds remaining within the budget, if there are sufficient funds then standard GoK procurement guidelines are followed to obtain the funds from MFED;

- MPWU are responsible for implementing the work including design and documentation (if required) and construction. Increasingly, local construction contractors (usually ex MPWU employees) are being asked to provide these services. The reasons commonly given for using local contractors were;
  - Because they were very busy, MPWU took a long time to do the work required; and
  - The MPWU charged too much to carry out design and documentation services.

During the FMP Team's field visits to primary schools on South Tarawa it was observed that generally primary schools were in very poor condition, in particular the permanent buildings and that maintenance was not happening because funds were not available.

2.3.2 Responsibility for funding Teacher Housing

Responsibility for the provision of new teacher housing and maintenance of teacher housing is shared between MEYS, MISA and the Kiribati Housing Corporation (KHC), roles and responsibilities are determined by the location of the work i.e. whether the work is to be carried out on the outer islands or on South Tarawa, and the type of building i.e. traditional, semi-permanent or permanent.

Teacher Housing on the Outer Islands

- Throughout the outer islands MISA is responsible for funding new teacher housing and building repairs and maintenance to existing teacher housing in whatever material they are constructed i.e. traditional, semi-permanent or permanent. However, the vast majority of teacher housing in the outer islands is constructed with traditional materials and usually comprise a separate sleeping house, eating / living house, cooking house and pit toilet;
- The provision of new teacher housing and maintenance of existing teacher housing on the outer islands is subject to the same prioritising and procurement processes discussed above. Head Teachers or their school committee notify the Senior Grade 1 of their housing needs, the Senior Grade 1 through the ICMC prioritises that need against other works required and based on the Island Council priorities MISA procures the funds;
- Island Councils are responsible for implementing the work on buildings using traditional materials through local communities. Island Councils have a fixed pricing schedule for each separate element of new traditional housing, communities cannot charge more than the fixed price.

Table 8 – Cost breakdown for teacher housing constructed in traditional materials

ELEMENT	LABOUR COST	MATERIALS COST	TOTAL
Sleeping house	$485.45	$1,433.94	$1,919.39
Eating House	$365.75	$775.30	$1,141.05
Cooking house	$200.00	$638.58	$838.58
Pit Toilet	$75.00	$212.00	$287.00
TOTAL	$1,125.20	$3,059.82	$4,186.02

Source: North Tarawa Island Council (with fixed prices confirmed at Abaiang and Maiana)
Note: A new primary school classroom building is quoted at the same cost as a sleeping house i.e. $1,919.39.

Permanent Teacher Housing on South Tarawa

- The KHC is responsible for the construction and maintenance of permanent and semi-permanent housing for government employees (including primary school teachers) on South Tarawa, they have no responsibility for housing constructed in traditional materials or for housing of government employees on the outer islands;
- Nearly 20% of KHC's current stock of 1115 houses are utilised by MEYS personnel;
- KHC housing stock provides housing for only 26% of current government employees and it is unrealistic to expect them to house the remainder given increasing land restrictions and KHC financial constraints arising in part from their inability to charge market rents (rents

are controlled by Cabinet and have not increased since 1994). For the last few years rental income has not matched the cost to maintain KHCs housing stock;

- The current wait list for KHC housing is 453 which represents 41% of current stock (it is not known how many of those waiting are MEYS personnel).

Traditional Teacher Housing on South Tarawa

- On South Tarawa MEYS is responsible for funding the provision of new teacher housing and maintenance of existing teacher housing constructed in traditional materials. Funding for this type of housing is subject to the same procurement processes discussed under Sections 2.3.6;
- Construction is usually carried out by local communities, with labour and materials costs similar to those identified above.

2.3.3 Building Regulations and Authorities

There are currently no formal Building Regulations to control the design and construction of public and private buildings in Kiribati. The MPWU is in the process of finalising documentation of the National Building Code of Kiribati (NBC) which we understand is to be presented to Cabinet for its first reading towards the end of this year. Until the formal adoption of the NBC, anticipated during 2006, Australian and New Zealand Standards loosely guide technical requirements for new buildings.

Of particular relevance to MEYS is the potential impact of the NBC on the MEYS National Infrastructure Standards (NIS). Once formally adopted the NBC will become the principal document controlling building performance and technical requirements in Kiribati. The NBC will override the technical requirements within the NIS. Section 2.2.1 compares the NIS and NBC and how they will impact on the provision of primary school infrastructure.

Other Ministries and Authorities that could impact on new primary school infrastructure include:

- Health authorities who are responsible for environmental health including water quality monitoring;
- The Water Engineering Section of the MPWU who are responsible for water resources management throughout Kiribati; and
- The Public Utilities Board within the MPWU who coordinate and manage power generation, water supply and sewerage disposal in South Tarawa. The Public Utilities Board is also responsible for issuing licences to qualified electricians and plumbers.

2.3.4 Standard School Building Designs

Most existing permanent and semi-permanent Primary School buildings were constructed under the British Administration (pre 1979). MPWU Technical Design Division is not aware of any standard school buildings designed or constructed since 1979 using GoK funds. However, several schools visited by the FMP Team have permanent buildings provided by donor funding or by the local community. These buildings appear to address deficiencies in staff accommodation, secure storage and library facilities. The extent of MEYS involvement (if any) in the design of these buildings is yet to be confirmed.

MPWU retains original 1977 drawings for British Administration standard classroom blocks. These were basic timber framed structures with corrugated steel roofs, concrete floors, secure store rooms and security mesh windows. External walls were designed for hardboard or bush material cladding. Rainwater tanks were provided. As these buildings were designed for both primary and secondary classes of unknown pupil numbers, the area of 64m^2 per classroom cannot be realistically compared with other models. Many of the existing primary school buildings on South Tarawa appear to be based on this model.

A new Satellite Primary School was recently designed by MPWU Technical Design Division to help ease over-crowding of Primary Schools on South Tarawa. MEYS was consulted as the 'Client Ministry' and whilst funding for the new facility will be channelled through the MEYS

budget it is provided from a donor source. MPWU has secured and cleared the school site and will shortly commence building Stage 1 of the school (3 classrooms, toilet block and part Admin block).

