# Apia
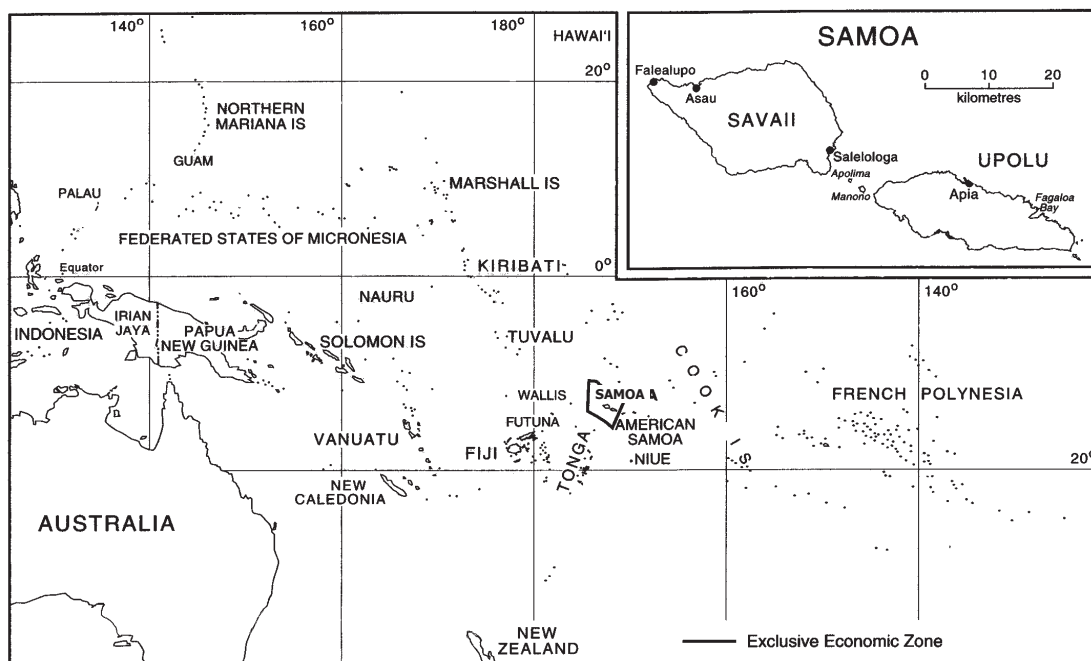
# Apia, Samoa

**Towards sustainable urban services: integrating sewerage and drainage in urban development with urban management – recent developments in Apia.**

Chair: **Dr. Nola Kate Seymoar**, *Director, International Center of Sustainable Cities, Vancouver, Canada*

**Dr. Paul Jones,** *Team Leader, Asian Development Bank Capacity Building for Urban Management Project, Apia, Samoa*
Pacific towns and cities – trends in urbanisation, factors driving urban change and resulting impacts on the urban environment including pressure to provide better urban services. The Samoa case study – a microcosm of Pacific urban trends with emphasis on urban management to provide improved urban services. Establishment in 2002 of the Planning and Urban Management Agency (PUMA) for Samoa.

**Mr. Taulealeausumai Laavasa Malua**, *Assistant Director, PUMA, the Department of Lands, Survey and Environment, Government of Samoa*
Setting the scene in Apia and Samoa - decision making structures, environmental conditions, urban growth rates, service provision, infrastructure coordination and the planning system.

**Dr. Tu'u'u leti Taule'alo**, *Director, the Department of Lands, Survey and Environment, Government of Samoa*
Sewerage and drainage in Apia – existing situation, previous attempts to provide improved services and why they have failed, current plans being put forward and their environmental, social, political, financial implications including user pays.

**Dr. Paul Jones**
The Samoan model for urban management and improved service coordination as agreed by Government in March, 2002, for PUMA – key features.

**Mr. Taulealeausumai Laavasa Malua**
Institutional arrangements as agreed to suit the Samoa model, namely, PUMA. Structure, functions, planning board, current priority projects, namely sewerage & drainage.

**Dr. Tu'u'u leti Taule'alo and Dr Paul Jones**
Sustainable solutions – why the timing was right for new institutional arrangements? Urban management as a tool to improve service coordination – what has worked in the Pacific and why.

Discussion on the Apia case. ■

# Growing Pacific Towns and Cities: Urban Management as a tool to improve Urban Services – the recent experience of Samoa

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## Abstract

Pacific towns and cities are under increasing pressure to provide better quality urban outcomes especially the provision of urban services. A major reason for such pressure is that the population of Pacific towns and cities is on the rise as economic and social opportunities generated by the urban and national economies expand in urban centers. While the population in Pacific towns and cities maybe small by world standards, they are of significance in Pacific island countries where urbanisation is a relatively recent phenomenon. Importantly, in many Pacific towns and cities, urban growth rates outstrip national growth rates, all pointing towards the trend that the future of the Pacific is an urban one. The drive for urban change -by those seeking employment, better education, improved lifestyles and access to services- is placing the urban environment under increasing pressure. This is reflected in declining levels of infrastructure, poor service delivery, inefficient institutions, squatter housing, rising land problems and increasing amounts of domestic and commercial waste. As a result, there is an increasing appreciation in some Pacific countries of the need for better planning and urban management as a means to resolve issues and concerns so as to achieve better urban outcomes especially sustainable urban services.

In the context of the above, Apia the capital and only primate city of Samoa, the largest country in Polynesia, is a microcosm of trends seen in other Pacific towns and cities. Facing similar pressures and challenges in the planning and development of its urban area, rising environmental degradation, land disputes and poor urban infrastructure coordination are major concerns in Apia. In response to the need to provide better urban outcomes especially urban services, the Government took the initiative in 2001 to review arrangements for planning and urban management. Following stakeholder consultation and noting the emphasis in many other Pacific countries has been on sector planning rather than taking an integrated approach to urban management, the Samoan model as agreed sought to create the most effective institutional arrangements to deal with cross sectoral urban issues within an agreed framework. The development of new institutional

arrangements for urban management including resolution of pressing urban service issues were embodied in the form of a new Planning and Urban Management Agency (PUMA) for both urban Apia and Samoa as agreed by Government in March, 2002. As a result, PUMA is now being implemented. The paper concludes by examining why the timing was right in Samoa to adopt an urban management approach to deal with cross sectored issues, and importantly, identifies the factors which have influenced why other attempts at sustainable urban management solutions have worked or failed in the Pacific.

