



GOVERNMENT OF SAMOA

**SAMOA SECOND INFRASTRUCTURE AND ASSET
MANAGEMENT PROJECT (SIAM II)**

COMPONENT 5.01: LAND ADMINISTRATION AND SURVEY

PROJECT INCEPTION REPORT

**TECHNICAL ASSISTANCE REPORT NO. 1
SUBMITTED TO
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT**

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Project Inception Report

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ACRONYMS

<i>AUSLIG</i>	<i>Australian Surveying and Land Information Group (now part of Geoscience Australia)</i>
<i>CGPS</i>	<i>Continuous Global Positioning System</i>
<i>DCDB</i>	<i>Digital Cadastral Data Base</i>
<i>GIS</i>	<i>Geographic Information System</i>
<i>GoS</i>	<i>Government of Samoa</i>
<i>GPS</i>	<i>Global Positioning System</i>
<i>IDA</i>	<i>International Development Association</i>
<i>IP</i>	<i>Intellectual Property</i>
<i>LII</i>	<i>Land Information Integration</i>
<i>MAFFM</i>	<i>Ministry of Agriculture Forestry Fisheries and Meteorology</i>
<i>MNRE</i>	<i>Ministry of Natural Resources and Environment</i>
<i>MWTI</i>	<i>Ministry of Works, Transport and Infrastructure</i>
<i>NMA</i>	<i>National Mapping Agency</i>
<i>RS</i>	<i>Remote Sensing</i>
<i>SGRS</i>	<i>Samoa Geodetic Reference System</i>
<i>SIAM-2</i>	<i>Second Infrastructure Asset Management Project</i>
<i>SIG</i>	<i>Samoa Integrated Grid</i>
<i>SLC</i>	<i>Samoa Land Corporation</i>
<i>SOPAC</i>	<i>South Pacific Applied Geoscience Commission</i>
<i>SPREP</i>	<i>Secretariat of the Pacific Regional Environmental Program</i>

1. Introduction

1.1 Project Description

The Government of Samoa (GoS) is implementing a Second Infrastructure Asset Management Program (SIAM-2) under credit from IDA. This project is a component of SIAM-2 and is described as C5.01 - Sustainable Management Land Administration and Survey (the Project).

The contract for delivery of consulting services was awarded to the Australian based company, Land Equity International Pty Ltd in late 2004 and a contract was signed in Apia on 4th February 2005. The consulting team was mobilised and commenced the project from that date. The team members are listed in Diagram 2 on the following page.

1.2 Project Rationale

Samoa is characterised by limited land resources, a high percentage of customary land (about 80%) and strong cultural and traditional values. Most families have access to land however the impediments in the present system restrict the full economic use of land resources. The GoS has committed to land related reforms and to economic and public sector change as a firm basis for achieving the strategic objectives outlined in the Strategy for the Development of Samoa, 2002-2004.

There is concern that the present system of land administration system will not provide a stable platform for meeting the development objectives of macroeconomic stability and private sector led growth. The system of land registration has been described as developing in an ad hoc manner since adopting the basic framework from New Zealand. The variance in land valuations for compensation and general property dealings is causing serious distortions in the land market which can lead to social upheaval. Legislation governing the practice of valuation is urgently needed.

There is growing activity in the development and application of GIS in various agencies of Samoa. There is concern that these systems are being introduced independently, with limited coordination and without appropriate mechanisms for achieving the benefits which flow from a capacity to integrate all geo-spatial information across the nation. The embryonic GIS Users Group formed amongst active stakeholders and supported by SPREP and SOPAC needs to be fostered and reinforced by an overarching policy and regulatory framework for data access and sharing.

At present the MNRE is responsible for the basic reference data bases which underpin the effective integration of land information. A National Mapping Agency (NMA) is proposed to assume responsibility for the production, distribution, maintenance and ownership (IP rights) of national maps and associated data on behalf of the GoS. It is envisioned that a properly constituted and resourced NMA will provide the overarching policy and regulatory framework identified above.

Diagram 1 suggests a model which underpins the overall project rationale.

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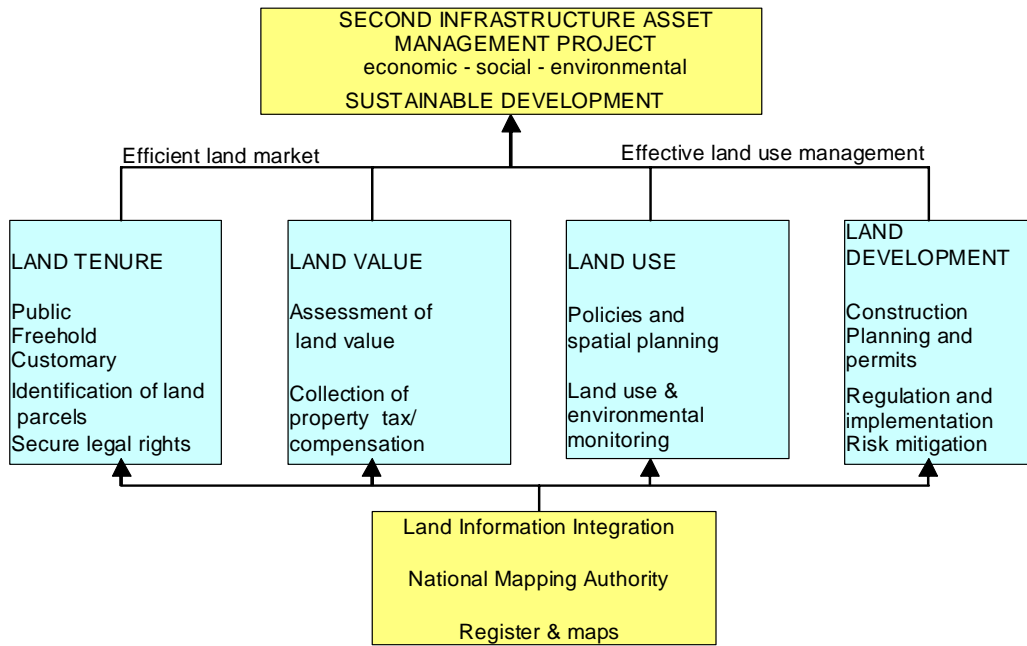


Diagram 1: Model for Development

1.3 Project Structure

The Project consists of two primary components which have been developed into 6 sub-components to address the requirements of the terms of reference. The structure shown in Diagram 2 has been adopted as a framework for the implementation of the Project. The international specialist responsible for the respective sub-components has been included under the Adviser column.

Component	Sub-component	Inter Adviser
1. Survey and Geographic Information	1.1 Geodetic Survey	Andrew Dyson
	1.2 Land Information Integration	Neil Pullar
	1.3 National Mapping	Chris Grant
2. Land Administration Reform	2.1 Land Registration Conversion	Dennis Brady
	2.2 Land Registration Legislation	Kevin Nettle
	2.3 Land Valuation	Mark McLoughlan

Diagram 2: Framework for Implementation of Work Plan

There are two national specialists providing invaluable local assistance as members of the adviser team. They are:

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- Seve Keilani Soloi (Private Sector) Survey Adviser
- Fiu Mata'ese Elisara-Laulu (NGO) Customary Land Adviser

An assimilation briefing on the culture and customs of Samoa (Fa'a Samoa) was conducted by Fiu Mata'ese (of the NGO O Le Siosiomaga) for all adviser team members immediately upon arrival in Samoa.

1.4 Scope Of Report

This report presents an introductory review and analysis of the institutional, technical, human resource and related environments which impact on the respective sub-components of the project. This is based on:

- Consultation and interviews with relevant agencies and stakeholders;
- A review and assessment of the counterpart arrangements;
- A review and assessment of the existing institutional and individual capabilities;
- A review and assessment of the facilities available to implement and sustain the project;
- A review of relevant records and data;
- An assessment of the risks involved in implementing the project.

The Work Plan and Delivery Schedule which were included in the original project proposal have been modified as a result of this analysis. This appears at Part 3, with detailed tables and charts in Attachments 4 and 5 respectively.

It should be noted that the institutional arrangements were significantly modified during the inception period as a result of changes to ministers and ministerial portfolios. The core responsibilities of land administration and survey remain however with MNRE at the time of the report.

2. Stakeholders and Consultations

The stakeholders have been identified for each sub-component and have been consulted through individual interviews and group workshop sessions to the widest possible extent. A summary for each sub-component follows under the general topics of:

- Stakeholders and Consultations;
- Institutional and Individual Capacity;
- Equipment (where relevant);
- Relevant Records and Data;
- Key Issues and Risks.

2.1 Geodetic Survey

Stakeholders and Consultation:

The key stakeholders are:

- MNRE Technical Services Division, Survey Section
- MNRE Technical Services Division, National Mapping Section
- Private sector Licensed Surveyors
- Samoa Land Corporation

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- Ministry of Works, Transport & Infrastructure (MWTI)

The following have been consulted:

Stakeholder Agency	Position	Name
MNRE Technical Services	Asst.CEO	Safuta Toelau Iulio
MNRE Technical Services	Principal Surveyor	Ueligitone Seiuli
MNRE Technical Services	Principal Mapping Officer	Leoo Polutea
Samoa Land Corporation	Chief Surveyor	Ms Eseta Maualaivao
Private Sector	Principals of Firms	Workshop Session
MWTI	Chief Surveyor	Vailini Raratoga
Not applicable	Former DLE Surveyor	Dr David Silack

LEI hosted an Industry Workshop for the private sector and key counterparts at the MNRE on 18th February 2005. An overview of the project was presented by all team members. A follow-up questionnaire was circulated to supplement the discussions on the expectations of the survey industry from the Project. The questionnaire returns were not available for this report.

Counterpart Arrangements

The counterpart for the Geodetic Adviser is Mr Ueligitone Seiuli, Principal Surveyor, MNRE Technical Services Division, Survey Section. As Principal Surveyor he manages the Survey Section and is responsible for all survey activities within the MNRE including the maintenance and upgrade of the Samoan Geodetic Network.

Mr Ueligitone Seiuli is the only licensed surveyor in the section. This has made consultations during the start of the inception period somewhat difficult. Notwithstanding the resource and work program constraints, the Principal Surveyor and the Survey Section are fully behind the project and are assisting in the preliminary reconnaissance activities to locate existing geodetic survey marks and determine the suitability of marks for GPS observations.

Institutional and Individual Capabilities

MNRE Survey Section

The Survey Section is responsible for all survey activities within MNRE including the maintenance and upgrade of the Samoan Geodetic Network and is the key organisation involved in the Geodetic Survey sub-component. There are 10 staff under the Principal Surveyor, one of which is classed as a Staff Surveyor with a Certificate from Honiara Technical Institute. The remaining staff are without any survey qualifications and are classified as Survey Trainees or Assistant Surveyors. These staff have basic survey capabilities developed from experience in the field. All can set up survey targets and most of them can operate survey instruments. A summary has been provided which indicates the level of education and survey capabilities and training needs.

Survey staff have had very minimal exposure to GPS surveying. The Principal Surveyor is responsible for maintenance of the Continuous Global Positioning System (CGPS) installation at the Fagalli Airport site in Apia. The CGPS was established under the AusAID funded South Pacific Sea Level & Climate Monitoring Project. Maintenance activities involve the downloading of data but not data processing.

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All staff can locate existing survey marks, most can determine the GPS visibility at a site and with some training would be capable of selecting locations for new marks.

The Staff Surveyor and some of the Survey Trainees, with appropriate on the job training, would be proficient GPS operators and party leaders.

Within the Survey Section only the Principal Surveyor is considered to have the basic qualifications and background experience to effectively undertake the training needed to sustain GPS planning, data processing and adjustments in the future. Two other staff were suggested for this level of training but it is the adviser's opinion that they might have difficulty with the lack of appropriate background experience.