Drawings provided by MPWU show a school with 10 classrooms (300 pupils), small Administration Block, 2 toilet blocks, a permanent school Maneaba and 10 permanent staff houses (which are based on KHC standard house types). Classrooms will be concrete block structures with timber framed corrugated steel roofs and concrete floors. Generous eave overhangs and ceilings will provide thermal comfort. A good compromise is achieved between cross ventilation and the provision of internal wall space for displaying curriculum, posters and student works. Rainwater will be collected from all roofs.

The Maneaba (approx. 240m^2) and classrooms (72m^2) exceed both NIS and NBC benchmarks. Toilets are generously provided at 1:25 for girls and 1:15 for boys but disabled access is not addressed. The FMP Team is also concerned that items that currently cause maintenance problems in South Tarawa schools are replicated in the new Satellite School. Roof sheeting is not installed in full lengths (ridge to eave); roofing nails are used instead of roofing screws; hardboard (masonite) is used instead of plywood or fibre cement sheet; windows have operable glass louvres but no security mesh; toilet blocks will have lights and ceilings but no security doors or gates to prevent out of hours access and classrooms will have ceiling fans.

In addition to these issues, the provision of a school Maneaba and staff housing constructed in permanent building materials may set an awkward precedent for MEYS – providing grounds for demands from other schools and teaching staff on South Tarawa. It also creates new building categories requiring MEYS funded infrastructure maintenance.

MPWU Technical Design Division staff clearly stated the need to address 'urban drift' by ensuring South Tarawa schools are not perceived as superior to rural schools. In light of this assertion and given the non-compliance with NIS benchmarks, the FMP Team considers the new Satellite School designs too generous and sophisticated to become 'model' primary school buildings for Kiribati.

It was clear during the stakeholder interviews that the MPWU Technical Design Division did not utilise the guidelines and requirements of the NIS or the NBC when establishing the project brief for the Satellite Primary School, it is also clear that the MEYS design review committee were also unaware of (or unable to interpret) their Ministries minimum infrastructure standards when reviewing the MPWU designs. The Director of the MPWU Technical Design Division confirmed that planning and design data published through the UK based Architectural Press[9] was used to establish room sizes, relationships and technical details. The FMP Team question the appropriateness of this document as a guide to primary school buildings in Kiribati.

2.3.5 GoK Budgets and Funding Commitments

Government revenue and expenditure is very tightly controlled (see Table 9 on the following page). Clear strategies to allocate funding for infrastructure procurement and maintenance do not exist, and where funding is sought it is subject to time consuming procurement processes and the whim of Cabinet making it virtually impossible to forward plan.

Throughout all levels of consultations it was clear that the timely availability of consistent and appropriate funds for primary school building repairs and maintenance was considered a major issue to stakeholders. In the case of MEYS this is a surprising response given the level of maintenance funding Primary Education Services have received in recent years (see Table 10 on page 27). The FMP Team are of the opinion that it is not the level of funding but the way approved funds are made available to the Ministries, leading to reactive rather than proactive maintenance activities, that has given rise to stakeholders concerns. An example of this is the 2005 distribution of maintenance funding to Island Councils through MISA which was received in a series of small installments (up to 6 separate payments). Island Council Clerks and Treasurers indicated this left them with no clear picture of the total funding they would receive and hence the works they could authorise. In some cases this has led to village contractors

[9] *Metric Handbook, Second Edition, edited by David Adler & published by Architectural Press.*

waiting up to six months for payment, priority works not being carried out and general ill-feeling towards the Island Council.

Table 9 – Summary of GoK Revenue and Expenditure 2004 to 2008 (in $000)

		ACTUAL 2004	BUDGET 2005	ACTUAL 2005	BUDGET CEILING 2006	MINISTRY ESTIMATE 2006	BUDGET 2007	BUDGET 2008
A	Government Revenue	61,142	57,420	58,727	64,127	64,127	66,632	68,569
1	Tax Revenue:							
	Personal Income Tax	5,679	5,600	6,000	6,000	6,000	6,240	6,490
	Company Tax	5,492	3,600	3,600	4,000	4,000	4,160	4,326
	Import Duties	17,660	18,572	18,000	20,000	20,000	21,600	11,600
	Hotel	101	110	110	110	110	110	110
	GST	-	-	-	-	-	-	10,000
2	Non-Tax Revenue:							
	Investment Income	512	500	500	500	500	-	-
	Fishing License	28,938	26,000	28,000	31,000	31,000	32,000	33,000
	Interest	-	75	-	-	-	-	-
	Fees & Incidental Sales:							
	Cruise Line Fees	818	800	684	684	684	686	874
	NASDA Fees	1,803	1,913	1,733	1,733	1,733	1,736	2,069
	Passport Fees	37	-	-				
	Air Space Usage	102	250	100	100	100	100	100
B	Ministries Revenue	3,083	3,045	3,045	3,150	3,938	3,213	3,277
TOTAL RECURRENT REVENUE (A + B)		64,225	60,465	61,772	67,277	68,065	69,845	71,846
C	Recurrent Expenditure	81,314	72,756	73,735	77,750	75,355	79,325	81,549
	Salaries	37,775	39,717	36,518	41,822	40,729	43,072	44,360
	Operating Expenses	43,408	32,758	36,658	35,519	34,217	35,845	36,781
	Debt Servicing	151	281	559	409	409	409	409
D	Other Commitments	17,641	10,405	9,977	9,460	12,096	9,110	8,778
	Grants and Subsidies	14,704	9,710	9,282	9,460	12,096	9,110	8,778
	Contribution to Development Fund	2,937	965	695	-	-	-	-
TOTAL EXPENDITURE (C + D)		98,954	83,161	83,712	87,210	87,451	88,435	90,327
BUDGET SURPLUS / DEFICIT		(34,729)	(22,696)	(21,940)	(19,933)	(19,385)	(18,590)	(18,481)
E	Financing Items	25,650	22,696	22,696	19,933	19,385	18,590	18,481
	Drawdown from the RERF	37,775	19,848	19,848	9,733	9,185	18,590	18,481
	Appropriation from previous years Surplus	-	2,848	2,848	-	-	-	-
	Sale of BOK Share	-	-	-	10,200	10,200	-	-
OVERALL BALANCE		(9,079)	0	756	0	0	0	0

Source: MFED Budget Section.