## Growing Pacific Towns and Cities: the Pacific Urban Future

The Pacific region comprises great diversity and complexity in the three geographic divisions, namely, Melanesia, Micronesia and Polynesia. A range of small countries, differing development problems, isolation and remoteness and the varying influences of colonial powers, all contribute to making the countries of the Pacific unique. While the scattered islands in the Pacific region contrast in their socio-economic settings, geography, culture, systems of governance and resource base, high rates of urbanisation and an absence of urban management practices, skills and commitment to comprehensively tackle urban problems are commonplace (Jones 1996). A key reason for such trend is that independence and the decolonisation process for Pacific islands came slow from the western powers, including France, USA, Great Britain, Germany and Spain. Samoa (formerly Western Samoa) gained independence in 1962, then Nauru 1968 followed rapidly by Fiji (1970), Papua New Guinea (1975), Solomon Islands and Tuvalu (1978), Kiribati (1979) and Vanuatu (1980). The development process for most Pacific Islands therefore is at an embryonic stage as they come to grips with the challenges, responsibilities and perception of needs. As a result, the growing need for effective urban management as a result of urbanisation will become one of the most significant development issues for Pacific Island countries as they are increasingly unable to keep pace with the rapidity of urban growth.

While the countries of the region are small in population, approximately 40% of the populations in Pacific Island countries are now living in urban areas, a trend that continues to rise. The population of Pacific countries and size of growing towns and cities are the largest they have ever been. By world standards, urban growth rates are high even despite settlement size being small. There are in excess of thirty-five towns and cities in the Pacific with populations exceeding 5,000 persons (Connell and Lea, 2002). Of the three Pacific regions, only Melanesian towns and cities have the lowest populations living in urban centers. In some countries such as the atoll countries of Kiribati and Marshall Islands, urban centers contain population and housing densities that rival Hong Kong (Jones 1996).

Of increasing concern is the fact that urban growth rates continue to outstrip national growth rates in most Pacific Island countries (see Table 1). The drivers of urban change - education and lifestyle choices, increasing centralisation of Government sector bureaucracy, moderate industrialisation and private sector development, and more recently, increased communications- have all fuelled the movement and mobility of populations to Pacific Island cities and towns. In combination, these factors have enhanced the permanency of the rural urban transformation, a process that begun in the post independence era when urban growth accelerated and is now well entrenched (Connell and Lea 2002: Jones 1996). Significantly, the movement of people to urban centers within countries (for example, from outer islands to urban Tarawa in Kiribati) has been the main pattern of migration for many countries, while recently, migration to urban centers in other countries within the region (for example, from Samoa to Auckland, New Zealand) have been a unique factor in stimulating urban growth.

Table 1: Pacific Island Populations 2000 – Selected Countries1

| Pacific Island Country or territory | Last census | Population at last census | Urban population | Annual intercensal national growth rate % | Annual intercensal national growth rate % |
|---|---|---|---|---|---|
| Fiji Islands | 1996 | 775,077 | 46 | 2.6 | 1.6 |
| New Caledonia | 1996 | 196,836 | 71 | 2.7 | 1.8 |
| Papua New Guinea | 1990 | 3,607,954 | 15 | 4.1 | 2.3 |
| Vanuatu | 1999 | 193,219 | 21 | 4.3 | 3.0 |
| Solomon Islands | 1986 | 447,900 | 13 | 6.2 | 3.4 |
| Guam | 1990 | 133,152 | 38 | 1.9 | 1.0 |
| Kiribati | 1995 | 77,658 | 37 | 2.2 | 2.5 |
| Marshall Islands | 1999 | 50,840 | 65 | 1.8 | 2.0 |
| Palau | 1995 | 17,225 | 71 | 2.9 | 2.2 |
| American Samoa | 1990 | 46,773 | 48 | 4.6 | 2.9 |
| Cook Islands | 1996 | 19,103 | 59 | 0.6 | -0.5 |
| French Polynesia | 1996 | 219,521 | 53 | 1.4 | 1.6 |
| Niue | 1997 | 2,088 | 35 | 1.2 | -3.1 |
| Samoa | 20012 | 176,848 | 35 | 2.0 | 1.0 |
| Tonga | 1996 | 97,784 | 32 | 0.8 | 0.6 |

## The Need for Urban Management

The symptoms of urbanisation and lack of commitment to effective planning and urban management solutions is evident in many ways in all Pacific island towns and cities. With urban population rising, squatter settlements are increasing and housing densities continue to rise, domestic household and industrial waste is increasingly visible as collection systems (if they exist) try to match supply, crime and family breakdowns including youth suicide are now commonplace, urban land cases continue to escalate before the courts, and generally, access to basic water, sanitation and road infrastructure cannot keep up with the demand for services (Connell and Lea 1998: Jones 1995: World Bank 2000). It is increasingly recognised that the emerging urban development problems have social, environmental and economic dimensions, because for many seeking an urban lifestyle in Pacific towns and cities, urban centers are places of perceived gain through social, economic and educational opportunities.

Despite an urban future, urban governance in the Pacific continues to be weak, ineffective and inadequate as Pacific Island Governments continue to keep an arms length from their urban futures. This is often because of the reluctance to interfere with the strong traditional socio-cultural order that exists side by side with the modern decision making structures of Government within the urban areas (Jones 1997). Where local government does exist in major urban centres, central government keeps them in check thus resisting effective decentralisation of power and the creation of potential political opposition. Hence, the trend in the Pacific is for central government to provide the bulk of the infrastructure needs of cities and towns (and rural areas). On one hand, cities are empowered to be the seat of power but on the other hand, they hold low cultural and political significance as they are not the place from which power derives its legitimacy (Belloni, 2002 – see Annex A).