It is considered that the Principal Surveyor will need support in managing the GPS function. Consideration should be given to identifying the most suitable staff from within the whole of MNRE for on the job training to maximise the benefits and ensure sustainability.

Private Sector – Soloi Survey Services

The principal, Mr Keilani Soloi is the National Survey Adviser. He has previous GPS experience and will undergo training in GPS planning, data processing and adjustments as part of this sub-component.

Three field staff are employed. They are without any survey qualifications and have basic survey capabilities developed from experience in the field. Two can set up and operate survey instruments. They would be suitable for training as GPS operators and party leaders.

Private Sector – Other practices.

There are three other private sector survey companies in Samoa. They have had limited exposure to GPS. They have indicated an interest in being involved in “on-the-job” training as part of the GPS operations on the project.

Samoa Land Corporation

Mrs Eseta Maualaivao, Chief Surveyor, SLC is a recent graduate (1999-2001) of the University of Otago, School of Surveying and has had exposure to good quality GPS training. She would be eminently suited to training in GPS planning, data processing and adjustments. However, at the moment she has a heavy workload and would not be available for the amount of intensive on-the-job training that would be required to develop her expertise to an appropriate level.

Equipment Available

MNRE's Survey Section is poorly equipped for geodetic operations. In summary the main items of survey equipment are:

- four Total Stations
- 3 Automatic Levels (no rigid tripods)
- Telescopic level staffs
- New Tripods
- Support equipment (spades, crowbars, compass, clinometers etc)
- Three desktop computers

The MNRE has vehicles available for survey work; however the Survey Section must request a vehicle from the departmental pool when they wish to undertake field work. There is no guarantee that a vehicle will be available at short notice.

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Equipment Required

Various items of equipment are required for each stage of the field operations. The basic equipment required is indicated below (more comprehensive lists will be prepared later):

Reconnaissance

- Spade
- Crowbar
- 30m tape
- Magnetic Compass
- Clinometer
- Hammer

The survey section has the necessary equipment.

Monumentation

- Spade
- Crowbar
- 30m tape
- Concrete trowel*
- Hacksaw*
- Water containers*
- Cold chisel*
- Hammer
- Centre Punch*
- Consumables (materials for concrete and brass rod [preferred] or copper tubes)

Items marked * need to be purchased.

GPS

- Spade
- Crowbar
- 30m tape
- GPS equipment
- Tripod

GPS equipment is to be purchased during the project. An indicative costing for suitable GPS equipment, software and a lap-top computer required for GPS operations is US\$125,000. The budget allocation for GPS equipment, computers and software to support the initiatives of the Land Administration & Survey Component is understood to be in the order of US\$100,000.

Relevant Records and Data

Survey section does not appear to have a complete set of records and reports related to the geodetic network. Some records and reports have been obtained from Mapping Section.

Lemuta Datum: The adviser has been unable to obtain any reports about the Lemuta Datum. Information required includes the definition of the datum, how control was established, the extent and location of control and coordinates. This information is necessary if transformation parameters to the proposed new datum are to be developed.

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Samoa Integrated Grid: A copy of the report "Adjustment of Western Samoan Control Network" by the former Australian Surveying & Land Information Group (AUSLIG) has been obtained from Mapping Section. This report indicates that the results (provided in file SAMOA.RES on a floppy disk) were provisional. The report is undated but assumed to be from 1989. It is not known if the data from this provisional adjustment was adopted or whether it was subsequently readjusted (this will be checked with Geoscience Australia). The adviser has not been able to obtain a final report on the project and the adoption of a final coordinate set. This information will be required before transformation parameters can be determined.

MWTI Projects: Control work has been carried out for MWTI by New Zealand based BECA Consultants in 1993 and 2001. It is important that copies of the reports on these projects and details of marking and data are acquired to determine if they can contribute useful data to the upgrade of the geodetic network.

Storage of Records & Database

It is important that all geodetic records are located and stored in one secure location. Ideally records should be scanned and made available to those needing access so that the originals are not handled regularly. This would also create a backup for the hard copy records system.

There is a need to create a survey database as a repository for all geodetic and other survey records, both manual and computerised. Considerable data will be generated from upgrading the geodetic network. This data should be integrated into the data base and be readily available to all interested users.

Training and Institutional Strengthening

The overall success of the project and long term sustainability of an effective GPS capability in MNRE is dependent upon the success of the technology transfer and an overall improvement in the basic survey education of its staff.

The existing capability is considered to be quite low because of a lack of any on-island survey education programme. The possibility of introducing some survey education at least at a certificate level should be investigated.

There is understood to be provision of US\$110,000 for training and institutional strengthening within MNRE & MWTI under SIAM2. Allocation of funding from this budget is at the discretion of the Ministry of Finance. The allocation of a substantial portion of this budget to Component 5 will be critical to the success of the component.

Risks

There are a number of risks associated with the geodetic activities which could slow or disrupt the effective implementation. These may be summarised as follows:

- MNRE are unable to provide adequate resources to enable the recovery of existing survey marks, the selection of suitable sites for new marks, the upgrade of existing marks and the placement of new marks. This could affect the establishment of the Primary and Tertiary horizontal networks and the Vertical network.
- MNRE are unable to provide adequate information about the existing geodetic control in Samoa. This could affect the development of transformation parameters between the old and existing datums and the proposed new datum.

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- MNRE are unable to obtain information and data from recent control activities on Samoa. This could lead to duplication of effort, a waste of resources and the possibility that suitable control work will not be incorporated into the new Samoan Geodetic Network.
- MNRE are unable to provide a complete search of cadastral plans and resources to collate the information from the plans in Apia and any other areas selected for establishment of a tertiary network. This will prevent the full integration of the cadastral reference marks into the tertiary network.
- A delay in acceptance of recommendations relating to the adoption of a new geocentric datum and map grid. This would delay the completion of the computations associated with the new Samoan Geodetic Network.
- The budget identified for procurement of GPS and computer equipment is inadequate. If it is not increased it will prevent the purchase of an effective operational GPS system which will in turn affect the observation stage of the network upgrade and the training opportunities.
- A delay in securing an increase in the budget for GPS and computer equipment will delay the procurement process.
- A delay in the procurement process for the GPS equipment will delay the observation stage of the network upgrade and delay the training opportunities needed for a smooth handover of the geodetic network to MNRE.
- Ministry of Finance does not allocate sufficient funds for training. This will affect the long term sustainability of the project and MNRE's ability to effectively carry out GPS surveys in the future.
- MNRE unable to provide appropriately qualified staff for participation in GPS training. This will affect the long term sustainability of the project and MNRE's ability to effectively carry out GPS surveys in the future.
- Lack of participation by stakeholders in the review of survey ordinances and regulations. A lack of participation potentially diminishes the credibility of any proposed amendments.

2.2 Land Information Integration

Stakeholders and Consultation

Stakeholder	Position	Name
MNRE Technical Services	Principal Mapping Officer	Leoo Polutea
	Principal Land Registry Officer	Ms Filisita Heather
	Principal Draughting & Plan Examination Section	Ms Elisapeta Leato
	Principal Valuer	Patea Setefano
	Project Component Mgr	Vitaoa Pele Fuatai
MNRE Land Administration		Peniamini Tuala
MNRE PUMA	Disaster Management	Filomena Nelson
	Urban Planning	Margaret Rimoni-Yoshida
MAFFM	Division of Forestry	Pau Ioane
		Tony Lentele
	Meteorology Division	Shaun Williams
Samoa Water Authority	Asset Management	John Galuvao
		Darren Raeck
Ministry of Finance	Dept. of Statistics	Ms Josefa Lualua

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Stakeholder	Position	Name
FAO		Bismarck Crawley
SPREP		Matt McIntyre
Police and Fire	Fire Services Officer	Tony Hill
Ministry of Health		Ms Elisapeta Pasa
Samoa Land Corporation	Chief Surveyor	Ms Eseta Maualaivao
MWTI		Ofeira Faasau

In addition the LII Adviser made presentations at the following forums:

- Survey Industry Workshop (18 February 2005)
- GIS User Group meeting # 3 (25 February 2005)

Counterpart Arrangements

At this stage both Leoo Polutea Principal Mapping Officer and Pele Fuatai (Project Component Manager) are providing effective counterpart cover for the LII sub-component. Providing new computerization initiatives are deemed possible in this project, further contacts in each of the MNRE sections affected will need to be identified. Within Drafting & Examination Section, the Principal Draftsman, Elisapeta Leato, has already shown a willingness to assist and be the contact for that section. It seems likely that Pele Fuatai will assume this role for the Surveying Section and in other MNRE sections where there are any LII initiatives the principal officer in charge of those sections will be the point of contact.

Institutional Capabilities

Institutional IT capabilities amongst the staff who will be affected by computerization initiatives are unlikely to be a barrier to implementation providing good user training is provided. Current IT staff have the skills and experience to deal with the increased system management responsibilities arising from LII initiatives (ie backups, disaster recovery, website maintenance, etc). The existing MNRE network provides the means to link key mapping and land administration initiatives with only minor additional hardware procurement to accommodate new computerisation initiatives.

There are some software development skills in the National Mapping Section that would be capable of maintaining (and enhancing) any application software developed in this project. These staff would need to be provided with appropriate software development tools and be briefed on the approach and features of any application software developed in this project. Expectations will also need to be managed as these staff already have heavy current workloads and it would be unreasonable to expect them to undertake major software development. Their role in maintaining and supporting these software applications should be made clear.

Map Server

With the pending implementation of the Map Server by SOPAC there is an urgent need to define a protocol covering the roles and responsibilities of participating agencies and what access rights are appropriate for each of the map layers published.

Relevant Records & Data

The following table identifies records of interest, the associated conversion task and software applications and associated database that will need to be developed.

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Record Collection / Function	Software Application / Database
Cadastral Record Maps	<p>Digital Cadastral Database (DCDB)</p> <ul style="list-style-type: none"> • Initial upgrade of spatial data to accurately reflect current cadastral boundaries • Add attribute data (including identifiers to enable linking with other database) • Initial data maintenance (“heads-up” digitizing of scanned new survey plans) • Improved data maintenance (import of LandXML files for new surveys) • Improved access to DCDB across all agencies • Add links to corresponding records in other database or archives • Add further layers to capture other cadastral lines (eg easements) or lines related to existing cadastral boundaries
Survey Plan Microfilms	<p>Digital Archive of Survey Plans</p> <ul style="list-style-type: none"> • Outsourced conversion of current microfilms to digital format • Scanning of all modern plans not microfilmed • Remedial Digital Photography of all sub-standard converted digital plan images • Establishment of a structured archive accessible to users
Land Registers	<p>Land Register Database</p> <ul style="list-style-type: none"> • Create database record for all Land Register entries affected by new registrations including owner details, parcel details, preceding and succeeding land register entries and links to corresponding DCDB parcel record, digital survey plan image file and digital deeds image files (if they exist)
Deeds Volumes	<p>Digital Archive of Deeds</p> <ul style="list-style-type: none"> • Outsourced conversion of current microfilms to digital format (where deeds have been microfilmed) • Scanning of all new deeds presented for registration and the addition of the links to these images in the Land Register Database • Progressive back capture through scanning of old deeds as resources permit and the addition of the links to these images in the Land Register Database • Remedial Digital Photography of all sub-standard converted digital deeds images • Establishment of a structured archive accessible to users
Computerised Registration System (including the computerization of the various indexes and folders currently	<p>Streamline registration examination through:</p> <ul style="list-style-type: none"> • Online access to key data sources • Improved access to key data sources through computerized indexes