The GoK sets budget ceilings for each Ministry that are initially based on their previous years expenditure. Ministries are required to establish their budgets within the ceiling if possible and if they do so Cabinet review and approval is usually straightforward. If a Ministry's budget exceeds the ceiling then a number of review and approval options are available.

- In the first instance all budgets exceeding the ceiling are submitted, along with full justification for the additional funds requested, to Cabinet for review and approval. Cabinet may consider increasing a Ministries recurrent budget prior to finalising the annual budget;
- Once budgets have been approved by Cabinet, Ministries can apply for additional funding through submission of a Supplementary Budget, along with full justification for the additional funds requested, to Cabinet for review and approval; and
- Ministries can apply for project development funding (donor funding) through the MFED Development Office. The MFED deals with funding applications on a case by case basis.

This system limits the capacity of MEYS to plan for future expenditure beyond their recurrent budgets. Below is a summary of MEYS expenditure on Primary Education Services through their recurrent budget since 2001, highlighting building repairs and maintenance expenditure.

Table 10 – Summary of MEYS Expenditure on Primary Education Services and Maintenance 2001 to 2006 (in $)

	ACTUAL 2001	ACTUAL 2002	ACTUAL 2003	ACTUAL 2004	ACTUAL 2005	DRAFT BUDGET 2006
GoK Total Expenditure	-	-	-	98,954,000	83,712,000	87,451,000
MEYS Total Expenditure	16,131,169	17,593,275	19,999,095	20,373,574	16,096,279	21,362,136
Primary Education Services (PES) Expenditure	5,417,048	5,246,561	6,485,892	5,843,491	4,596,735	6,074,369
Building Repairs & Maintenance	500,221	436,523	353,783	481,346	0 *1	0 *2
MEYS Expenditure as % of GoK Expenditure	-	-	-	20.6%	19.2%	24.4%
PES Expenditure as % of MEYS Expenditure	33.6%	29.8%	32.4%	28.7%	28.6%	28.4%
Maintenance as % of PES Expenditure	9.2%	8.3%	5.5%	8.2%	0	0
PES Maintenance as % of MEYS Expenditure	3.1%	2.5%	1.8%	2.4%	0	0

Source: GoK Annual Management Information Reports 2001 to 2005 and MFED Budget Section.

Notes: *1 The FMP Team have been informed that MEYS did not allow any funding in 2005 because they were under the impression that MISA was responsible for all primary school maintenance.

*2 The FMP Team have been informed that in the original 2006 MEYS budget submission an amount in excess of $600,000 was included for the maintenance of primary school buildings on South Tarawa, however Cabinet has directed MFED to remove all capital expenditure from next years budget .

According to summary information extracted from GoK Management Information Reports during 2001 to 2004 MEYS spent $1,771,873 on repairs and maintenance to primary school buildings and teachers housing. Over the four year period this sum equates to 7.8% of the Primary Education Services expenditure and approximately 2.5% of MEYS expenditure. This level of maintenance funding meets best practice and will again be needed if MEYS wishes to meet the goals and objectives of its *Strategic Plan 2005 – 2010 and Ministry Operational Plan 2005 – 2006.*

Of real concern to the FMP Team was that there was no evidence observed during our school field visits of this funding having any impact on the declining condition of primary school buildings, in particular those on South Tarawa.

MEYS also has a Development Budget comprising development funding through MFED and Aid-in-kind. MEYS estimates that this type of funding increased their 2004 & 2005 expenditure by approximately $16,000,000 [10]. However, access to development funding can be unpredictable and should not be relied upon for the implementation of the FMP.

[10] *MEYS, Ministry Operational Plan 2005 – 2006, page 19*

Maintenance of traditional buildings carried out by Island Councils during 2005 was funded through a separate maintenance provision, in addition to the MISA recurrent budget. Total maintenance funding was in excess of $1,000,000. The MISA Permanent Secretary informed participants at the Phase 1 Wrap-up Meeting that in October 2005 Cabinet approved a similar provision for maintenance of traditional and permanent buildings on the Outer Islands for 2006, although no amount was given. It is the Permanent Secretary's understanding that this funding commitment will continue, however in the light of Cabinet's recent directive to remove all capital expenditure from the 2006 budget it cannot be guaranteed.

2.3.6 Procurement processes

The procurement of all goods and services by government agencies, including new buildings, building repairs and maintenance, is subject to the GoK *Procurement Act 2002* which identifies three separate procurement processes governed by the estimated cost of works i.e.

- Procurement valuing $5,000 and less -

  This process requires the submission of fully costed quotes for review and approval by the Permanent Secretary or their alternate. Anecdotal evidence suggests that under this process simple procurement e.g. $200 worth of pens and paper by MEYS Stores, can take weeks and in some cases months to be approved while requests flow up and down the required approval path.

- Procurement valuing between $5,000 and $50,000 -

  This process requires the submission of fully costed quotes for review and approval by a Ministry Procurement Review Committee (MPRC), chaired by the Permanent Secretary or Head of Department. Again anecdotal evidence suggests that delays can occur through the absence for extended periods of appropriate personnel to sit on and chair the MPRC.

- Procurement valuing $50,000 and over -

  This process requires the submission of fully costed quotes for review and approval by a Central Procurement Review Board (CPRB), chaired by the Secretary to the Cabinet with members comprising Permanent Secretaries, Heads of Department or their alternates. The Act requires MFED to resource and support the CPRB. The CPRB sits twice a week and Ministries are required to book in advance for their funding submissions to be reviewed.

Whilst the GoK procurement processes encourage good governance they have done so at the expense of efficiency. Stakeholders have indicated that small to medium procurement, by far the majority, can be a lengthy process.

2.3.7 MEYS Stores Section

The Stores Section is housed within the Primary Education Services Division, they are responsible for the procurement and delivery of consumables, furniture and equipment to primary schools and JSS throughout Kiribati.