In Polynesia, for example, separate urban governance structures of a formal nature are almost non existent, often because of the smallness of

the countries involved and the socio-cultural sensitivities and political implications of modifying traditional decision making structures which decide where and how lands, primarily customary lands, are used and developed (Connell and Lea 1995: Storey 1999). In Kiribati in Micronesia, for example, local government does exist in both the urban capital South Tarawa as well as outer islands, but poor rates of economic growth, a lack of funding for local councils and a preoccupation for many households of just surviving from day to day, make urban planning and management irrelevant. The reality is that the urban environment -that is, the biophysical and the social, cultural and economic fabric of Pacific towns and cities including land- is increasingly fragile and under enormous pressure for change. The need for Government and communities to work together to find new solutions to improve the urban quality of life is now paramount.

Despite the above trends and indicators of urban change -noting growing disadvantaged groups and poverty, environmental degradation, land disputes and declining urban infrastructure are now common in all Pacific Island towns and cities-there has been an absence of assertive urban management throughout the Pacific. In addition, there has been little consistency in approaches to the planning and management of urban environments at both the national and regional levels (Jones 1996: Storey 1998).

A planning and urban management system is a holistic cross sectoral approach to achieving the planning and management of urban development goals and objectives, integrated at the national, regional and local levels. Urban management is characterised by the involvement of:
• multi sectors,
• multi disciplines,
• multi stakeholders,
• multi solutions to meet differing needs and affordability,
• an approach based on shared responsibility and
• a focus on the total environment (Jones, 1997).
Urban management seeks to create the most

effective institutional arrangements to deal with cross sectoral urban issues within an agreed framework. Unfortunately, aid agencies, development banks and the like generally continue to focus with Pacific Island countries on strengthening and supporting individual development components such as health, water, roads and agriculture and the 'natural' environment. Thus, the emphasis is on individual sector components rather than addressing concurrently urban management per se, including the need for effective institutional arrangements. This contrasts to more integrated approaches to national, urban and rural planning and management that is presented in this case study of Samoa.

## The Samoa Case Study: why the Need to Review Urban Management Arrangements?

In the context of the need to document recent initiatives for improving urban management as a means to tackle rising development problems associated with the process of urbanisation in the Pacific (see, for example, Connell and Lea 2002), the purpose of this paper is to present the Samoa model of urban management as a means to improve urban outcomes. This includes tackling the priority urban service issues in urban Apia of sanitation and drainage. New institutional arrangements for urban management evolved out of an Urban Planning and Management Project3 commenced in June, 2001, and which is currently ongoing. The initial phase of the project focused on developing a new planning and urban management system to address land use, development and infrastructure coordination issues in Apia, the capital of Samoa, but with potential application of the system at the national level. A key outcome of that project, the development of new institutional arrangements for planning embodied in the form of a new Planning and Urban Management Agency (PUMA) was agreed to by Government in March, 2002. PUMA is currently being implemented as phase two of that project.

Samoa and specifically Apia, is a microcosm of other rapidly growing Pacific towns and cities. The problems and issues outlined in the introduction to this paper are also common to Apia as the capital and only primate city of Samoa. Rapid urban population growth -Apia's population in 2001 was 61,401 persons or 35% of the national population- saw a 20% increase in urban population during the decade from 1991 to 2001. Such growth is pushing the urban environment and its socio cultural, economic and biophysical dimensions to its limits, with environmental degradation, land disputes and poor urban infrastructure coordination all on the rise. Importantly, land tenure is the most dominant factor in shaping the form and distribution of settlement and land use in the greater Apia urban area specifically and Samoa generally. Land tenure and ownership systems introduced and legislated from the mid 19th century and onwards rather than an integrated planning system, have been the primary influence in Apia's development (Ward and Ashcroft 1998). As a result of a pattern of settlement where development of freehold land has 'leapped-frogged' customary land, the emerging urban growth trend in Apia is one where:

• the dispersed nature of development means high servicing costs and a major lag in service provision, as is prevalent in the Government's own freehold subdivisions;

• the absence of an effective sewerage system for high populated areas within Apia, especially the flood prone Apia central business area where septic tanks empty into storm water drains or directly into the harbor;

• fragmented distribution of freehold land for 'private' development;

• legislative and institutional arrangements for managing urban change and growth are absent at both the Apia and national levels (that is, prior to PUMA being agreed in 2002);

• an extensive network of water and electricity services in the rural areas which blur a clear division between the Apia urban and rural areas;

• minimum cost recovery and user pay charges for services such as water supply, noting no direct costs are yet charged for domestic rubbish collection. User pays is still a foreign concept for many especially those living on customary lands, noting water rates have only been introduced in 2001.

These trends reflect the growing concern in Samoa of the need for development, including land use, to be properly planned and integrated so as to take into account all aspects of the environment -physical, social and economic. In Samoa over the last decade, there has been an increasing recognition of the need for the environment, in its broadest meaning, to be managed more sustainably. The above trends cut across social structures, community needs and demands, land and land use, services and infrastructure provision, all within an urban area that is the commercial and industrial centre of Samoa. In this context, the importance of urban Apia to the economy and the need to improve infrastructure to support business growth cannot be understated, with the urban area generating 70% of the national income (UMPT 2001). Population growth, economic development, increasing stress on environmental resources, declining infrastructure levels, poor service coordination and concern over community and village well being, are all recurrent and overlapping themes in the development of Apia. It was such issues and concerns that prompted the call by Government in 2001 to review and agree more effective arrangements for planning and urban management in the face of dealing with falling urban quality of life standards in Apia.

## Learning from the Past so as to Move Forward

The issue of planning and urban management and the need to develop appropriate political and administrative structures to deal with urban growth have been on the agenda for some time in Samoa. Much of the recent debate over the last two decades has centred around the issue of

whether urban planning and management for Apia should be undertaken by national Government or a local Council authority, and if the former, which Department or Ministry. There have been earlier attempts to establish formal bureaucratic structures for local Councils -for example, in 1937 the New Zealand Administration alienated land via lease to settlers at Aleisa in North West Upolu with its own district, bylaws, regulations, Council and Mayor- but this subsequently failed.