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Record Collection / Function	Software Application / Database
supporting the land registration function)	<ul style="list-style-type: none"> • Investigate the possible implementation of email Registration Lodgement service • Provision of standard templates for all regular deeds (and the standardization of all new deeds to use A4 paper size) • Scanning all deeds and associated documents presented for registration • Automated “business rule” checks (through customized software utilizing information from the digital Registration Abstract file) • Computerised Work Flow monitoring and reporting • Disaster recovery procedures
Plan Examination (including the computerization of the various indexes and folders currently supporting the plan examination function)	<p>Streamline plan examination through:</p> <ul style="list-style-type: none"> • Online access to key data sources • Improved access to key data sources through computerized indexes • Introduction of a standard survey report template (based on new Survey Manual) • Automated “business rule” checks (through customized software and the lodgement of LandXML files with new surveys) • Computerised Work Flow monitoring and reporting
Samoa Geodetic 2005 Application	<p>To include:</p> <ol style="list-style-type: none"> 1 Network adjustment routines 2 Coordinate transformation routines 3 Definition of new datum and associated map projections 4 A computerized record of all current geodetic stations: <ul style="list-style-type: none"> • All stations from this project’s geodetic campaign • Progressive back capture of existing geodetic data 5 Software routine to accurately transform GIS files in terms of old datum to the new Geodetic 2005 datum (possibly using the NTV2 grid method of transformation)
Land Valuation	<p>Improve access to key records required to support land valuation :</p> <ul style="list-style-type: none"> • Online access to key data sources • Improved access to key data sources through computerized indexes • Timely provision of all conveyance and other transfers of land and leases presented for registration • Computerised access to lodged deeds to assist the valuation assessment of individual sales • Disaster recovery procedures
Land Administration	Improve access to key records required to support

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Record Collection / Function	Software Application / Database
	land administration function in MNRE: <ul style="list-style-type: none">• Online access to key data sources• Improved access to key data sources through computerized indexes• Computerised Lease Administration Application• Disaster recovery procedures

As part of implementing these applications and to ensure benefits are maximized the following land information standards and policies will need to be prepared:

Standards

There appears to be a need for the following standards to be defined in the immediate future:

- Samoa Geospatial Metadata Profile
- Samoa Feature Catalogue/ Map Product Specification
- Survey Data Exchange (LandXML)
- Templates for Land Registration deeds

In addition to defining these standards, there needs to be guidelines as to how these standards should be implemented as well as some examples. For example, metadata and feature catalogues should be prepared and published on the MNRE website as read only for the 1999/2000 1:50,000 topographical mapping and associated rectified aerial photogrammetry and related imagery.

Land Information Integration Policies

Policies need to be developed to define:

- Responsibilities of Data Custodians
- Data pricing between public agencies
- Data sharing between public agencies
- Training Needs Analysis & Training Program

The current GIS User Group will need to continue and be supported as a forum for providing technical input into the new standards and policies (see Attachment 2 for Mission and Goals of the GIS User Group). There is also a need for a common approach to the development of land policy papers dealing with critical issues (such as those listed above) to be tested and to provide a model for the resolution issues of a similar nature in the future. At present there is no recognised means of authoritatively validating policies and standards and this need to be addressed.

Training

Most LII initiatives will involve a training component; especially any new software application developed where both user and system management training will be required. Similarly any data conversion initiative or the implementation of new equipment will need training (in particular the scanning of documents to create scanned digital archives to facilitate disaster recovery and improved access to these documents). In these situations, the training will be delivered by the LII Advisor to the (small) group of relevant MNRE staff. If staff of other organizations are affected, the training will be extended to include them.

In initiatives involving the GIS User Group, such as metadata preparation and land policy development, it has been decided that the LII Advisor will conduct a regular

series of short workshops involving interested members from this group. This is likely to involve both MNRE and other non-ministry staff. This may also be the case with the Survey, Legal and Valuation professions should computerization initiatives arising out of this project impact on the way these professionals interact with land administration processes within MNRE.

Risk Assessment

Some of the key risks are:

- Inadequate funding for equipment procurements, outsourced data conversion (microfilm conversion) and software application and database development
- Inadequate resourcing of data conversion activities
- Inadequate on-going support for proposed computerized systems
- Vulnerability of computerized systems to disasters
- Vulnerability of computerized systems to the failure of a key piece of equipment
- Lack of support from (private sector) surveyors and lawyers
- Future office arrangements could require new network connections
- Archiving

2.3 National Mapping Agency

Stakeholders:

The stakeholders in National Mapping are wide ranging and include all those who have an active or passive interest in spatially referenced data. The stakeholders may be *active* if they generate spatial data for their own purposes, or conduct value adding operations on the data of others. On the other hand they may be *passive* if they apply spatial data derived from other sources for their particular use. In addition there are donor supported regional organisations such a SPREP and SOPAC which play a role in the development and dissemination of mapping and/or GIS applications in the stakeholder community.

The *active* stakeholders are identified as:

MNRE

- Technical Services Division
 - National Mapping Section
 - Draughting and Plan Examination Section
- Planning and Urban Management Agency (PUMA)¹
- National Disaster Management Office

Ministry of Agriculture, Forestry, Fisheries and Meteorology (MAFFM)

- Forestry Division²
- Meteorology Division³

Samoa Water Authority,

Statistics Division (Ministry of Finance)

Electric Power Corporation

Ministry of Works Transport and Infrastructure (MWTI)

Police and Fire

Summary of Consultations:

¹ Some elements of PUMA were in the process of transfer MNRE to the Ministry of Works, Transport and Infrastructure

² The Forestry Division was in process of transfer to MNRE

³ The Meteorology Division was in process of transfer to MNRE

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Many of the initial consultations were undertaken in conjunction with the Land Information Integration Adviser. The names of those interviewed and a detailed review and analysis at the technical level is covered under LII above. From the perspective of a National Mapping Agency the common themes emerging from the consultations are summarised below:

- Access to Data - The active stakeholders have recently formed a GIS Users Group. The National Mapping Agency should foster this largely informal technical initiative by delivering a formal policy framework for effective data sharing.
- Map Server - With the pending implementation of the Map Server by SOPAC there is an urgent need to define a protocol covering the roles and responsibilities of participating agencies and what access rights are appropriate for each of the map layers published.
- Cost of Data - The high cost of key topographical data was regarded as a barrier to data sharing. The costs imposed by MNRE were universally regarded as high. While revenue generation is GoS policy the evident resentment could drive users to data poaching leading to separate data bases with the attendant data integrity and accuracy constraints.
- Cadastral Mapping - The absence of a digital cadastral data base (DCDB) was universally identified as a serious barrier to the effective use of data. The use of accurate land tenure data (ownership and occupation) is a priority requirement for utility agencies. This should be considered in conjunction with the cost issue above
- Geographic Names - Lack of road name signage and wide confusion on road names on topographical maps and adversely affects the response of Emergency Services (Fire) and others. A Road Name Index is urgently needed
- Intellectual Property - MNRE expressed some concern that some copyright data was being used to generate new products and on-sold by the user without recognition of the IP owner.

Counterpart Arrangements

The Principal Mapping Officer, Leoo Polutea and the Project Component Manager, Vitaoa Pele Fuatai, provide good counterpart cover in the initial stages. Subsequently the counterpart for the National Mapping Adviser became the Assistant CEO, Technical Services Division (Safuta Toelau). This is appropriate to the circumstances and the Assistant CEO's views on the potential structure and role of a NMA in MNRE are proving constructive and valuable.

Institutional Capacity

There are varying levels of GIS proficiency amongst active stakeholders, however activity is growing rapidly and the need for improved access and data sharing is well understood by operational staff consulted. The emergence of the Samoa GIS Users Group is testimony to this understanding and barriers at the operational level should be minimal.

The Mission Statement and Goals of the GIS User Group are included at Attachment 2 to illustrate the conformity with the general objectives of the National Mapping Sub-

component. During the User Group meeting of 25th February (meeting # 3) the National Mapping and LII Advisers were invited to comment on the Mission and Goals. They suggested that further refinement of the text did not appear warranted, and the focus should shift toward action aimed at achieving the goals.

The consensus is that the goals embodied in the GIS User Group should now be elevated to a higher plane in the GoS. A National Mapping Policy is necessary and a National Mapping Agency (NMA) should provide a guiding force in the integration of national spatial data. It will logically be located in the Technical Services Division of MNRE who have prime responsibility for the geodetic reference framework, the cadastral map base and the topographic coverage of Samoa. Some concerns were expressed concerning the present capacity of the MNRE to effectively undertake the custodianship role and responsibility over these primary data layers. This concern represents a genuine risk to the project.

Relevant Records and Data (MNRE)

The National Mapping Section provides digital topographic data tailored to meet the needs of the stakeholder users. The 1:50,000 topographical series is virtually the sole source of this data. The series consists of 6 published mapsheets of Samoa and was produced from aerial photography flown under contract by the Australian company Airesearch Mapping Pty Ltd in 1999. MNRE has access to aerial photography and the digital topographic data in 4 standard layers. The stocks of published maps are plentiful. Reprinted stocks can be purchased from the supplier. There is presently no program to revise this series with selected aerial photographic coverage.

Maps for coastline monitoring are complete. A new system for redefining Maritime Boundaries of Samoa has been implemented and the definition of boundaries is almost complete.

The 1:20,000 topographic series compiled in 1983 is now obsolete; however it remains a useful reference for road and other geographic place names.

A digital cadastral data base (DCDB) was commenced for Apia in the mid-90s, however this was not completed. There is no apparent program for the Draughting and Plan Examination Section to complete the DCDB or maintain the 50% coverage estimated to be in existence. Technical Services Division has expressed a desire to supplement the skills of the Draughting and Plan Examination Section with a qualified cadastral surveyor. This will round out the capacity of the section to provide a complete cadastral survey and mapping service.

Limited consideration has been given to establishing an inventory of geographic place names. A staff member of the National Mapping Section (Mr Nomeneta Saili) recently attended a training program in Toponymy at the Land Information Centre, Department of Lands, Bathurst, New South Wales, Australia.

There is presently no legislative and/or regulatory base, beyond that in Section 16 of the Department of Survey and Environment Act, concerning National Mapping Agency and the related Geographic Naming function.

Policy Issues

Arising from the consultations some key policy issues will need to be addressed in project implementation to give credibility to the National Mapping Agency (NMA).

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- NMA Status - The options include (i) new legislation, (ii) regulations under the principal act enabling the MNRE (Section 16) or (iii) informal arrangement based in inter-agency goodwill (least likely option).
- Geographic Names Board Status – similar to NMA status
- Data Custodianship - Establish the concept and the responsibilities of data custodians. This may require memoranda of agreement between stakeholders which will reinforce the ownership of data and responsibility for data accuracy and reliability which attaches thereto.
- Pricing - The cost of data between agencies to be based on reducing barriers to access through a policy of equity and reasonable cost recovery on a whole of government basis.
- Copyright and Intellectual Property - Ownership of data provided by third party contractors/consultants (eg Aerial photography) and value added use thereof.

Risks

Some of the risks impacting on establishment of a NMA include:

- Inability to support MNRE with equipment and training to undertake primary data custodian role in support of NMA;
- Inability of GoS to develop and support introduction of appropriate policy framework
- The adoption of divergent GIS technologies by different public agencies
- Inability to establish and sustain DCDB

2.4 Land Registration Conversion

Stakeholders and Consultation

The stakeholders in the system of Land Registration include

- People of Samoa
- Government through MNRE
- Land Management Division
 - Land Registration Section
- Technical Services Division
 - Drafting and Examination Section
 - Land Valuation Section
- Solicitors
- Banks
- Real Estate Agents

Consultations were held with:

Stakeholder	Position	Name
MNRE Land Mgt Division	Principal Land Registry Officer	Ms Filisita Heather
		Staff
	Asst CEO	Sooialo David Fong
Private Sector	Principal Soloi Survey	Keilani Soloi
	Solicitor	Ms Maiava Peteru

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Stakeholder	Position	Name
		Fepuleai & Schuster
ANZ Bank	Business Mgr	Mark Burns
	Prime Banking Mgr	Ms Rita Tuglia-Enesa
Samoa Realty Ltd	Managing Director	Ms Rosita Brighthouse-Slaven
Valuer & Real Estate Agent		Elon Betham

Discussions are continuing with other solicitors and surveyors together with bank and real estate representatives.