Stakeholder feedback, KEMIS data and the school field visits indicated that the Stores Section is not effective in its role, consumables, furniture and equipment are not reaching the schools. Issues include;

- MEYS Stores occupies two dilapidated buildings on Bikenibu adjacent to MEYS Administration. Storage capacity is limited and the condition of books, and paper products currently in store is poor;
- MEYS do not support the Stores Section with their own recurrent budget based on known requirements. Nor is the Stores Section equipped with appropriate equipment i.e. computers and procurement software;
- There appears to be no procurement management system or forward planning to anticipate school needs and allow for cost efficiencies through bulk purchases. Procurement is reactive, consumables appear to be procured upon request irrespective of

the size of the order, tying up individual requests for funding in the protracted MEYS procurement review and approval process;

- Schools are seeking alternative means to obtain their consumables. For example in 2005 the New Zealand High Commission provided primary schools and JSS with approximately $17,500 for the purchase of books & stationary and in excess of $60,000 towards the provision of primary school furniture and classroom equipment.

The Stores Section has an important role to play in assisting primary schools meet NIS furniture and equipment benchmarks. In order to improve the efficiency and effectiveness of the Stores Section MEYS will need to provide appropriate personnel skills development and resources.

2.3.7 Infrastructure Management Resources

Whilst the roles and responsibilities of the Ministries responsible for procuring and funding maintenance are clear, strategies within these same Ministries to identify, prioritise, plan and manage maintenance are not as clear, nor are there skilled personnel within each ministry specifically tasked with supporting infrastructure management.

In spite of this Ministries have individually developed valuable infrastructure management resources, including:

Kiribati Education Management Information System (KEMIS)

The development of KEMIS was an initiative of the AusAID funded KESP. KEMIS, which commenced in 2002, is a contemporary education management information system designed to focus on ten of the Education for All (EFA) school level indicators to support GoK's international reporting commitments, as well as to inform MEYS decision-making.[11] KEMIS has been established under MEYS and is currently managed by the Education Officer (Statistics). It collects data and reports on selected EFA indicators, including primary school infrastructure.

An annual Primary School Survey Form has been developed which seeks information from all primary schools about the quantum and condition of their infrastructure, furniture and equipment. The returned data allows MEYS to access up to date information on school infrastructure and furniture and asses it against NIS Benchmarks.

The FMP Team spent considerable time with the Education Officer (Statistics). KEMIS data initially helped inform which schools were most appropriate for the FMP Team to visit. Information gathered through detailed site analysis and head teacher interviews was then cross-checked against KEMIS. This process confirmed the data received by KEMIS to date is generally of an acceptable standard. In addition, questionable or missing information can be supplemented by immediate access to data from previous years. As a result of this process, many of the assumptions and calculations presented in this Baseline Study are based upon KEMIS data.

KEMIS is absolutely integral to the successful implementation and ongoing monitoring and review of the FMP. MEYS should be encouraged to maintain and further develop this valuable resource in association with the FMP and other Education Sector projects.

MPWU Maintenance Scopes of Work

During 2004 and 2005 the MPWU visited all islands within the Gilbert Group and established separate scopes of work and costs for the maintenance of permanent school buildings and health centres. These scopes of work assisted ICMC's establish their 2005 maintenance priorities and will inform future infrastructure management strategies.

Only sites known to have permanent or semi-permanent buildings were visited by MPWU. Therefore, permanent buildings constructed recently by school communities (eg. Nein Tebwara PS) were not included. Estimates include replacement of thatch roofs to semi-permanent buildings but not renovation of rainwater collection systems.

[11] *KESP Annual Plan 2005-2006, Uniquest Pty Limited*

MPWU renovation estimates are clear and thorough. They follow the industry standard system of costing each item as a percentage of the full replacement cost of the element. Healthy contingencies are also included. As MPWU carry out building design and documentation and are the main construction entity for public buildings in Kiribati, we have no reason to question their estimates or the rates used and as such they have been incorporated into the provisional cost estimates in Annex D.

The MPWU estimates are foundation documents for the introduction and ongoing implementation of the FMP. It is therefore critical that this initiative is extended to remaining islands and regularly updated in the future.

Training needs within MEYS

Discussions with MEYS at Policy and Administration and Primary Education Services level highlighted that the planning and management skills required to undertake school infrastructure procurement and maintenance need significant development. Selected staff from within these Divisions would benefit from a training program targeting asset management skills and monitoring and review strategies.

Head teachers, teachers and School Committee members have a role to play in supporting the implementation of the FMP, they would benefit from a training program to foster a general awareness of practical maintenance and environmental issues.

2.3.8 Routine (Basic) Maintenance

The school field visits highlighted that there is no 'culture for maintenance' within MEYS. Roles, responsibilities and strategies to assist each level of school management to contribute to the maintenance of school buildings and the school's physical environment are not defined.

At the school level maintenance is seen as the Ministries responsibility, this is reinforced by the recently reprinted head teachers handbook which provides very little guidance and no resources to assist head teachers carry out routine maintenance activities at their schools – head teachers do not see maintenance as part of their job description.

Routine maintenance consists of tasks carried out at regular intervals by the school community (students and teachers) or a caretaker, all of which require minimal capital input. Tasks might include:

- Cleaning (of school buildings, toilets and the school grounds);
- Collection and disposal of rubbish;
- Checking of toilets and pipes for leaks and general damage;
- Checking of water supply pipes or rainwater tanks for leaks and general damage;
- Clearing rainwater collection systems;
- Clearing drains;
- Grass cutting;
- Tree lopping (in particular where branches overhang roofs);
- Replacing window louvres;
- Replacing light bulbs and tubes;
- Minor repairs to fix safety hazards or to prevent damaged areas from getting worse i.e. fixing a stair tread or patching a hole in a roof.

Some of the schools visited carried out some of the above tasks (mainly rubbish collection), but generally these tasks were not seen as a school responsibility nor in many cases did they have access to information of tools to help them identify and carry out the work required. Routine care and maintenance activities should be planned by the head teacher and should be included each year in the school recurrent budget.