The review that led to the establishment of PUMA in 2002 was clearly not the first review. There was a cycle of reviews that had been periodically abandoned. Some of the key attempts to develop plans and a planning system include:

- 1954 – Town Planning Committee under the auspices of Public Works concluded that planning legislation would be futile without the establishment of a local authority
- 1956 – Apia Advisory Committee lapsed because of uncertainties about responsibilities
- 1964 – Public Works prepared a draft town plan for Apia
- 1972 – Town plan completed and legislation submitted to Cabinet but not passed
- 1979 – Draft Town and Regional Planning legislation completed
- 1984 – Apia Town Plan prepared but not endorsed
- 1994 – Municipal Authorities legislation drafted but not passed
- 1996 – Urban planning and infrastructure review recommends the establishment of a new Urban Management Commission for Apia
- 2000 – Statement of Economic Strategy, 2000–2001, indicates a number of urban planning and management issues need clarification prior to considering integrated urban development
- 2000 – Government initiates Project to review the need for integrated planning system for Apia including strong local consultation program with urban villages.

One of the consistent themes that has emerged from the analysis of past attempts is that none of these efforts have led to the establishment of an integrated planning and urban management system. History clearly suggests that prior to PUMA

being agreed to in March, 2002, the pressures to maintain the status quo have proven stronger than those attempting to bring about urban change.

## Emerging Findings and Outcomes: the Samoa Model for a new Planning and Urban Management System

In the context of rising issues in Apia being considered against a patchwork of decision making structures with little coordination or overall urban policy direction, the Government undertook an extensive consultation program with stakeholders during the six months from June to December 2001. The aim was to identify clearly the range of urban issues and concerns as they relate to planning and development issues, focusing primarily on Apia but also with some rural consultation given the status of Apia as the only primate city in Samoa. As a result of this consultation, a number of common findings have emerged as they relate to developing the new planning and urban management system. These can be summarised as:

- a change in attitude and understanding is needed to understand Apia's growth. There are villages on customary lands, villages based on a mix of customary and freehold land and new emerging villages on freehold lands, all exhibiting varying characteristics. The changing social systems operating within these villages needed to be understood in the context of the underlying land tenure systems;
- coordination and planning by a professional and resourced body is a priority. Development in many areas including the population movement into the Apia north western fringe and southern catchments is happening in an ad hoc manner without any planning framework at the village or wider level. This includes a lack of coordinated provision of infrastructure and services;
- there is an increasing need for participation in the planning process. Development is happening without any consideration of the impact on adjoining landowners -for example, loss of

existing road access was often raised as an issue. Rather than being raised as a complaint by villagers after development has started, it would be best resolved prior to development if a proper planning process existed;
- there should be equal opportunity in access to services such as education and health. Combined with employment opportunities, access to better education is seen by many as one key driver in prompting population drift to Apia;
- a need for support systems for village and freehold development such as land for plantations, recreational facilities and good transport;
- a need to meet the demands of varying interest groups in the urban area such as business, youth, elderly and the disadvantaged;
- consideration of all the costs of urban growth - financial, social and environmental. This needs to include the cost of not doing anything to manage urban change. Community consultation indicated a clear distinction between 'ability to pay' and 'desire to pay', hence the political sensitivity in introducing user pay charges on individual services too quickly, and

- need for transparency and accountability. The public service has made major gains in this area over the last decade and similar values should be considered for any new urban planning and management system.

Based on these findings and in the context of a desire to improve the quality of urban life, four key outcomes have been identified as the emerging key result areas that stakeholders wish to achieve from a planning and urban management system focused on resolving Apia's urban problems (see Table 2):
- safe, healthy and cohesive communities that meet people's needs and supports and enhance village character;
- sustainable natural resource management in Apia and the catchment;
- a supportive environment within which business can develop and which assist in opportunities for economic growth; and
- appropriate urban structure and form so as to provide equitable access to transport, services, recreational facilities and jobs.

Table 2: Emerging Urban Outcomes: Key Planning and Development Parameters.

| Emerging Outcomes of the Urban System - Apia | Key Planning and Development Element Relevant to Achieving Outcome |
| --- | --- |
| Outcome 1: safe, healthy and cohesive communities that meet peoples needs and supports and enhance village character | * planning guidelines and standards (land use, setbacks, access, layout, open space, noise/air quality)<br>* infrastructure (electricity, water, roads, sanitation, drainage, waste disposal)<br>* services (school, health centres, shops)<br>* building guidelines and standards<br>* village council/community focus/participatory process |
| Outcome 2: sustainable natural resource management in Apia and the catchment | * land use guidelines<br>* watershed protection<br>* river/stream water quality<br>* infrastructure (electricity, water, roads, sanitation, drainage, waste disposal)<br>* village council/community focus/participatory process |
| Outcome 3: supportive environment for business | * planning guidelines and standards (parking, pedestrian access, urban design, open pace, footpaths, setbacks)<br>* infrastructure (electricity, water, roads, sanitation, drainage, waste disposal)<br>* building guidelines and standards<br>* business council/participatory focus |
| Outcome 4: appropriate urban structure and form for Apia | * equitable land use (transport, roads, housing, commercial development, industry, schools, health centres, ports, open space, airports)<br>* infrastructure (electricity, water, roads, sanitation, drainage, waste disposal) |

## The Proposed System Components and Core Functions

An effective planning and urban management system concerns itself with planning for and managing the consequences of development in a way that achieves sustainable development -that is, development that meets the economic, social and environment needs of present and future generations. Urban management has a wider application than urban planning and can include the notion of urban planning. Urban management is characterised by the process of managing development including planning. Policies and plans made via the urban planning process may form tools by which development can be managed. The overall purpose and intended result of planning and urban management system is to improve the quality of life for all Samoans.

The agreed planning and urban management system for Apia has been identified as comprising five identifiable components (UMPT 2001). These are indicated in Figure 1 and are necessary to achieve the outcomes identified above. The five components can be summarised as:
- a set of actions that results in the identification of and agreement to goals for urban development and improvement;
- a set of actions that lead to the formulation of a set of agreed policies and plans;
- actions that establish and implement the set of regulations and other planning tools that have been developed to provide solutions to the urban issues and concerns identified by stakeholders;

- a set of activities that will result in the coordinated provision of urban management services; and
- activities that are needed to finally achieve the agreed urban outcomes.