Counterpart Arrangements:

The Counterpart for the Land Registration Advisor is Ms Filisita Heather, Principal Land Registry Officer and Supervisor of the Land Registration Section. Ms Heather has a general drafting background and has been the Principal Land Registry Officer since 1996. The Land Registration Section assumed responsibility for the custody of approved plans and counter services in 2000/2001. The present practices were largely developed during Ms Heather's tenure. Ms Heather has made herself available for discussions whenever requested and proved to be most helpful.

Institutional and Individual capacity

(a) The players

- AG's Office for legislation and MNRE.
- Land Management Division
 - Land Registration Section
- Surveyors, solicitors, real estate agents, banks

(b) The system

- Despite the weaknesses in the existing registration system with its manual registers and deeds, the application of 'best practice' initiatives and appropriate technology would do much to streamline activities and provide better service to all users. Some sections of the Register Book are damaged but it does not appear that information has been lost. The concepts and basic operations of the existing system are expected to largely parallel those of a potential title registration system – forms, numbering, examination of Register and transactions, Register updating, records storage and maintenance, etc. The staff will need training in the new arrangements (especially if a computer-based solution is deemed appropriate) but it is expected that there will be a good transfer of knowledge from their present environment.

(c) Downstream training

- Reports indicate that the conveyancing community is well versed in the principles and operations of a Torrens Title Registration System. So much so that the existing deeds system is presently treated as a 'de facto' Torrens system. Notwithstanding this experience it is expected that the development of new forms and business rules will require substantial stakeholder involvement and training.
- Similarly, MNRE staff will need education in the general operations and needs of the new system. The Land Registration Section staff will require in-depth training in all facets of the system.

Relevant Records and Data

Registry records (Land Register, plans, deeds) are stored in a secure, air-conditioned vault only accessible by MNRE staff. The searching public have access to the records but are serviced and supervised by counter staff.

Register Books are only handled by staff. The early books are relatively fragile and paper and book bindings are damaged. There is a risk of losing pages in the Register. The Land Register book is not photocopied because of this damage. All other records may be photocopied for a fee.

Data from registered deeds is collected in computerised databases. The databases are for conveyances, caveats, leases, mortgages, transmission applications, powers of attorney and proclamations. This information includes historical data going back to 1920. However, it is not checked and not all fields are completed.

The registration system is supported by plans and maps which are in the custody of the Land Registration Section. Plans were lodged in paper form and colouring was used to indicate relevant detail such as easements and new roads until the mid-1990's. Plans are now 'black and white' and prepared on transparencies. The public have access to the early plan originals but no access is given to the transparencies. These are photocopied for searching purposes.

Existing System

A more detailed review of the existing system of Land Registration will be undertaken as part of the needs analysis for land registration reform in Samoa. This review will be undertaken jointly with the Land Registration Legislation Adviser because of the reliance on legislative backing for LR reform (see the first key issue above). For the inception review a summary of the perceived strengths and weaknesses of the existing system may be useful.

Strengths

- Parcel-based system within a Volume/Folio Register framework
- Transactions required to be registered – practice well-established
- Essentially good records
- Short-form mortgage and lease notifications on the Register
- Senior registration staff aware of registration practices and principles and capable of understanding plan information
- Some computer operational skills exist within Land Registration Section
- Organisational support for change and simplification of law and practices
- Community of trained practitioners apparently support the system – surveyors, lawyers and real estate agents
- Buoyant real estate market – limited availability of Freehold land; high value; significant mortgage market and financiers
- Few instances of legal action arising from incorrect registration

Weaknesses

- Unknown accuracy of the Register
- No direct linkage from plan to title - need to search the parent Register reference shown on a subdivision plan for the cross-reference to the Register entry for the new parcel

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- Register details typically not verified by title searches supporting a transaction
- Significant level of requisitions for deeds and plans – community costs in Tala and time and duplication of effort
- Manual searching of records for information – time consuming for clients and staff
- Register folio does not disclose the identity of the land remaining in the title after subdivision; residual could be difficult to define; no plan available
- Register 'book' subject to deterioration and damage
- Permanent retention of all registered deeds – documents deteriorating, limited conservation/restoration activity
- No office automation tools to assist processing
- Recording of detailed technical description on Register (original prepared by Drafting and Examination Section, copy to surveyor which is given to solicitor to prepare land description in deed of conveyance)
- Handwritten Register entries
- No formal liaison with client groups (banks, solicitors, real estate agents, surveyors)
- No analysis of errors and feedback
- Registration times – Charter specifies 5 days for deeds and 20 days for plans
- No formal staff training programs
- No delegations to register or amend
- Easements and roads dedications typically not registered
- Colour coded plans and the need to designate the affected sites
- Poor accommodation for staff and clients with lodgement and search functions on first floor and no access for disabled clients
- Significant effort required to prepare the records for conversion – issues include possible retrospective creation of easements and roads, designation of affected sites, research of extent of land remaining in titles after partial subdivision and parcels identified as road
- Plans damaged and some missing data
- A2 plan forms can only be reproduced on separate A3 or A4 pages (2 per image taped together by staff)
- Limitations on the forms of land development - no strata development.

Risks

There are several risks associated with the effective conversion of the land registration system. Many of these are related to the need for joint consideration of enabling legislation. An assessment of these risks covers:

- Legislation not available to support the implementation of a Torrens Title Registration System. However, the existing legislation would seem to be sufficient to enable the implementation of a computer-based system incorporating all the features required of a Torrens system when the legislation became available. Specific legislative concerns include: mortgages, title qualification and removal, easements, certificate of title and evidence laws. If computer Register was not legal it might be possible to create an interim 'paper' Register from a computerised information system with the paper Register being discontinued with the enabling legislation.
- Ability of the staff to maintain the new system at the same time as undertaking folio conversion (e.g. designation of sites affected by easements)

in paper plans, determining the residue of a title following subdivision and possibly preparing 'departmental' plans to illustrate the residue parcel).

- Inaccuracies within the existing Register and generated during any conversion activity.
- Register details typically not verified by title searches supporting a transaction.
- Limited validation information available; some is available but records are not checked; only substantially complete and not present if no transaction has been registered since the grant.
- Significant effort required to prepare the records for conversion – creation of easements and roads is an issue, designation of affected sites in coloured plans, research of titles subject to excisions to identify the remaining land.
- Some plans damaged and missing data.
- Delay in decisions concerning the proposed replacement registration system at both conceptual and detailed levels. This includes the information to be collected, content and format of system input and output documents, statistics, operational business and folio conversion rules.

2.5 Land Registration Legislation

Stakeholders:

The reform of the land registration legislation impacts on all holders of interests in Government land, freehold land and customary land leases, persons and organisations lending on the security of land. It also affects the professionals associated with dealings in land including solicitors, surveyors and estate agents. Also an interested party is the Attorney General who is required to represent MNRE in litigation on land matters.

The additional consideration of the issues of extension of the system to include customary lands and the decisions of the Land and Titles Court involves a much wider cross section of the community, including all persons having beneficial interests in customary land, individual chiefs and orators, village mayors, women's groups, the President of the Land and Titles Court and churches.

Consultations:

Consultations held to date:

Stakeholder	Position	Name
Private Sector Solicitor	Pres. Law Society	Harry Schuster
	Solicitor	Maiava V. Peteru
		Robert Barlow
Attorney Generals Dept	Attorney General	Ms Brenda P Heather-Latu
	Parliamentary Counsel	Tony Lawson
	Asst AG	Daryl Clarke
	Sen. State Solicitor	Lalotoa Mulitalo
ANZ Bank	Business Dev Mgr	Mark Burns
	Prime Banking Mgr.	Ms Rita Tugia-Enesa
Land & Titles Court	Judge	Maiava Nafatali Moa

Further consultations will continue with private solicitors, banks and real estate agents.

As regards extension of the system to customary lands, an extensive programme of consultation with stakeholders is under way, with discussions with the President and Judges of the Land and Titles Court, members of the Supreme Court, selected Government Departments, chiefs and orators, village mayors, women's groups and church leaders

Counterpart arrangements

No counterpart has been appointed to the land legislation adviser. Unfortunately, the Assistant CEO, Legal Services Division has been overseas during the inception stage. It is anticipated that she will return in July and will be on hand to carry forward the legislation. This situation has created some difficulties for the advisor in accessing information and legal resources. This situation has been partially overcome by obtaining access to Attorney General's files where the matter has resulted in litigation and also to the Attorney General's legal resources. Nevertheless it is in MNRE's best interests to have a direct counterpart in this area in order to have a good understanding of the legislative reforms and to carry on the task of introducing and implementing the legislation after the departure of the adviser.

It is pointed out that, under the TOR, the final task of the land legislation adviser is to prepare a draft bill and submit it to MNRE. The subsequent responsibilities of ensuring the passage of the bill through Parliament, introducing any subsidiary regulations, implementing the legislation and educating staff and practitioners on the new system will be with MNRE.

Institutional and Individual Capabilities

The key unit is the Registration Section of Land Management Division of MNRE. Currently this unit functions with only limited on-the-job training and no procedure manual. Under the circumstances they do a good job although their skill level is not high. It is clear that they presently lack an understanding of some of the legal aspects of the creation of interests in land. The move to a Torrens system will place greater responsibility on the staff to ensure the accuracy of the Register, so their existing skills should be upgraded. They have no concept of what a change to the Torrens system would entail and training in the new system will also be necessary. Conversion of the existing Register to a Torrens Register will also place an additional workload on the staff.

The initial impression is that the standard of conveyancing in the private sector is not high. This is an issue which will be discussed with the Law Society. In any event they will need some introduction to the new forms and procedures.

Risks

The current project design requires the upgraded registration system to be implemented at a date earlier than that set down for submission of the draft bill reforming the land registration legislation. It may well be possible to implement some new procedures without any amendment of the legislation but other measures such as the computerisation of the land register and implementation of a Torrens title system cannot be carried out until the new legislation is enacted. This is something which is outside the control of the Project and the timing is impossible to predict with certainty. After submission of the draft bill to MNRE it will have to be reviewed by the Parliamentary Counsel before it goes to Parliament. The time that this will take is impossible to predict. Following completion of the review by the Parliamentary Counsel, the responsibility is on the Minister to try and secure priority for the bill but it is possible for bills to be delayed for 12 months or more awaiting their passage through Parliament. Even if priority is secured it is understood that normal practice is

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for bills introduced in one Parliamentary session to remain in Parliament until the following Parliamentary session before passage. Consequently, it may well be some period of time between submission of the draft bill and actual implementation of the system. This has implications for the introduction of any necessary regulations and the training of staff.

2.6 Land Valuation

The purpose of this section is to provide a summary of the current valuation system used in the MNRE and to provide some analysis of its effectiveness and to make recommendations for an alternative, if necessary. The review will include information on valuations undertaken by the Ministry, the processes utilised including the recording and accuracy of market sales and rental data.

Mention is made of the appropriateness of the valuation system for defined uses. This issue and the consideration of alternative and appropriate valuation systems for Samoa will be treated in detail in subsequent project implementation reports.