2.3.9 Community Support to Schools

Schools are required to have a School Committee made up of parents within the school community. Committee members are paid to sit either by Island Councils (on the outer islands) or by the school. The Committee's role is to support the school through participation in various sub committees responsible for such things as fundraising activities or sourcing local contractors and materials for maintenance etc. Committees also act as a conduit between the school and local community for passing on school information to parents.

Stakeholder interviews confirm that with minor exceptions (such as the provision of a Maneaba) a culture of voluntary community support for primary schools is gradually disappearing within Kiribati. On South Tarawa the sense of community has been lost with the influx of children from the outer islands and the ability of parents to send children to any primary school they choose, very few schools have an identifiable community. On the outer islands income earned through schools for the construction of and maintenance to traditional and semi-permanent buildings has become an important source of income to villages, and in principle this should be encouraged as an effective means of supporting the local economies.

Table 11 – Assessment of Community Support

ADVANTAGES	DISADVANTAGES
All schools had active School Committees. Use of local labour and materials is sustainable. The channeling of GoK funds through Island Councils to the local communities is an effective means of supporting local economies. Local communities are still constructing Maneaba and very occasionally other buildings for their schools.	A culture of voluntary community support to schools is gradually disappearing. Head teachers indicated varied effectiveness of School Committee performance. In some schools visited the Head teacher / School Committee relationship was strained. Head teachers reported a reluctance in some local communities to carry out minor repairs at schools because they are too small, leaving the work to deteriorate until they can charge a reasonable amount for it. Head teachers reported a reluctance to carry out minor repairs through the school (by children or teachers) in case they get the local community offside. This is a constraint to the development of a routine maintenance culture within schools.

Source: Stakeholder Interviews, Project Records

2.3.10 Donor Support to Schools

Donor support has played an important role in the delivery of education services in Kiribati over many years. This is acknowledged in both the *MEYS Strategic Plan 2005 –2010* and the *Ministry Operational Plan 2005 – 2006* and clear targets for donor development support are identified. MEYS priority areas relevant to the FMP include:

- Development of an *Inclusive Education Policy* to include marginalised groups prioritising registration of the School for the Disabled;
- Expanding the capacity of KEMIS and access to it, including associated professional development for personnel using and interpreting data;
- Upgrading and maintaining safe infrastructure and facilities in a sustainable way, in selected schools; and
- Expanding Library and Archive Services in schools and upgrading storage.

It is the FMP Team's view that to ensure its sustainability the FMP must be developed so that it can be wholly funded through the MEYS recurrent budget over an appropriate implementation period. This will not prevent MEYS from identifying components within the FMP which address their priority areas and seeking donor support for their implementation. This would benefit the sustainability of the FMP and positively impact on the implementation period.

The Baseline Study has identified the following items as areas of possible donor support:

- Upgrading access to primary school buildings to meet the disabled access provisions of the NBC. Provision of technical resources to enable full participation of disabled children within the government funded school system e.g. provision of specialist furniture and training of teachers and aides;
- Provision of infrastructure to support clean and safe water supply at primary schools to meet NIS Benchmarks;
- Provision of infrastructure to support safe and sustainable sanitation practices at primary schools to meet NIS Benchmarks;
- Provision of infrastructure to support the safe storage of curriculum materials and the development of library resources at primary schools to meet NIS Benchmarks;
- Development of asset management resources to support the sustainability of the FMP e.g. supporting the development of the Head Teachers Maintenance Handbook, provision of training in asset management skills and monitoring and review strategies etc.; and
- Support for the MEYS Stores Section.

3. Options and Recommendations

3.1 Amendments to the National Infrastructure Standards

3.1.1 Categorising Schools

To better assess and prioritise school infrastructure requirements across the range of primary schools in Kiribati it is recommended that schools are categorised under two headings:

- Enrolment

Table 12 – Enrolment Categories

CATEGORY	REQUIREMENT	NUMBER OF SCHOOLS
Small	Schools with up to 90 students	34 (37%)
Medium	Schools with 91 and up to 180 students	35 (38%)
Large	Schools with more than 180 students	22 (25%)

Source: MEYS 2005 Teacher Posting Data

- Location

Table 13 – Location Categories

CATEGORY	REQUIREMENT	NUMBER OF SCHOOLS
Urban	Schools with access to piped water, town power & waste disposal services (town sewer, septic pump-out & garbage collection)	12 (13%)
Rural	All other schools	79 (87%)

Source: MEYS 2005 Teacher Posting Data

A number of existing NIS benchmarks will need to be reassessed in light of these categories and consideration will need to be given to incorporating a number of new benchmarks to cater for the variety of requirements.

- School Site: This benchmark will not change.
- Classrooms: This benchmark will not change.
- Maneaba: The NIS should not mandate provision of Maneaba.
  - Small schools should not be required to provide a Maneaba but be provided with practical options such as sharing with a local village; and
  - Medium and Large schools should be encourage to provide Maneaba.
- Library: The NIS should encourage all schools to have a library. It is still important for the NIS to stress that facilities provided are secure and watertight.
  - For Small and Medium schools acceptable facilities would be library shelving in a secure and water tight store room, staff room or head teachers office; and
  - Large schools should be encouraged to provide a separate library room attached to a permanent administration building or a classroom.
- Head teachers office: The NIS should not mandate a separate Head teachers office, rather it should encourage schools to provide facilities appropriate to their size and location.
  - For Small schools head teachers can use a classroom;
  - For Medium schools acceptable facilities would be the head teacher sharing space within a store room or staff room; and

  - Large schools should be encouraged to provide a separate head teachers office in accordance with the minimum and maximum areas stated.