Figure 1: Proposed System Components.
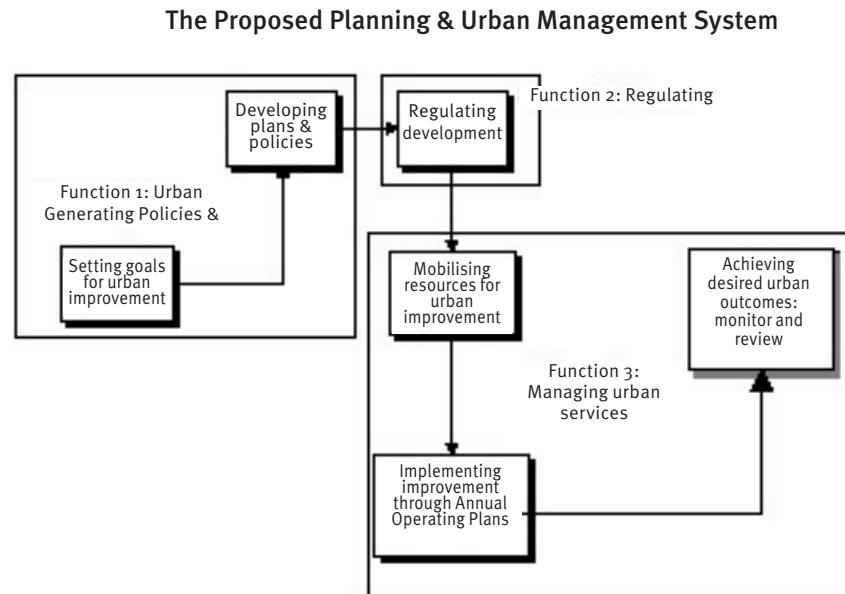
### The Proposed Planning & Urban Management System



If the purpose of the integrated planning and urban management system is to improve the quality of life in the Apia area as the priority area requiring sound and effective planning but with possible application at the national level, then the major functions based on these core components that need to be carried out by the new planning and urban management system for Samoa have been identified as:
- making plans and policies for effective planning and urban management;
- operating a regulatory framework for the control and assessment of development; and.
- undertaking an urban management function if the objective is to strengthen and provide coordinated urban management services between key infrastructure providers.

## Institutional Arrangements to accommodate the Samoa Model

In terms of institutional arrangements, the possible range of models to accommodate an urban planning and management system in Apia is extensive (Jones and Kohlhase 2002). Two possible options for the short to medium term were reviewed, namely:
- a Planning Division within an existing Government institution; and
- an independent Planning Authority or Commission.

After public consultation and debate, Government on the 27th March, 2002 agreed the preferred institutional arrangements for a new planning and urban management system for Apia but with potential application of the system at the national level. It was based on the establishment of a new Division within DLSE and it was agreed that the preferred structure should have responsibility for land use and development policy and planning at all levels -that is, in the priority Apia urban area, and as resources and capacity allow, in the rural areas- given that the skills required for planning and policy work at these levels are similar and are in short supply. Further, in a country the size of Samoa and with limited resources available, it would be costly and inefficient to duplicate the provision of planning and policy inputs at the national, urban and rural levels.

The result of the above is that Government agreed to the establishment of a Planning and Urban Management Agency (PUMA) to deal primarily with urban issues in Apia as well as rural, regional and national planning and policy concerns. It was agreed that PUMA would be an identifiable and accountable body and would have a Planning and Urban Management Board comprising Government and community representatives. Organisationally, PUMA would have a staff of approximately 25 professionals comprising primarily of existing staff from DLSE and possibly other Government Departments such as Public Works, thus making it potentially efficient, effective and low cost.

A new Planning and Urban Management Bill has been prepared to ensure the key system functions and objectives as outlined above are achieved. A draft of this Bill as prepared October, 2002, consisted of three primary components namely the objectives of planning in Samoa, strategic planning, and development assessment. Significantly, the draft Bill places a strong emphasis on the need to reach consensus with stakeholders and the making of agreements with both individuals and villages.

## Why was the Timing right in Samoa to agree on new Urban Management Arrangements?

In the context of lessons to be learnt for managing other Pacific towns and cities as stakeholders seek more sustainable outcomes, why did Government agree to PUMA in 2002 whilst so many earlier attempts were aborted or failed?

A combination of factors have made the timing right. The fundamental driver for change has been a strong feeling in the community that now is the time for planning. The symptoms of poor planning and urban management are increasingly visible in the Apia urban area and people want better outcomes. Stakeholders want Government to make planning a priority (Taule'alo, 2000). Other key factors include:
- the institutional emphasis on an incremental approach which utilises existing human resources more effectively and efficiently in one consolidated body, namely, PUMA;
- the need for Government spending to match community needs and priorities derived through a creditable planning process, thus, a push for more transparency and accountability;
- the likelihood of major road asset maintenance and upgrading programs in the Apia urban area

funded by the World Bank which need coordination and a good strategic planning base;

- the need to strengthen coordination given key urban issues of sanitation, drainage and correctly prioritised road issues are still outstanding and unresolved.

## Urban Management - a Tool to Improve Urban Services and Infrastructure Provision in other Pacific Countries?

There have been a number of attempts over the last decade to strengthen planning and urban management in Pacific Island countries. Countries that have been the focus of sustained planning and urban management activities include Fiji, Kiribati, Vanuatu and Samoa. Some of these projects have been structurally flawed in design as many have attempted to deal with developing tools for planning and urban management -such as the preparation of structure plans for urban corridor growth or land planning guidelines- rather than address the fundamental issues of (i) whether the institutional arrangements in place are the most effective and efficient for cross sector planning and infrastructure coordination, (ii) whether planning and urban management is integrated with national economic planning, and (iii) understanding priority community needs and aspirations including the cost of the system on the community. To answer these questions involves knowing the key urban issues and problems, the outcomes that stakeholders wish to achieve, the economic drivers of the urban economy and the priority areas of need such as improved quality of urban services.