Stakeholders:

- Ministry of Natural Resources and Environment (MNRE)
- The Chamber of Commerce
- The Banking sector
- Individual and corporate property owners
- Churches
- Treasury
- Ministry of Works Transport and Infrastructures
- Customary land owners
- Private valuers
- Real Estate Agents
- The Attorney General's Office

Consultations:

Stakeholder	Position	Name
MNRE	CEO	Tu'u'u Luafatasaga Dr. Ietitaia Setu taule'alo
MNRE Technical Services	Asst. CEO	Safuta Toelau Iulio
	Principal Valuer	Patea Malo Setefano
	Trainee Valuer	Moira Faletutulu
	Trainee Valuer	Faanimo Warren
	Sen. Valuer	Vaitogi Sefo Vaitogi
Chamber of Commerce	Managing Dir IPA	Leiataua Isikuki Punivalu
Polynesian Airlines	MD and CEO	Malopaia John Fitzgerald
ANZ Bank	Business Dev Mgr	Mark Burns
	Prime Banking Mgr	Rita Tugia-Enesa
Ministry of Finance	Deputy CEO	Iulai Lavea
Land Titles Court	Judge	Maiava Nafatali Moa
Samoa Realty Ltd	MD	Rosita Brighthouse-Slaven
Private Valuer	Mgr. Elon Betham and Associates and General Manager Samoa Shipping Services Ltd.	Elon P. Betham

Counterpart Arrangements:

The counterparts to the Valuation Adviser for the Project are Patea Malo Setefano, Principal Valuer and Vaitogi Sefo Vaitogi, Senior Valuer. Both these men are cooperative and have indicated support for the Review of the Valuation System and are helpful in advancing any initiatives to improve the current system. The two female trainee valuers (Moirā Faletutulu, Faanimō Warren) have thoughtful input when engaged on issues that are relevant to the review and valuation analysis.

The arrangement with counterparts to date is effective and there is no reason to doubt that this will continue. It is felt that the previous association that the Valuation Adviser has established has been beneficial.⁴

Institutional and Individual Capacity:

The MNRE is the main player in the valuation sector in Samoa. The private sector is also represented in the valuation of property. However, it has a limited list of participants. A table which shows the known 'valuers'⁵ working in the real estate industry, and their places of employment is listed in Attachment 3. This information was provided during discussions with the Principal Valuer.

Staff require support and the opportunity for higher education. Ideally, all valuers in Samoa should have a Degree in Land Management, from the University of South Pacific, Fiji or its equivalent. It is important that the valuers' education includes experience in the specialist valuation area of Assessments for Compensation purposes. Valuers also require experience in defending their valuations, including court room exposure.

Staff of MNRE are generally quite well versed with the essential technology requirements. An example where there would be clear benefits would be training in a quality database such as Microsoft Access

Relevant Records and Data:

The MNRE has responsibilities for valuation of property through the following Acts:

- The Constitution & The Constitution Convention Ordinance (1960)
- The Stamp Duty Ordinance (1932)
- The Taking of Lands Act (1964)
- The Lands Survey and Environment Act (1998) and the 2004 Amendment
- The Lands and Environment Act (1989)
- The Alienation of Freehold Land Act (1972)
- The Land for Foreign Purposes Act (1992/93)
- The Land Registration Act (1992/93)
- The Land Ordinance (1959)
- Planning and Urban Management Act (2004)
- The Lands and Titles Act (1966)

Activities

The main activities that the Valuation Section of MNRE undertakes are:

⁴ The Valuation Adviser was the Chief Valuer for the Department of Land, Survey and Environment between July 1994 and July 1996, when both the valuers worked closely with him.

⁵ The term 'valuers' in this context is used loosely as it seems some people practise as valuers without supporting qualifications.

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- Private assessments for the public for which a fee is charged
- Compulsory acquisition of land (The Taking of Land Act). A recent prominent case is the acquisition of approximately 2,900 acres of customary land adjacent to the township of Salelologa.
- Leases of government property to private individuals/corporations
- Leases of private property/customary land to the government
- Assessments for Stamp Duty purposes
- Assessments for the Financial Sector for mortgage purposes
- Insurance assessments, usually based on replacement cost
- Land Exchange – exchange of land by government

An analysis of recent valuations completed by the Valuation Section and recorded in the register book shows the following activity:

Year	Total no of Vals	PURPOSES						
		Finance	Govt/private leases	Land Comp'	Market valuations	Stamp duty	Land exchange	Insurance
2002	120	86	5	4	16	5	1	3
2003	86	59	3	4	11	8	1	-
2004	114	84	3	2	21	3	1	-

The Valuation Section has computerised records for its sales analysis needs spanning many years. Sales data is recorded in an Excel spreadsheet and is updated regularly (usually monthly) by the valuation staff. Information is gleaned from the Land Registration Section of the Ministry. Much of this information is also recorded by the land registration staff in a separate Excel spreadsheet and therefore unnecessary duplication of data entry occurs. Improvements can obviously be made, including a conversion to a secure data base - for example the "Access" program. The question of linkage of information to Land Registration is also being addressed under Sub-Component 2.2: Land Information Integration.

Accessibility to sales information recorded in the Valuation Section appears to be reasonably controlled via internal user passwords. The structure already appears in place to build a more robust system.

For the Year 2004 there were approximately 465 conveyances recorded. Of these, approximately 320 are understood to be 'arm's length' transactions. This means that the sales information recorded should be the actual price paid between the seller and buyer. It is estimated that there are 11,000 freehold parcels recorded in the Land Registry. The sales represent approximately 3% and this is encouraging. It indicates that although the market is not robust, market players want to have their transactions recorded, with the inherent security that this offers. Sales amounts are unlikely to be heavily understated when a mortgage to a bank is involved and where the registration is completed with bank involvement. Even if there is no mortgage involved, the low stamp duty of 1% is hardly an incentive to understate the sale price. In some instances, there are certain to be deliberate false statements regarding actual sale prices. However, this does not appear to be an endemic practice.

Valuers are aware that there is data that misrepresents the true situation. Anecdotal evidence suggests that there are transactions which are not being recorded at the time the actual deal has been made. There appears to be an impediment to the

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registration process that can be directly linked to the total cost of affecting any transfer. (The Stamp Duty at 1% of the sale price / value of property does not appear to be the impost). The legal costs appear to be excessive and in certain instances are a cause for delay in registration. This is not a major impediment to the process but it needs to be acknowledged.

Rental data is not recorded as part of the Land Registration process. Liaison with real estate agents and others in the property industry is important for valuers to enable ready exchange of information. This appears to be occurring on a broad basis. There is scope for improved recording of rental data. There may however be privacy issues.

There is currently no legislative authority that regulates and sets standards for the practice of Valuers in Samoa. This has been identified as a weakness in the Valuation industry in this country. Currently a Valuation Board consisting of the Assistant Chief Executive Officer, Technical Services Division MNRE, the Principal Valuer and a private valuer, sits for registration of valuers and annual licences. Formalisation and enhancements to this process should be occurring and will be an output in this project. (See Work Plan – Attachment 4)

Alternative Valuation System

The initial inception review suggests the existing valuation processes are adequate for the current levels of valuations in Samoa. The existing process can be best described as involving a case by case assessment where inspections are carried out; reports are completed describing the property and fixed improvements; and appropriate sales are analysed.

In circumstances where there is no broad based land tax or land rating system, there appears to be no pressure to introduce a mass appraisal system that allows for high volume assessments quickly and efficiently. Notwithstanding this, a framework for such a system will be provided as an output that can be utilised if required at a later date. This would be for the Apia urban area only.

Risks:

Lack of Access to Counterpart Staff. It is important to have the continued ready access to the Principal Valuer and to a lesser extent, the other Valuation staff. Access to other staff, including Registration staff, is also a potential risk if people become unavailable for consultation and access to information. At the time of writing this Inception Report the risks of effective implementation appear minimal given the cooperation experienced to date.

Insufficient Training and Education of Staff. Ideally, all valuers in Samoa should have a Degree in Land Management, from University of South Pacific, Fiji or its equivalent. It is important that the valuer's education includes experience in the specialist valuation area of Assessments for Compensation purposes, including court room exposure.

MNRE Staff training. Staff are generally quite well versed with the essential technology requirements, however there are clear benefits in training in a quality database such as Microsoft Access. There would also be clear benefits in periodic in-country training to reinforce the principles of valuation learnt during their academic training.

Transport: As is noted in other areas of the report there is a general lack of access to vehicles for any form of field work. Valuers have complained about this as risk in efficiently completing their work.

Key Issues:

Some key issues emerging from the initial review are:

- Does the Taking of Land Act make adequate provisions for the assessment of compensation for the taking of customary land? There may be special considerations for the assessment of customary land based on such notions as culture, tradition, spiritual connections which the Act does not address. There is certainly no allowance for the compulsory nature of any acquisition. For example, in Australia an allowance is made for the compulsory taking of property in addition to any market value.
- Is there any desire from the Government of Samoa to increase its revenue base by an impost of a land/property tax or rates in Apia urban area?
- The implications of formalising the registration of valuers where there are a very limited number of practising valuers – who/what should be the regulator?

3. Implementation Plan

A comprehensive work plan and indicative deployment program was included in the project proposal. This was prepared on the basis of the terms of reference provided, our understanding of the general project implementation environment and our assumptions concerning the capacity of the stakeholder institutions to take responsibility for sustaining the components of the project. The level of understanding has been enhanced and the assumptions have been largely reinforced during the inception period from 7th February to 3rd March 2005. As a result a modified Work Plan for the implementation of the contract has been prepared.

General Approach

The Work Plan reinforces the achievement of long term sustainability through the transfer of experience and skills across all stakeholder levels, but especially across the operational levels of MNRE. The Ministry must accept responsibility for sustaining the investment in equipment and training and ensuring that the reforms in the survey and land administration are translated into improved efficiency and long-term benefits to the people of Samoa. In this respect the approach of the consultant team is to operate very much in an advisory mode with a strong preference for on-the-job training within the operational environment. The assignment of appropriately qualified counterparts to the adviser team during the inception stage is positive support by MNRE to this approach.

The Adviser team remains as originally proposed and additional inputs are not proposed as a result of the inception study. There is some potential for additional input in the Valuation sub-component to assist with advice to the Principal Valuer in the land acquisition issues surrounding the Vaetali Road (Apia – Airport upgrade) construction program being undertaken under a separate component of SIAM2. Discussions are continuing however, support of this nature is seen as being entirely consistent with the advisory and on-the-job training approach being followed.

Similarly, the upgrade of the geodetic survey framework is so vital to achieving the overall sustainability of the survey and land information systems of Samoa that the

GoS (through MNRE) must be prepared to invest human and capital resources in its establishment and maintenance. In this respect, the importance of on-the-job training cannot be under-stated and underpins our overall approach to the project.

3.1 Work Plan

The modifications to the Work Plan are essentially to address timing and procurement concerns, some of which remain as issues to be considered by MNRE upon receipt of the Inception Report.

The revised work plan is in a detailed table at Attachment 4. This table describes the activities under each sub-component, with an indicative time schedule.

3.2 Delivery Plan

This is a comprehensive time schedule shown at Attachment 5. The delivery plan is referenced to the work plan and both plans have been linked as closely as possible to the Contract for Consulting Services - Annex C Reporting Requirements.

4. Procurement

The Consultant is not responsible for procurement. However, the terms of reference provide for preparation of technical specifications to assist MNRE procure essential equipment for geodetic surveying (GPS) and for the integration of land information across MNRE (mapping, draughting, land registration and valuation). The preparation of detailed specifications is scheduled to commence immediately after the inception period.

A general summary of the procurement items which were identified by counterparts and stakeholders during the inception meetings and review is included here merely as an indicative guide for potential further consideration - subject to available budget.

Geodetic

The indicative costs for a GPS system which provides minimal functionality for MNRE is estimated to be **US\$ 125,000**.