- Staff room: The NIS should not mandate a separate Staff Room, rather it should encourage schools to provide facilities appropriate to their size and location.
  - For Small schools staff can use a classroom;
  - For Medium and Large schools acceptable facilities would be the provision of separate facilities in accordance with the minimum and maximum areas stated.
- Store rooms: The NIS should encourage schools to provide secure and watertight storage facilities.
  - For Small schools stores can be located in a designated classroom or administration building;
  - For Medium and Large schools acceptable facilities would be the provision of separate room within a classroom or administration building.
- Teachers housing: This benchmark will not change.
- Student Furniture: This benchmark will not change.
- Teacher Furniture: This benchmark will not change.
- Classroom Equipment: This benchmark will not change.
- Water Supply: The provision of safe and reliable drinking water should be encouraged in the NIS. The NIS should refer schools to the NBC for technical details and installation options.
  - Schools in rural areas should be encouraged to provide rainwater tanks if possible. Annex D suggests sufficient tanks to provide 2 litres a day for students and teachers for 60 school days;
  - Schools in urban areas should be encouraged to connect to the piped town water system or provide rainwater tanks as above;
- Sanitation: The provision of safe sanitation facilities for students and teachers should be encouraged in the NIS. The NIS should refer schools to the NBC for technical details and installation options.
  - Schools in rural areas should be encouraged to provide ventilated improved pit toilets (VIP latrines) sufficient to meet 1:40 girls and 1:60 boys (it is assumed that teachers will use the toilets at their houses) located in accordance with NBC Specification DFS1. Hand washing facilities should be located in close proximity to these toilets;
  - Schools in urban areas should be encouraged to provide flushing or water seal toilets sufficient to meet 1:40 girls, 1:60 boys and 1:25 teachers. Hand washing facilities should be incorporated with these toilets.
- Security: Schools should provide a safe and secure environment for their students and this should be encouraged in the NIS. Although the majority of head teachers interviewed expressed their desire to fence off the school site in many cases, especially in rural schools, it was not practical.
  - It is recommended that all permanent school buildings have solid lockable doors and security mesh to all window openings;
  - Schools in urban areas should provide and maintain in good condition appropriate security fencing. If funding allows the employment of a caretaker / watchman should be considered;
  - Schools in rural areas are generally not faced with the same security issues as urban schools and as such security fencing is not recommended.

3.1.2 Health-Promoting Schools Program

Once the WHO implemented Health-Promoting Schools Program is underway MEYS will need to review the program outcomes to determine if they are appropriate for incorporation into the NIS. In other Pacific countries in which this program has been implemented it aims to balance the curriculum and classroom teaching with action to improve the schools social and physical environment. In these countries the program encourages primary schools to have:

- A safe and secure environment including fences to prevent intruders and animals getting into school grounds and protection from traffic hazards;
- Greening programs that encourage the growing of fruit and nut trees for food and shade and the planting of flowers and shrubs to improve visual attractiveness;
- Grounds that are neat and tidy with designated safe playground and lunch areas and regularly mown lawns and where both teachers and students share responsibility for keeping the environment attractive and clean;
- Buildings and furniture, such as school desks that are regularly maintained;
- Good airflow in and around buildings and well lit classrooms;
- Hygienic toilets for girls, boys and teachers that take into account the special needs of older girls and female teachers;
- Access to reliable clean water for drinking and hand washing;
- Adequate water for washing and sanitation;
- Good garbage disposal procedures; and
- Infrastructure catering for the needs of students and staff with physical disabilities.

Adoption of similar objectives by Kiribati primary schools will need to be supported through the NIS.

3.1.3 Coordination of the NIS and the NBC

As previously noted when it is adopted the NBC will override the NIS. It is very important that both documents are compatible and work together to provide primary schools with appropriate infrastructure and facilities. This issue was discussed at the Phase 1 Wrap-up Meeting of 23 November 2005. At this meeting MPWU representatives expressed their support for dialogue between MEYS and MPWU to resolve conflicting or excessive requirements.

The FMP Team recommend that MEYS take the lead in this initiative to ensure that the NBC responds to the specific needs of primary school children and that realistic and achievable benchmarks are established, in particular where those benchmarks seek to limit the size of facilities or where they set minimum numbers such as toilet requirements.

3.1.4 Stand-alone MEYS Document

To increase stakeholder awareness of the NIS and its benefits and to ensure its sustainability it is recommended that the NIS be rewritten as a stand-alone MEYS document and widely distributed within MEYS, MISA and MPWU. Table 2 highlights a number of areas that will need to be address in the NIS before this can happen, these include;

- An introduction by the MEYS Permanent Secretary to provide MEYS endorsement for the NIS;
- A simple description of the purpose of the NIS and how this fits into established procurement strategies;
- An overview of those responsible for the procurement and maintenance of school buildings;
- An overview of Kiribati building regulations and how the NIS is to work with them;

- An outline of the method used to categorise schools;
- An overview of goals and objectives to promote health and the environment; and
- A concluding chapter.

3.2 Amendments to KEMIS

Primary School Survey Forms have been completed by head teachers since 2002 and the results included in an annual MEYS Statistical Digest. Much of the enrolment and curriculum information collected will have been used and verified by the Ministry and other Projects working in the Education Sector. The FMP Team is perhaps first to 'test' the accuracy of the system relating to school infrastructure.

In preparing the Baseline Study, the FMP Team was provided full access to KEMIS statistics. A detailed analysis of each school's response gradually built up a picture of the infrastructure at each location. As the quality of information varies from year to year, in some cases responses from previous years were sought to ensure the most accurate information was used.

3.2.1 The Primary School Survey Form

The basic structure of the Primary School Survey Form is sound and should be retained to provide continuity with previous years. However, completing the infrastructure section of the form is a large exercise for Head Teachers. The FMP Team therefore applauds the recent decision to issue the 'Infrastructure Survey Form' annually as a separate document. In addition, the FMP Team makes the following recommendations:-

The Survey Form Introduction

- Anecdotal & statistical evidence suggests the accuracy of responses is falling due to teachers not seeing the benefit of submitting the same information each year. It is recommend that the Survey Form Introduction should briefly explain WHY the information is being collected and HOW the information provided will inform the preparation of maintenance budgets and renovation priorities;
- Poor measurements provided (eg. room length inserted as room area). It is recommend that the Introduction should include a brief description of how to measure and calculate floor areas. This may be best explained graphically;
- Duplicated areas (eg. some responses include the same floor area figure for Head Teacher's Office, Staff Room & Store Room for a room that was clearly of shared use). It id recommend that the Introduction include instructions for splitting shared areas according to use. This may be best added to the above diagram; and
- It is likely the most tedious part of completing the form each year is measuring floor areas. As this information will not usually vary from year to year, we recommend the Introduction remind Head Teachers to keep a copy of these figures before submitting the form.