Experience in the Pacific including the recent Samoa initiative suggests that those planning and urban management projects which are likely to be sustainable in improving urban outcomes are those that:

- have political will, commitment and leadership,

- have a Project design which is realistic and achievable in the allocated timeframe,
- are supported by a groundswell of stakeholders including individuals who are willing to 'champion the cause' for better planning and urban outcomes,
- are based on incremental solutions including institutional rather than wholesale changes,
- respond to local needs, including integrated solutions that respond and reflect such needs,
- reflecting the capacity of local human resources and technical knowledge to sustain change,
- provide an urban budget -a plan needs a budget and financing plan for implementation,
- understand the prevailing socio-cultural order including land tenure issues (their constraints and opportunities) and the ability and desire of people to pay,
- raises policy issues in the short term rather than hard and fixed solutions based on planning tools such as Urban Structure Plans and Masterplans,
- have made progress in environmental management as a precursor to the broader holistic urban management approach of considering the environment in its economic, social and biophysical dimensions,
- provide solutions that can complement and support gains being made in sector strengthening projects such as for water, roads, waste management and infrastructure asset maintenance. Too often such projects work in isolation from the broader strategic framework,
- are in Pacific countries which have reasonable levels of economic growth and standards of living, thus allowing their populations to focus not just on day to day planning and survival issues but will sustain the demand better urban outcomes over the short to medium term,
- have specific issues that need to be resolved in the new system as a matter of priority.

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# Planning for Sustainable Drainage and Sewerage Services in Apia

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## Introduction

Samoa is a South Pacific small island developing state located north east of Fiji and west of French Polynesia. It is the larger and western part of the Samoan archipelago, and lies between 130 25' and 140 05' south of the equator and between 1710 23' and 1720 48' west longitudes (see Figure 1). It comprises two relatively large islands, Upolu and Savaii, two smaller inhabited islands, Manono and Apolima, and a number of smaller uninhabited offshore islands, islets and rocks. The islands stretch over a distance of about 200 kilometres covering a total land area of about 2800 square kilometres - 40% in Upolu and 60% in Savaii - and an exclusive marine economic zone of approximately 130,000 square kilometres. Both Upolu and Savaii are about 75 kilometres long and average 26 kilometres 44 kilometres wide respectively. Total land area is just over 2800 square kilometres, about 40% in Upolu and 60% in Savaii.

The capital, Apia, is located about midway on the north coast of Upolu. It is the main centre of government and commercial activities. Of the national population of 176848 in 2001, 22% or 38836 people lived in Apia. While population growth for Apia in the decade 1991-2001 had been low but steady, growth for the surrounding areas had been substantial, up to 30% and 45% at the immediate districts to the east and west respectively. The strong rural-urban movement of population coincided with the release of large areas of government lands for private sale or lease. There is also a growing trend amongst Samoans to live on their own freehold lands.

**The Samoa islands**
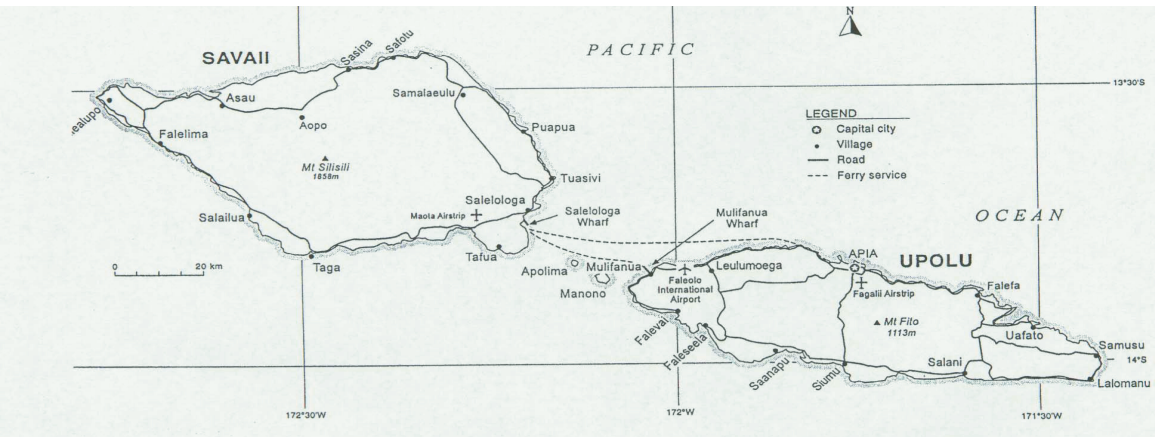
Like any growing town, Apia is under increasing pressure to maintain adequate services to its urban population. In the absence of a town municipal authority the national government provides all the public services except sewage treatment which is the responsibility of the individual households or landowners themselves. But with limited resources, exacerbated by the lack of urban planning, the existing drainage and sewerage systems have become grossly unsatisfactory, posing a major threat to public health and the environment. This paper explores the options for the sustainable provision of drainage and sewerage services in the Apia urban area. It looks at the existing situation and identifies the constraints to effective services. It also develops an incremental approach for service improvement based on stakeholder needs and appropriate solutions that are relevant to the local conditions.

## Existing Situation

Apia lies at the foothills of the Upolu's central range occupying about 60 square kilometres of a narrow coastal plain and gentle mountain slopes. Five rivers flow through the urban area – the Fagalii to the east, Vaisigano, Mulivai, Gasegase and Fuluasou to the west defining four main urban watershed areas – the Vaisigano, Mulivai, Gasegase and Fuluasou catchments. Land tenure is a mixture of government, freehold and customary lands, the latter controlled by families under traditional Samoan customs and usage. While there is no formal land use planning system in place, there is a clear central business area at the middle of town with mixed development on the rest of the main Beach Road along the waterfront and on other major roads.

The urban lowlands are subject to flooding during heavy rains. Increaosed demand for plantation lands has intensified the clearance of forests in the upper catchments aggravating soil erosion and flooding at the lower catchments. Worse affected by flooding is the lower Gasegase catchment which is the lowest part of Apia, used to be covered by an extensive mangrove forest. The area was largely occupied by low-income families on leasehold land but since a government project in the early 1990s which improved drainage a number of smaller businesses have been set up. The agricultural produce market is built here and some bigger commercial operations have also been established. In recent years there has been frequent flooding of the market area every time there was heavy rain at the upper catchment.