Land Information Integration

An indicative list of IT equipment to support LII initiatives is identified in the following table:

Quantity	Description
6	PC Workstation, wireless enabled, protected by UPS and connected to MNRE network
1	Integrated Wireless Router, Access Point, DSL modem Unit
1	File Server protected by UPS
1	A3 B & W Laser Printers
2	A4 B & W Laser Printers
1	A3 Scanners
3	A4 Scanner (one with ADF)
1	AO Scanner (Flatbed or "Roll")
1	Digital Camera
6	Software utility to produce multi-page scanned image files (pdf format) as part of scanning process and as a virtual printer
1	Microsoft Visual Studio .NET 2003 Professional

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Quantity	Description
1	Microsoft Visio Professional 2003
2	MapInfo Professional
6	Anti Virus Software
1	Backup Software
1	Survey Calculation Software that can import and export (fully populated) LandXML files (or add-on to existing survey software such as SDR Map)
3	Hand held programmable calculators (survey calculations)
3	Survey calculation software for Hand Held programmable calculators

An estimated cost for this equipment is **US\$ 56,000**

Microfilm Conversion

There is also a need for a budget provision for the scanning of the following microfilm records:

Quantity	Description
8,300 approx	Conversion of Survey and Scheme Plan Microfilms to digital image files (TIF or pdf file format)
16,000 approx	Conversion of land claims microfilms to digital image files (TIF or pdf file format)

An estimate of cost of scanning microfiche is about **US\$ 14,000**.

Valuation

The equipment the Valuation section has currently available is reasonable.⁶ However, improvements could be made including the following acquisitions.

Quantity	Description
2	Standard desktop computers with XP Windows and XP Professional
1	Digital Camera
1	A4 Scanner
1	Generic software for drawing simple building footprints
1	Measuring wheel for field inspections

An estimated cost of valuation equipment is **US \$4,000**

5. Risk Management

The risks to the successful implementation of the project are not related to physical hazards, but to the complex institutional, human resource and legal environment within which the project is operating. To a large extent mitigation of risks of this nature are beyond the control of the adviser team and require full commitment and intervention at GoS level.

⁶ Each of the four staff has a computer. However, two of these at least 6 years old. There are two adequate printers. The Section is connected to Ministry of Natural Resources and Environment computer network. There is no fax machine nor scanner. There is a photocopier which appears in good working order.

Project Inception Report

The risks are described under each sub-component in Part 2 above. After a general overview our view is confirmed that the project is seriously exposed to risk in two key areas. The first is the capacity of the MNRE survey section to sustain the survey reforms – notably the application, maintenance and expansion of the investment in the geodetic network. The second is the revision of the land registration system ahead of the enabling legislation resulting in possible delays in the implementation or the need to function under dual systems during this transition.

The recognition of these key risks has been integral to the development of work and delivery plans in this report. A Risk Management Matrix has been prepared within which the primary risks are distilled from the inception review. Each risk is identified, with its source, likelihood of occurrence and potential impact on the implementation of the project. A response to each risk has been developed, nominating the responsible organisation and the likely timing of the response.

The **Risk Management Matrix** is at Attachment 6.

Attachments

ATTACHMENTS

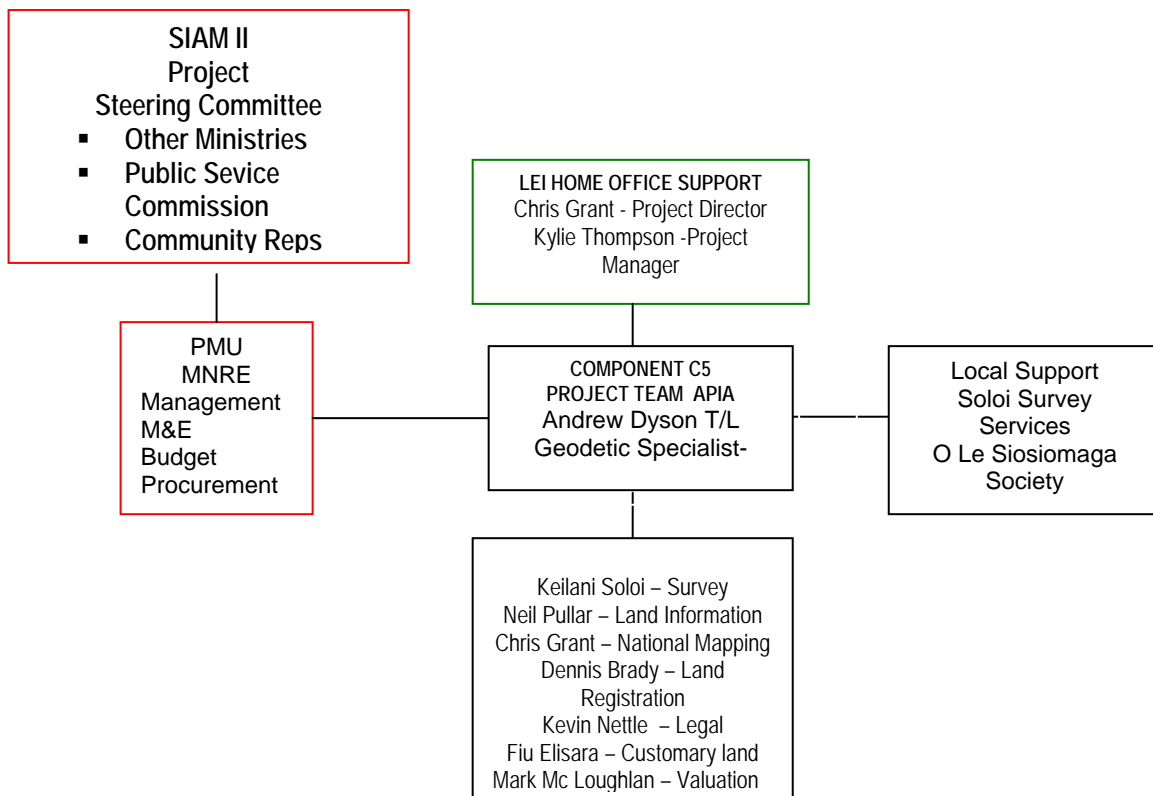
1. Project Management Structure
2. Samoa GIS Users Group
3. Valuers in Private Practice
4. Work Plan
5. Delivery Plan
6. Risk Management Matrix

Attachment 1. Project Management

Land Equity International (LEI) are responsible for implementing Component 5 'Sustainable Management: Land Administration and Survey' of SIAM 2. LEI will be providing technical assistance under Contract C5.01 Land Administration and Survey between LEI and Ministry of Natural Resources and Environment (MNRE), signed on 4 February 2005. This contract is a primary reference for project implementation.

To ensure optimum operational efficiency and clarity of operational arrangements, clear lines of communication, and detailed TOR based on the work plan has been set down for each team member. The Team Leader will also carry out audits under LEI's quality assurance procedure in order to ensure the project is in compliance with LEI's quality management system.

The Team Leader will be supported by an Australian based Project Director and LEI's experienced Project Manager.



Project Organisational Chart

Attachment 2. Samoa GIS User Group

Mission Statement: "The mission of the Samoa GIS User Group is to advance and promote the application of GIS and remote sensing technologies in Samoa as a tool for improved decision making by developing standards and fostering collaboration between users and promoting the professional development of members".

Five goals have been identified which are milestones on the road to achieving the overall Mission:

Goal One: Promote Spatial Data Management

- Promote the enhancement of spatial datasets in Samoa for a range of applications
- Promote spatial data security to minimise data corruption and misuse of datasets
- Promote the development of standardised data layers and monitoring systems for data sharing and data manipulation
- Develop a metadata system for all users to record their spatial datasets

Goal Two: Provide Advice on GIS/RS Technology Development

- Provide advice on GIS and RS technology development and advancement in Samoa
- Provide advice on strategic and operational issues relating to GIS and remote sensing

Goal Three: Promote the development of institutional protocols for data management and sharing

- Promote the development of data protocols and standards to ensure data is managed, secure and reasonably priced
- Promote data sharing amongst users via the establishment of MOUs between agencies/departments using GIS/RS

Goal Four: Raise awareness on the applications of spatial technologies

- Advocate the use of spatial technologies at national sectoral and at community levels
- Raise public and institutional awareness of the capability and applications of GIS and RS technologies
- Facilitate access to primary and secondary datasets for use in regional planning and development

Goal Five: Promote training and professional development of members

- Identify training needs and coordinate training of members in the use and application of GIS and related spatial technologies
- Promote the professional development of members

Attachment 3. Valuers in Private Sector in Samoa

Name	Place of Employment	Academic Qualification	Valuation Qualification
Patea Malo Setefano	Ministry of Natural Resources and Environment	BA USP & Post Grad in Land Management USP, Fiji	Licensed Valuer (active)
Vaitogi Sefo Vaitogi	Ministry of Natural Resources and Environment	No formal qualifications, has attended USP, Fiji	Interim licence, by virtue of extensive experience
Moira Faletutulu	Ministry of Natural Resources and Environment	BA in Economics & Management, USP, Fiji	Valuer in training
Faanimu Warren	Ministry of Natural Resources and Environment	Cert. Bus. Studies (Polytechnic) Currently, studying Land Management at USP part-time	Valuer in training
Malaki	Apia Real Estate Management	BA (Land Management) in USP, Fiji	Licensed Valuer (active)
Elon Betham	Elon Betham and Associates General Manager of Samoa Shipping	No qualifications recorded	Experienced by virtue of being ex-Ministry of Natural Resources and Environment valuer Non-active
Lui Seru	General Property Valuers	BA in Land Management, USP, Fiji	Licensed valuer
Toeupu Kaisara	Kaisara Real Estate Management	BA in Land Management, USP, Fiji	Not licensed
Rosita Brighthouse-Slaven	Samoa Realty Ltd.	Not known	Not licensed
Too Tea	National Property Services (linked with Apia Real Estate)	Not known	Not licensed
Elaine Pulea	Fepuleai & Elaine Real Estate Services	No valuation qualifications	Not licensed but active
Fiona Sapatu	Senior Planning Officer, Ministry of Natural Resources and Environment	BA in Land Management from USP, Fiji	No licence, not active

Valuers in Private Sector Samoa

Attachment 4. Work Plan

Activity No.	Activity Description	Timing
<p>Component I: Survey and Geographic Information At the conclusion of this component Samoa will have a survey and geographic information system which supports management of the environment, national emergencies and sustainable management of land and natural resources.</p>		
<p>Sub-component 1.1 Geodetic Survey At the conclusion of this sub-component there will be a single strengthened and unified geodetic reference framework capable of supporting land information integration with particular application to cadastral boundaries. The MNRE will have GPS equipment and staff will be fully conversant with the application of this technology, and the downstream processing, through direct on the job and other training.</p>		
1.1.1	Initial Review and Analysis	1 mth Feb-Mar 05
<p>The T/L will work closely with MNRE to undertake a complete assessment of the existing geodetic network and the capacity of the public and private sector to upgrade and sustain the geodetic reference system. The identification of appropriately qualified field staff within the MNRE, and their assignment to work on this sub-component will be an important part of this activity. The review will also contribute to the Project Inception Report. Outputs: ♦ A draft report with clear analysis of the geodetic network with options for upgrade; - Report (a)⁷</p>		
1.1.2	Specification of geodetic and supporting computer equipment	0.5 mths Mar 05
<p>As outlined previously the specification of GPS equipment has been given priority to facilitate procurement and deployment of equipment for subsequent geodetic surveys in the network upgrade. In consultation with the LII adviser (Sub-component 1.2) specifications will be prepared for computer equipment necessary for geodetic and cadastral survey operations. Outputs: ♦ Specifications suitable for procurement of GPS equipment; - Report (h)</p>		
1.1.3	Geodetic Upgrade Action Plan	1.5 mths Mar-Apr 05
<p>The detailed action plan will include broad specifications for each level of the network, indicative spacing of marks and indicative location of marks to support orderly development. Specifications for monuments will also be prepared and documented including a reconnaissance for location and upgrade of old marks. The timeframe of activities, responsibilities, a training needs analysis and general logistics will be developed as well as vertical network requirements and specifications. Outputs: ♦ Detailed work plan for the Geodetic Survey field work and training needs.</p>		
1.1.4	Revision of Survey Ordinances and Regulations	1.5 mths May-Jun 05

⁷ The report reference here is to the report listed in Reporting Requirements under the terms of Contract for Consultant Services between LEI and GoS (page 58-61)