The Survey Form Questions

- The questions are not soliciting accurate responses in some key areas (eg. the KEMIS 2005 summary shows primary schools on Abaiang, North Tarawa, South Tarawa & Maiana as have 100% access to clean and safe water - whereas the FMP Team's investigations on these islands revealed water quality and quantity to be a major problem). It is recommend that additional question, such as 'How often does your school run out of drinkable water?' or 'For what proportion (%) of the year does your school have drinkable water?' be included;
- Statistics on hand washing facilities and habits not available. It is recommend that new question/s be added soliciting a response in this area;
- Building condition categories (A,B or C) are too subjective, do not describe how much work is required or whether the building is usable or abandoned (eg. for schools visited by the FMP Team, MPWU renovation estimates bear no correlation to the KEMIS building

conditions). It is recommend that existing condition categories be linked to a verbal description such as 'minor renovation required' or 'major renovations required'.

- It is unclear if additional teacher housing is actually required (staff may be happily living in the local village). It is recommend that additional question/s clarify this issue; and
- It is not necessary to know the number of bedrooms in Teacher Houses. It is recommend that the question be simplified to include only material, number and condition.

3.2.2 School Data Analysis

The FMP will be linked to, updated and measured by the KEMIS database. The accuracy of data input and analysis is therefore critical to the successful upgrading of primary school infrastructure. The FMP Team has identified several areas which may improve the quality and presentation of the data:-

- In some cases, unusual or inaccurate information is input into the database directly from the survey forms - distorting the overall picture. When detected, odd information should be checked against data from previous years and assumptions or corrections made accordingly;
- Input of 'actual' information can lead to distorted summary figures (eg. an Island score of 100% for desks disguises the fact that some schools have a large surplus while others have no desks at all). It is recommend that in summary calculations, no school be allowed a score of greater than 100%;
- The current system does not readily highlight schools with particular needs. It is recommend that a rating system (say 1 to 10) be linked to KEMIS data, measuring each schools' infrastructure condition and / or compliance with relevant codes. This would be used to track the overall condition of the school over several years. It would highlight schools which are receiving little assistance or schools experiencing particular problems with vandalism or an aggressive local environment. It may also highlight instances where an Island Council is failing in its responsibility toward maintenance. Over time, this system may even reveal that northern islands have more problems maintaining traditional buildings due to the wetter climate.

3.3 Facilities Management Plan

The Baseline Study confirms the need for a Facilities Management Plan (FMP) to assist MEYS in the upgrade of existing primary school infrastructure to meet NIS benchmarks. To ensure its sustainability the FMP will maximise the use of existing GoK systems and personnel including:

- KEMIS data on the condition of school infrastructure. MEYS will utilise the data to identify areas of particular need. This and other information (on curriculum needs, strategic objectives etc.) will assist MEYS to determine their infrastructure and maintenance priorities ;
- MPWU renovation reports to assist the FMP in establishing scopes of work and costs. GoK must be encouraged to continue funding this MPWU initiative so that inspections can be carried out on a regular basis (say every 2 – 3 years) and the scope be expanded to include the Phoenix and Line Island Groups;
- Infrastructure procurement and maintenance implementation strategies utilising established systems and personnel already in place i.e. the ICMC and Ministry Accountants; and
- A realistic funding strategy and implementation program. Based on preliminary cost estimates (refer to Annex D) and historic levels of MEYS commitment to building repairs and maintenance funding (refer to Section 2.3.5 and Table 10) it may be that the 2005 – 2010 time frame for the FMP will need to be extended. MEYS must seek all avenues to secure appropriate levels of funding from GoK including having the costed FMP endorsed by Cabinet for inclusion in the MEYS recurrent budget or having Cabinet approve an FMP

implementation fund separate from the MEYS recurrent budget (similar to the current MISA Outer Island Maintenance Fund).

MEYS will need to identify the appropriate location within their structure for the management of the primary school FMP. The management and implementation of the primary school FMP will have an impact on MEYS management strategies for their remaining infrastructure. Strategies for further consideration will include:

- Setting up a separate infrastructure procurement and maintenance division within the MEYS structure to manage the infrastructure, building repairs and maintenance requirements for the whole Ministry; or
- Each division to be responsible for managing their individual infrastructure, building repairs and maintenance requirements. Allocating roles and responsibilities within each division to existing positions or personnel. MEYS to prioritise, coordinate and implement activities through an Infrastructure Procurement and Maintenance Committee who will liaise with other Ministries as required.

All personnel selected by MEYS to participate in the procurement of primary school infrastructure and maintenance will benefit from a program of capacity building targeting asset management skills and monitoring and review strategies

3.4 Head Teachers Maintenance Handbook

The FMP must be supported by the development of maintenance policies and programs that will ensure that all levels of school management have an active role in the sustainable, efficient, ordered and effective management of the school physical environment and infrastructure. MEYS can only benefit from the development and support of a culture for maintenance throughout the school system.

At school level head teachers must be encouraged to view the implementation of routine maintenance and basic asset management activities as essential components of their duties. MEYS can support this role by providing head teachers with appropriate information and resources in the form of a Head teachers Maintenance Handbook. The Handbook will include such topics as:

- Why routine maintenance is important to MEYS;
- A clear and concise description of the head teacher's role and responsibilities with regards to school maintenance;
- How to carry out an inspection of the school grounds to identify problem areas. How to fix any problems or who to speak to if the school can't fix them;
- How to carry out an inspection of school buildings, what to look for and how to get problems fixed;
- How to keep a register of school assets (their buildings and facilities);
- What simple and repetitive tasks will help schools keep their assets in good condition longer and who is to do them;
- How to put together a plan to carry out routine tasks at regular intervals;
- What tools the school will need for basic maintenance and how to keep them secure;
- How to plan for future maintenance needs;

Head teachers will also benefit from a training program to foster a general awareness of practical maintenance and environmental issues and how schools can support the implementation of the FMP.