There is no local authority responsible for urban management; the government through its various agencies is responsible for urban services - Ministry of Works for construction and maintenance of roads and drains, Samoa Water Authority for water supplies, Health Department for water quality, Ministry of Agriculture for hydrology and watershed management and Department of Lands, Survey and Environment (DLSE) for resources conservation and environmental impact assessment. The fragmentation of responsibilities leads to poor service coordination and the spread of limited resources over a number of agencies managing similar services.

The existing drainage channels have not been properly maintained and the outlet to the sea through the mangroves was never completed. Most of the remaining mangrove swamp, being freehold land, has been subdivided and sold and large parts have been filled or reclaimed. So instead of flood water getting to the sea via the old mangrove flood plain, water is channelled through smaller channels. These are grossly under-sized and would quickly fill up causing back-flooding. Human settlement and continuing development of the mangrove swamp areas is causing a 'dam effect' so that water appears to be permanently trapped in the lower areas. Poor maintenance of the existing drains also means that they are often

overgrown and full of rubbish blocking flows. As the area is very flat there is little fall to the sea so flooding is worse if it occurs during high tide. With increased development of the upper catchment there are greater volumes of surface runoff, far exceeding the capacity of existing drains.

Individual households and businesses are responsible for their own sewage treatment or disposal. The most common sewage treatment systems are the septic tank and pit latrine. There are no standards for septic tank construction and maintenance, often only cleaned out when blocked. Sludge from treatment facilities is disposed of at the landfills. Pit latrines are holes in the ground without lining, commonly used by low-income households.

Both systems are problematic in low-lying areas that are prone to flooding and with high water table, like the lower Gasegase catchment. Here it is not uncommon for raw sewage to discharge directly to groundwater or to surface drains. In recent years a number of businesses and government agencies in the central business area have established packaged treatment plants although there are no approved standards for their operation and maintenance. Local capacity to manage these plants is limited and reported operational costs are high.

The main public concern with the existing situation is the health risk due to sewage pollution of the low lying urban area. Poor drainage and the lack of control over the operation of sewage treatment facilities have resulted in the pollution of open drains and the water table as well as the coastal waters nearby. With frequent flooding, there is also a high health risk when untreated sewage is spread by flood waters to higher ground and through homes and other structures.

## Constraints to Service Provision

In spite of local efforts over many years to promote urban planning in Apia, it was only in

early 2002 that a framework for planning and urban management was approved by Cabinet. With limited local experience in or tradition for formal planning there is little understanding amongst stakeholders of what planning is and a perceived lack of community interest in planning assessment and urban development control (Taule'alo 2001). There is also a strong reluctance by Samoans to compromise their authority, or pule, as land owners to choose what to do with their own lands. Many strongly believed that planning would allow the government to take people's lands by force (Sturms 1984). Entrenched traditional attitudes and cultural values over lands make have also made it extremely difficult to initiate change for sustainable management (Taule'alo et al 2003).

Some of the key planning principles seem to go against accepted traditional values or seen as in conflict with existing social institutions (Taule'alo 1996). In a society where the extended family, or aiga, connections are all too important it is extremely difficult to reconcile family interest against the public interest. As the authority of the village council, or fono, is paramount it is very hard for the government to intervene on matters of national importance. The coexistence of both modern and traditional authorities is not readily conducive to the application of conventional planning concepts and methods (Taule'alo 1993). Other influences on attitudes to urban planning are cultural in nature and reflect the conservatism of living in small and isolated communities. For instance, 'the prevailing socio-political context of insularism reinforced by geographic remoteness gives rise to a slow pace of administration and lack of democratic innovation' (Jones 1996). And personal and partisan politics coupled with limited employment opportunities can generate 'insecurity, policy caution and poor institutional memory' (McEloy et al 1987).

As a result of the absence of urban planning there are no agreed mechanisms to control urban development. Most land use activities have been ad-hoc and unplanned. There are no

planning standards for the construction of drains and sewage treatment facilities and therefore no procedures for monitoring their operation and maintenance. To date there is limited public consultation on the provision of urban services and therefore very little stakeholder involvement in decision making on urban management. Overall public awareness of urban development is low and government agencies have not sufficiently informed the public about urban matters particularly the details and funding of capital and maintenance works.

The fragmented nature of responsibility for urban services can lead to duplication and makes it extremely difficult to hold any one agency responsible for the effective provision of drainage and other services. Available financial and human resources are spread across a number of agencies leading to ineffective utilisation of resources and lack of accountability. There is limited community support for and involvement in the management of drains as shown by the throwing of rubbish into the channels. Residents are unprepared to help clean them unless they are paid by the government. Owners of affected properties have never recognised the fact that existing drains have significantly improved the conditions and values of their lands and are unwilling to contribute to any of the costs involved.

Although the Ministry of Works is responsible for issuing building permits, approval is mainly based on engineering and architectural aspects with only limited assessment of sewage disposal or treatment. This lack of standards has directly resulted in poor construction and maintenance of sewage facilities. While a reticulated sewage system for Apia has been under consideration for some time, lack of funds has prevented its implementation. Many urban residents cannot afford to provide proper sewage facilities and most do not consider them as top priority. There is also limited local capacity in the construction and operation of sewage treatment facilities with most septic tanks and package plants not working as well as they should.

## Options for Service Sustainability

The first step in the provision of an urban planning system in Samoa is in progress with the establishment of the Planning and Urban Management Agency (PUMA) within the DLSE to facilitate and coordinate planning and urban management functions for Apia. PUMA's responsibilities include the development of strategic plans, the assessment and control of development and the management of urban services (Jones and Kohlhase 2002), the latter being a top priority raised in community consultation. Underlying the development of the new planning structure is the need for wide stakeholder consultation and meaningful involvement in decision making to promote ownership of and encourage participation in the planning process (Taule'alo 2000).

In the management of urban services the sustainable provision of drainage and sewage services have been identified as a top and urgent priority. An incremental approach is considered as the most appropriate with step by step improvement of targeted solutions utilising available resources (The Virtual Consulting Group. 2002). For drains the overall strategy is an integrated catchment management approach which takes into account the development impacts at both the upper and lower catchments. Focussing on the Gasegase catchment, the aims are to i) improve existing drains; ii) develop adequate drain outlet to the sea and iii) control land use activities upstream particularly the clearance of hillside forests.