Project Inception Report

Activity No.	Activity Description	Timing
	<p>Existing Ordinances and regulations will be reviewed. The present methods of cadastral survey will be assessed and feedback obtained on the future direction of cadastral survey. With the participation of stakeholders through workshops etc, amendments will be drafted and proposed for adoption in advance of the geodetic upgrade field work.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ Recommendations for changes to Survey Ordinances and draft Survey Regulations – Report (e) 	
1.1.5	Preparation of Survey Manual	1 mth June 05
	<p>A comprehensive manual will be prepared for the guidance of all surveyors operating within the newly defined Samoan Geodetic Reference System (SGRS). This will include all aspects of geodetic and cadastral surveys in Samoa</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ A manual with guidelines for the conduct of cadastral and geodetic surveys in Samoa – Report (d) 	
1.1.6	Undertaking Geodetic Network Upgrade	3 months Aug-Oct 05
	<p>New marks established, old marks upgraded as necessary. GPS observations to be carried out, counterpart survey staff to be trained in all aspects of the establishment, GPS operation, processing and adjustment and, subject to resources, a program of levelling prepared including connection to NTF tide gauges.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ A Geodetic network for Samoa which is capable of supporting cadastral coordination; - Report © 	
1.1.7	Geodetic Datum Upgrade	1 mth Oct 05
	<p>A new geocentric datum will be defined and adopted, the SGRS will be defined and adopted. Transformation parameters between the old and new datums and if necessary WGS84/ITRF2000 will be defined. (Note that this cannot be completed until after the upgrade of the network, including the final adjustment of data.) Consultation will be undertaken with Geoscience Australia, NTF and with relevant agencies and MNRE.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ Report on upgrade of geodetic network datum – Report (b) 	
1.1.8	Industry Education Information and Communication	ongoing
	<p>Participation of the small, but developing survey industry is essential for the benefits of the cadastral reforms to be achieved and sustained. An IEC program, as a series of workshops and public relations exercises will be undertaken throughout this sub component to assist in the continuing education of all stakeholders.</p> <p>Outputs</p> <ul style="list-style-type: none"> ▪ Draft report on information packs for survey industry – Report (f) ▪ Report on training workshops for survey industry – Report (g) 	
<p>Sub-Component 1.2. Land Information Integration (LII) At the conclusion of this subcomponent there will be policies, standards and processes in place which maximise the integration and application of geographic data in Samoa.</p>		

Project Inception Report

Activity No.	Activity Description	Timing
1.2.1	Initial review and options analysis	0.5 mth Feb 05
<p>The Adviser will work closely with other specialists, MNRE, other government agencies, regional organisations and private sector land professionals to undertake an initial assessment of the opportunities to facilitate inter-functional land information flows (including information flows between agencies) and to combine different map layers of geospatial land information to create map products in addition to identifying barriers to these opportunities. This appraisal will consider opportunities arising from computerisation; both data conversion exercises and the development of software applications. The identification of appropriately qualified counterparts within the MNRE, and their assignment to work on this sub-component will be an important part of this activity. The review will contribute to the Project Inception Report.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ A clear analysis of opportunities and barriers to land information integration; 		
1.2.2	Development of LII principles and strategy	1 mth Feb- Mar 05
<p>The strategy for LII will include the overall management of geospatial data in Samoa and address the identified opportunities and barriers. It will include a series of policies that need to be addressed to facilitate LII and in particular the initial work plan. Issues to be addressed by policies that may be relevant in Samoa are: land information access and sharing between stakeholders; land information fees; data custodianship; and privacy considerations. The LII strategy will also need to identify appropriate structures to encourage the participation of all stakeholders at both the policy level and at the technical level and a series of training initiatives to support the LII work plan and the sustainable operation of LII processes.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ A draft Land Information Integration Strategy for Samoa - Report (i) 		
1.2.3	Preparation of IS specification for all activities.	0.5 mth Mar 05
<p>The design and specification of computer equipment and software applications will not only deal with computerisation within this LII component but will also coordinate computerisation design, specification and procurement across all other components. The design and specifications will be based on a data model covering all LII subject areas together with appropriately documented high-level functional analysis. Computer applications are likely to be required to support on-going mapping, land administration processes as well as disaster archive purposes and one-off data conversion exercises.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ Hardware and software specifications to support project procurements ◆ A corporate data model with documented high-level functional analysis (a series of data flow diagrams identifying principal steps for critical LII processes) 		
1.2.4	Drafting of key data standards and policies for LII	0.5 mth Jun 05
<p>Key data standards (identified during the preparation of LII strategy) will utilise relevant international geographic standards where these are appropriate for Samoa or can be appropriately customised. The Australian and New Zealand experience is that the ISO/TC211 series of geographic standards (which include data quality, metadata and feature catalogue standards) and the LandXML standard (to define the digital equivalent of a cadastral survey plan) have been found to be customisable. Experience has shown that not only must standards be carefully drafted but they must also include plans for their implementation which includes any necessary training and reformatting tasks</p> <p>Outputs:</p>		

Project Inception Report

Activity No.	Activity Description	Timing
	LII implementation plan covering software development, key data standards, and data conversion tasks (and will include national standards and specifications for map products – refer task 1.3.4) - Report (m)	
1.2.5	Develop LII Land Administration & Mapping Software Applications	3 mths May-Jun 05 Aug 05
	<p>To facilitate land information integration, a series of land administration applications will be developed linked to a common database (based on the corporate data model – see task 1.2.3). The initial focus will be on developing applications required to support the LII Record Conversion Programme. Then applications supporting key land administration and mapping functions will be progressively developed. It is envisaged that not all potential applications will be able to be developed within the scope of this project and so the focus will be on applications supporting land registration, cadastral mapping, valuation and geodetic survey functions. An important consideration will be the ongoing sustainability of these applications. Hence rigorous backup, disaster recovery provisions and user training will be included for all applications developed.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ Developed software applications ◆ User documentation ◆ System documentation ◆ User & System training plan ◆ Disaster Recovery Plan 	
1.2.6	Implement Records Conversion Program and LII Computerised Applications	1 mth Sep-Oct 05
	<p>A LII focus should be applied to all individual initiatives within MNRE (including mapping and land administration reform). The LII Strategy will provide the framework for this to occur in order that computerisation benefits are maximised by streamlining processes, ensuring critical standards are applied to ensure consistency between databases, costly duplication is avoided and resources are used effectively. The existing MNRE network provides the means to link key mapping and land administration applications with only minor additional hardware procurement to accommodate new computerisation initiatives. Data conversion initiatives will be programmed to ensure digital data is available to support these applications. Where available existing digital sources of land and geospatial information will be utilised albeit some reformatting may be required to comply with new standards.</p> <p>Outputs:</p> <ul style="list-style-type: none"> ◆ User & System training completed ◆ Conversion Tasks underway (meeting agreed targets) or LII application operational (according to LII development Plan) ◆ Routine Backup arrangements in place. 	
Sub-component 1.3 National Mapping Authority (NMA)		
<p>At the conclusion of this subcomponent there will legislation for a NMA and agreed approaches to data custodianship, ownership and access. National standards will be in place for the production and maintenance of national mapping including the guidelines for changes to nomenclature and national and international boundaries.</p>		
1.3.1	Initial review and Stakeholder Analysis	1 mth Feb 05 & May 05
	<p>This will be a quick overview of existing map series and products to match these, based on a 'green fields' approach, to the national mapping needs to support disaster, environment and land and marine natural resource management.. The stakeholders will be identified and their respective needs and technical and skill capacity to contribute to the mapping inventory of Samoa assessed. This will be undertaken in the context of Sub-component 1.2 with the aim of</p>	

Project Inception Report

Activity No.	Activity Description	Timing
	developing a strategy which maximises the capacity to support all national programs which rely on accurate and current spatial data. The analysis will recognise the potential support available from the regional organisation SOPAC in the application of new technologies. Outputs: <ul style="list-style-type: none"> ◆ Position Paper on National Mapping Agency - Report (j) 	
1.3.2	Preparation of NMA draft enabling legislation/regulation	2 mths May-June 05
	This activity will develop an enabling (legislative or regulatory) framework for a National Mapping Agency within MNRE. A rationale for legislation will be explored with all stakeholders through consultation forums at all levels. The role and responsibilities of the NMA will be developed to include the definition of all major political and social boundaries including the maritime boundaries around the EEZ of Samoa. Outputs: <ul style="list-style-type: none"> ◆ Draft report on legislation/regulation to create and enable the NMA ready for submission to cabinet –Report (k) 	
1.3.3	Preparation of Guidelines for Geographic Names Board	0.5 mth June 05
	The naming of geographic features is an important component which must be administered in a manner which prevents duplication and confusion. The role, responsibilities and administrative apparatus of a Board to control and administer the adoption and approval of geographic place names will be developed under this activity. The relationship between the PUMA will be developed to ensure consistency in the naming of roads and other man made and natural features in developments affecting land. Outputs: <ul style="list-style-type: none"> ◆ Recommended mandate, structure and operating guidelines for a Board of Geographic Place Names for Samoa – Report (l) . 	
1.3.4	National Standards and specifications for map products	June 05
	This will be undertaken in conjunction with LII Adviser, as part of activity 1.2.4, and common report produced.	
COMPONENT 2: Land Administration Reform		
At the completion of this component Samoa will have a modern system of land title registration which is fully supported by law, regulation and practice manuals. The system of land valuation will be overhauled and laws and standards put in place to regulate land valuation practice in Samoa		
Sub-component 2.1 Land Registration Reform		
At the completion of this subcomponent the strategy for transition between the deeds system and a simplified system of land registration in Samoa will be complete. The policy and legislation for adoption of Torrens system for the registration of all land in Samoa will be developed.		
2.1.1	Initial review and needs analysis for land registration reform	1.5 mths Feb- Mar 05
	A review of the present registry and registration system and an understanding of the general performance. Information on record processes, documents, filing retention and disposal regimes. Consultation with community and professional stakeholders will be commenced, and continued throughout, to assess needs and expectations. An analysis of the capability and capacity of the registration office to undertake the title conversion. The activity includes a review of the information to be brought forward in the conversion including especially any non-core registry data held. Options for records conversion and coding will be examined. Outputs <ul style="list-style-type: none"> ◆ A needs analysis report on LR Reform – Report (a). 	