3.5 MEYS Stores Section

The MEYS Stores Section has an important role to play in assisting primary schools meet NIS furniture and equipment benchmarks. Unfortunately the Stores Section lacks the capacity and

resources to effectively undertake this role. In order to support MEYS in the implementation of the FMP it is recommended that the operations and resources of the Stores Section be reviewed by a procurement specialist to identify strengths and weaknesses and prepare an appropriate capacity building strategy, incorporating skills development and provision of operational resources, to assist the Stores Section meet their responsibilities.

3.6 Development of Model Facilities

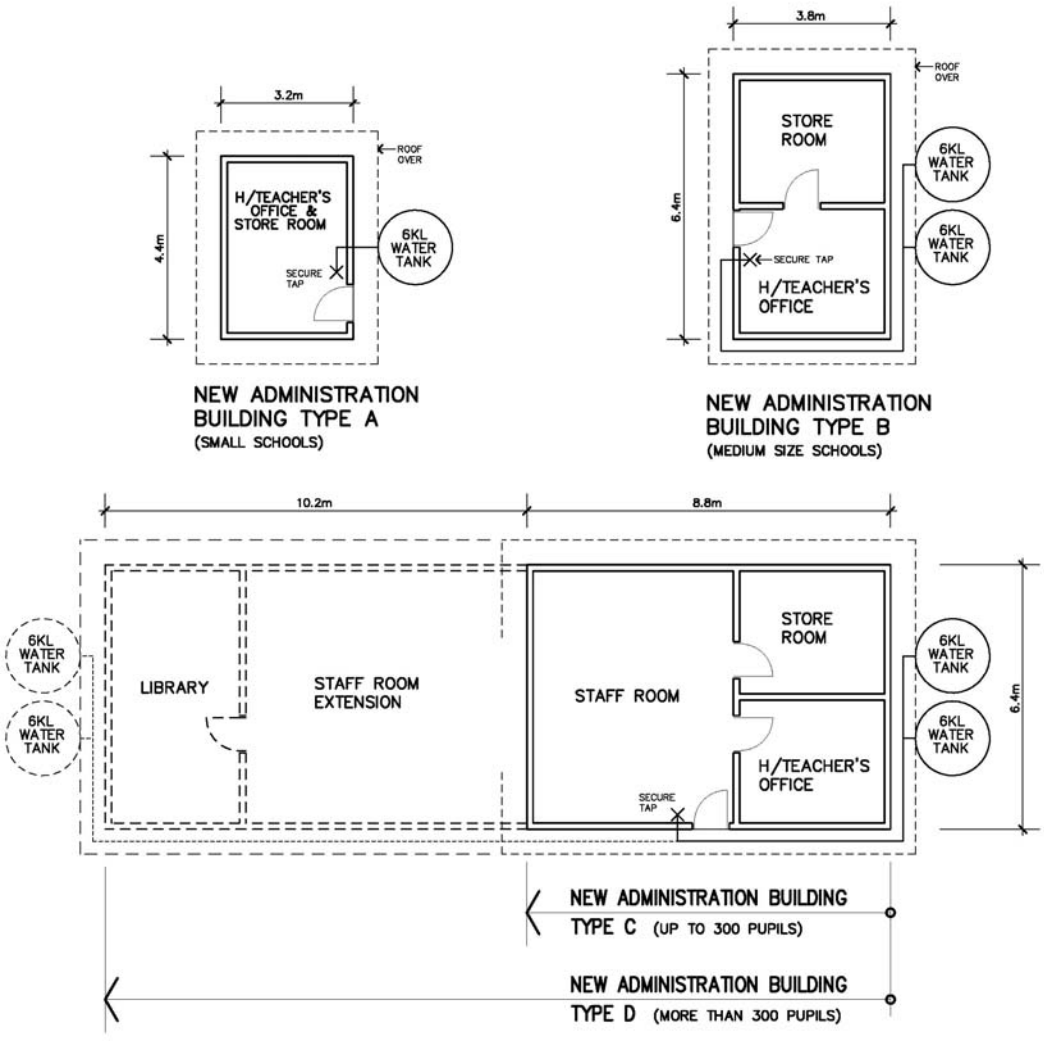
3.6.1 Classrooms and Ablution Blocks

Current and projected population figures show a steady drift of people from rural to urban areas, placing considerable strain on existing public facilities. FMP Team calculations show additional classrooms are required to ease over-crowding in a number of South Tarawa and Kiritimati primary schools. This situation may be eased somewhat with construction of the new Satellite Primary School, but due to travel distances, new classrooms will still be required at existing schools.

In preparation of the final FMP, new standard classroom and ablution blocks will be developed in association with MPWU, to comply with NIS and NBC regulations. At the Phase 1 Wrap-up Meeting the MPWU Permanent Secretary acknowledged their role in the development of these facilities and undertook to support the FMP Team during Phase 2 with the provision of an appropriate MPWU Counterpart.

3.6.2 Administration Blocks

FMP Team site visits and consultations confirmed that lack of staff facilities, secure storage and safe drinking water (collection and controlled access) are major issues in Kiribati primary schools. To address these issues the following 'draft' models were prepared for discussion at the Phase 1 Wrap-up Meeting.



KEMIS data shows 26 of 91 primary schools have only traditional buildings. While traditional buildings are both comfortable and sustainable, schools need at least one permanent building if secure storage, library facilities and rainwater collection are to be provided. Unless secure storage is available, bulk curriculum materials cannot be distributed. Similarly, donors are unlikely to provide library materials unless housed in a secure and weatherproof building. Even where semi-permanent or permanent buildings are provided, these functions are rarely addressed. Larger urban schools were also found to be lacking in staff areas, storage and library facilities.

Where required, a single new permanent building would address these critical needs. The FMP Team therefore recommends a series of new Administration Blocks be developed in association with MPWU to cater for the needs of various sized schools. The number and type of administration blocks proposed (based on current information) is included in the Preliminary Cost Analysis (Annex D).