Project Inception Report

Activity No.	Activity Description	Timing
2.1.2	Develop strategy and policy for Land Registration and Titling reform and recommendations for Cabinet	0.5 mth Mar 05
<p>The strategy will outline the data to be collected; the proposed conversion program and the proposed timetable. The conversion work processes will be generally documented. The format and content of system outputs will be detailed and a detailed work plan for system upgrade prepared.</p> <p>Outputs:</p> <ul style="list-style-type: none"> • A report and recommendations for a cabinet briefing paper with strategy for reform - Report (b) <p>(NOTE Report (a) and (b) will be combined. They cover Activities 2.1.1; 2.1.2 and 2.2.1)</p>		
2.1.3	Preparation of a Land Registration User Manual	0.5 mths Jun 05
<p>The User Manual will be prepared in conjunction with LII and will include descriptions of computer user operations arising from new computer software application and the creation and maintenance of a disaster recovery archive. Specialised computer system management tasks will also be described.</p> <p>Outputs</p> <ul style="list-style-type: none"> • User manual for registration officers – Report (d) 		
2.1.4	Registration system upgrade implementation.	2 mths Jun-Aug 05
<p>Based on the strategy (2.1.2) and the software developed the implementation of the upgraded registration system will be undertaken. This will include training personnel in the record conversion processes, the equipment to be used and the coding, if any, of registry data to reduce data entry time and effort. A program for conversion of back files to the upgraded registration system will also be developed</p> <ul style="list-style-type: none"> ▪ A final report on the land registration system upgrade including a program of conversion of historical records to the upgraded system 		
2.1.5	Develop and Implement Training program	Ongoing
<p>Training will include both general and specific training of MNRE staff in the operation of the new Land Registration System. It will also include industry consultation workshops to train all stakeholders.</p> <p>Output</p> <ul style="list-style-type: none"> ▪ Draft report on staff and industry training in the new land registration system – Report (e) and (f) 		
<p>Sub-component 2.2 Land Registration Legislation</p> <p>At the conclusion of this subcomponent the laws underpinning the transition to the Torrens system will be drafted and presented to Cabinet. An analysis of the impact of extension of the land registration reforms to the Land and Titles court will be completed as a framework for consideration of future policy on the inclusion of customary land in the formal registration process.</p>		
2.2.1	Initial review and needs analysis	1 mth Feb 05
<p>A joint review of the present registration system will be undertaken in collaboration with activity 2.1.1. Consultation with community and professional stakeholders will be commenced and continued throughout to assess needs and expectations. Existing legislation will be reviewed and an assessment will be made of benefits of developing and implementing legislation for a Torrens system for registration of title to government/ private land and the appropriateness of such a system for Samoa.</p> <p>Output</p> <ul style="list-style-type: none"> ▪ A clear analysis of advantages and disadvantages of legislating for a Torrens system in 		

Project Inception Report

Activity No.	Activity Description	Timing
Samoa. – Report (a)		
2.2.2	Review of customary land tenure and administration	1mth Mar 05
<p>Customary land occupies some 80% of the land resources of Samoa. While traditional systems ensure the security of tenure over these lands these traditions will undoubtedly be tested by demographic changes and the pressure of future economic development in Samoa. While the TOR do not specifically call for intervention in existing customary land arrangements there are sensible reasons for ensuring that the reforms proposed are capable of accommodating the administration of <u>all</u> land in the country in the future. The review will examine the administration of customary lands and identify issues which require consideration if a holistic approach to land administration is to be the future in Samoa.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ A draft report containing analysis of customary land administration in Samoa – Report (h). 		
2.2.3	Develop strategy and policy for future land registration arrangements in Samoa and recommendations for Cabinet	0.5 mth Mar 05
<p>This activity is in parallel with activity 2.1.2. The land registration strategy will be based on the analysis of the advantages and disadvantages of implementing a Torrens system in Samoa and the appropriateness and sustainability of such a system for Samoa. Policy issues to be addressed include the conclusiveness of the Register, the extent of indefeasibility, the extent of guarantee, the legality of computer records, the method of definition of title boundaries and the mapping to support that definition, the establishment of an assurance fund, the conversion of existing titles to Torrens titles and the flexibility necessary to accommodate customary land registration in the future. The inputs of all stakeholders will be sought in the development of the strategies and policies.</p> <p>Outputs</p> <ul style="list-style-type: none"> ▪ A report and recommendations for a cabinet briefing paper with strategy for reform of LR - Report (b) 		
2.2.4	Review extension to Land & Titles Court	0.5 mth June 05
<p>A study will be undertaken of the advantages, disadvantages and appropriateness of extension of the upgraded land registration system to customary land. The issues involved with registration of <i>pule</i> and other rights over customary land will be considered together with methods of definition of the boundaries of such lands.</p> <p>The current and possible future roles of the Land & Titles Court will be considered, and whether the Court orders it creates should be incorporated into the land registration system and, consequently, into the LII environment. Extensive stakeholder consultation will be undertaken as part of the study.</p> <p>Outputs</p> <ul style="list-style-type: none"> ▪ A draft report on the outcomes of the study including recommendations on the issue of extension of the upgraded land registration system to customary land –Report (h) 		
2.2.5	Draft Land Registration legislation	1.5 mths Jun - July 05
<p>Based on the agreed strategies and policies draft new legislation and amendments to existing legislation to support an upgraded registration system will be prepared and submitted to MNRE. Subject to the approval of MNRE, stakeholder input and feedback on the draft legislation will be obtained prior to final submission.</p> <p>Outputs</p> <ul style="list-style-type: none"> ▪ Draft legislation prepared and submitted to MNRE. – Report (g) 		

Project Inception Report

Activity No.	Activity Description	Timing
<p>Sub-component 2.3 Land Valuation At the conclusion of this sub-component there will be an appropriate valuation system, capable of being implemented nation-wide, for the purposes of public and private sector use and it will be supported by draft legislation</p>		
2.3.1	Initial review and analysis	1 mth Feb 05
<p>Review of the current valuations system in use in MNRE. This will include: information on valuations and the processes utilised; available documentation – including the recording and accuracy of sales and rental data. The purpose of the existing valuation system and its appropriateness for defined uses will be reviewed and there will be consideration of an alternative and appropriate valuation system that effectively links to the land administration processes.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ A report indicating effectiveness of the current valuation system and recommendations for an alternative, if necessary - Report (j) 		
2.3.2	Draft National Valuation Standards	1 mth Mar 05
<p>The consultant will draft national valuation standards that will relate to the quality of assessments and due process which will be available for MNRE and stakeholders. These standards will reflect international valuation practice for both the public and private sectors.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ A draft valuation standards document- Report (k) 		
2.3.3	Industry Training and Workshops	ongoing
<p>Training will include workshops and on the job training in valuation practice and the new valuation standards.</p>		
2.3.4	Draft guidelines for valuation practice and licensing	1 mth Apl 05
<p>The consultant will draft guidelines for valuation practice and licensing that will include: necessary minimum qualifications for valuers; valuers' codes of ethics; a recommendation for an appropriate Board (or other delegated authority) to resolve disputes or appeals relating to valuers' conduct and valuations. The appeals process is important and recognises the right of the public to object to valuation assessments based on certain defined grounds.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ A draft Code of Practice for valuers - report (l) & (m) 		
2.3.5	Draft land valuation legislation prepared for MNRE	1 mth May 05
<p>Draft land valuation legislation will be prepared for MNRE. This will allow for: the licensing of valuers; monitoring of valuers' conduct and valuations; a valuation appeals process via the Land Board or other authority; compulsory registration of all land transactions (linked to 2.2 Land Registration sub-component) and a suitable (alternative?) valuation mechanism for MNRE will be considered.</p> <p>Outputs</p> <ul style="list-style-type: none"> ◆ Draft valuation legislation – Report (n) 		

Attachment 5. Delivery Plan

Delivery Plan

Project Inception Report

Project Inception Report

Project Inception Report

Attachment 6. Risk Matrix

Risk Matrix

Attachment 6 - Risk Management Matrix

#	Risk	Impacts	L	C	R	Response	By Whom	Timing/ Sequencing
1.	Land registration legislation is delayed by Cabinet	A true title registration system with full legal protection of title cannot be introduced without legislative change. Lack of legislative support would reduce the level of tenure security provided by the project. While many of the benefits of the upgraded registration system could still be achieved, titles would lack government guarantee and indefeasibility and a fully computerised register would not be available.	4	3	3	Engage the participation of stakeholders in developing policy and drafting legislation which meets local needs and has the support of Cabinet. In the interim, develop and implement a strategy for upgraded systems and procedures which closely replicate a modern title system and progressively introduce revision on enactment of the new legislation.	LEI, MNRE	On-going throughout the project.
2.	Geodetic network upgrade is unsustainable	Inability to develop a sustainable level of skills and capacity in MNRE counterparts and the survey industry would lead to a poorly maintained geodetic network, inaccurate land records and surveys, and a poor ability to effectively manage land and natural resources.	3	4	3	Build local capacity through on the job training of MNRE staff. Assist with the early procurement of GPS equipment to optimise skills transfer using technology which will be retained by MNRE.	LEI, MNRE,	On-going throughout the project.
3.	Equipment shortages in MNRE and the private sector delay survey reforms	The geodetic network may not be completed or may need to be upgraded using equipment from elsewhere. Local staff are not trained in the use of new equipment and are therefore unable to maintain the upgrade.	3	4	3	The Geodetic adviser will specify GPS equipment to be procured early in the project. MNRE will push for early procurement. If the equipment hasn't been procured at the time of the upgrade then the Geodetic adviser will attempt to ensure that the equipment used is the same, or very similar, to that being procured.	Geodetic Adviser, MNRE	Emphasis on procurement during first 3 months of assignment. Emphasis on training is ongoing.

L=Likelihood	5 = Certain	4 = Likely	3= Possible	2 = Unlikely	1 = Rare
C=Consequence	5 = Severe	4 = Major	3= Moderate	2 = Minor	1 = Negligible
R=Risk Level		4 = Extreme	3 = High	2 = Medium	1 = Low

Attachment 6 - Risk Management Matrix

#	Risk	Impacts	L	C	R	Response	By Whom	Timing/ Sequencing
4	Equipment shortages prevent or delay effective Land Information Integration	The goals of a National Mapping Agency are dependant on MNRE capacity to deliver the key spatial information layers of Topography, Cadastral (DCDB) and Geodetic reference framework.	3	4	3	Appropriate levels of equipment will be identified at the inception stage. Action will be recommended to assist the early establishment of the key data bases in MNRE	LII Adviser MNRE	
5.	Insufficient training allocated to sustain the project	Local staff do not have the skills to sustain project improvements to the land registration system, geodetic and cadastral survey system and the national land information strategies embodied in the National Mapping Agency.	3	4	2	Priority will be given by all advisers to capacity building and training of counterparts in the early months of the project. LEI will recommend the application of SIAM2 training budget for establishment of appropriate formal training courses	TA, MNRE, Min of Finance	
6.	Lack of counterpart availability and interaction with the adviser team	Missed opportunity for transfer of knowledge and capacity building. Inability to develop an acceptable level of skills, education, resources and management capacity will result in the gradual degradation of the land registration system to a level where it will be no longer operational.	4	4	2	Co-location of counterpart's offices with advisers. Assignment of one counterpart to each adviser. MNRE to ensure that counterpart work load is such that it enables time for project activities, training and capacity building.	MNRE	Ongoing throughout the project

L=Likelihood	5 = Certain	4 = Likely	3= Possible	2 = Unlikely	1 = Rare
C=Consequence	5 = Severe	4 = Major	3= Moderate	2 = Minor	1 = Negligible
R=Risk Level		4 = Extreme	3 = High	2 = Medium	1 = Low

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#	Risk	Impacts	L	C	R	Response	By Whom	Timing/ Sequencing
7.	Stakeholders not identified or consulted	The project could miss opportunities to benefit the various stakeholders. The reform process may be slowed because of lack of consultation and disagreement on key reforms. Land owners may not comply with new legislation if informal systems better meet their needs or are better understood.	3	3	2	Use workshops, media and publicity campaigns to involve stakeholders. Engage O Le Siosiomaga Society to assist with identifying stakeholders and ensure their participation in discussions. Engage Soloi Survey Services to ensure the local survey industry is represented in designing reforms and building capacity. Engage the GIS Users Group in national mapping policy development. Emphasize training, informal discussions and meetings with stakeholders to develop consensus on reforms.	TL, APD, Adviser team, Soloi Survey Services, O Le Siosiomaga Society	Ongoing throughout the project
8.	The impacts of the project are felt disproportionately by gender	The project could miss the opportunity to empower female land owners by limiting registration to traditional male land holders. This limits the potential for economic development and entrepreneurship by women.	3	3	2	Develop the registration system to record both the husbands and wives names on a title. Work with traditional councils, Women's Committee's and the MWCSO to ensure changes to land registration incorporate and accommodate women's needs.	Land Legislation Adviser, Land Registration Adviser, TL	Ongoing throughout the project
9.	Project has unexpected impacts which are not identified	Reforms are recommended under the project without the benefit of valuable socio-economic baseline data and qualitative indicators to measure success. Lessons learned are not presently fed back into the development process.	3	3	2	Use monthly progress reports to analyse and report on project inputs, processes, outputs and outcomes. Refine project objectives in light of monthly reports.	TL, all TA, Project Manager	Ongoing throughout the project, at least monthly examination of indicators

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