The improvement of existing drains is largely engineering in nature and requires the rehabilitation or reconstruction of channels to maximise capacity and set proper levels. On-going maintenance is also important as vegetation, debris and rubbish block up the channels. A new initiative by the Ministry of Works to engage neighbouring families to clean the drains will need careful supervision to succeed. While the ideal solution for drains outlet to the sea is to re-establish the mangrove swamp as a flood plain, this is now very difficult to achieve with the private sale of most of the land concerned. A long-term-term solution is for the government to acquire lands adjoining the new subdivision drains so that they can be expanded. But any solutions downstream should be matched by efforts upstream. Growing residential and plantation development of lands at Mt Vaea in the upper Gasegase catchment has increased the levels of soil erosion and surface runoff and would undermines solution to deal with the problems at the lowlands downstream.
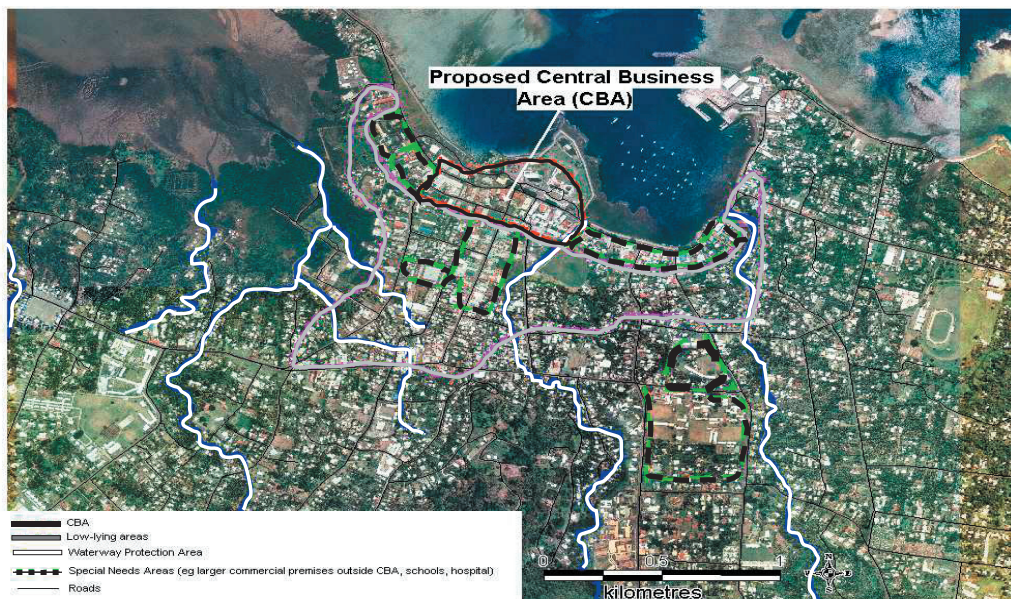


Apia Drainage Concept

It is recognised that to improve overall sanitation in the urban lowlands, the drainage problems should be adequately dealt with first before the sewage issues can be addressed. For urban sewage a step by step approached based on 'needs' is being advocated, developing specific solutions at affordable cost. As in the case of drainage, this is an incremental approach looking at the needs of four management areas, namely[1] low lying areas;[2] waterway protection areas;[3] central business area and iv) special needs areas.

**Sewage Management Strategy for Central Apia**



Proposed Central Business Area (CBA)

CBA
Low-lying areas
Waterway Protection Area
Special Needs Areas (eg larger commercial premises outside CBA, schools, hospital)
Roads

kilometres

The first management areas host residential or small commercial properties, the second are similar to the first but located along waterways, the third has larger commercial and government premises at the town centre while the fourth also has larger commercial properties but outside the central business area and including institutions such as schools and hospitals. Generally the improvement of existing septic tanks and pit latrines is the initial priority for the first two areas, a reticulated system is considered for the central business area while package treatment systems or improved septic tanks could apply in special needs areas.

As well as technical and planning solutions the proposed drainage and sewage strategies will also require institutional support. PUMA will coordinate the provision of services and facilitate public awareness. Local capacity in the construction, operation and maintenance of sewage facilities can be strengthened by the provision of training courses at the Samoa Polytechnic. To promote transparency, an urban budget could be established from existing urban expenditure as provided under the various agencies. So instead of funds being lumped together with other costs, the urban budget will clearly indicate the available funds for urban management and how they can be utilised. In the long-term, however, there is a need to develop use-pay systems to pay for urban services where those who reap the benefits from such must help meet the costs involved.

## Conclusions

The question now is how the proposed strategies for drainage and sewage in Apia could work this time when previous proposals had failed to materialise. There are strong indications that the timing is right for Samoa to develop planning options for sustainable urban outcomes (Jones et al 2002). First there is strong public support for the establishment of PUMA as well as broad inter-agency backing for the development of an urban planning system. Recent community consultation on coastal management had shown a strong public desire for the government to play a stronger role in the management of such matters as sand mining and beach reclamation so individual interests do not undermine the public good. This is the fundamental principle of land use planning – that where the action of an individual puts at stake the interests of other members of the public then the government must intervene in the public interest. In other words the public appears to have finally accepted the need for urban and rural planning as a tool for safeguarding community standards and maintaining national order.

Second there is strong public awareness of urban and environmental issues. In a 1998 survey of households at Sapulu village, Savaii, during preliminary studies for the proposed Salelologa township, there was strong and clear understanding of such issues as sustainable development, waste management and the conservation of marine and terrestrial biodiversity (Taule'alo 2001). This has also been manifested in DLSE public awareness programmes on waste management particularly littering– where behavioural change that would normal take a whole generation to achieve was generally attained in considerably less time.

Third there is widespread community and inter-agency support for the formulation of the drainage and sewage strategies. This is achieved through on-going community consultation where the interested parties are briefed and allowed ample opportunities to discuss and debate the draft proposals. Developed through an Asian Development Bank technical assistance project, a steering committee of the core agencies dealing with urban issues must sign off each stage of the drafts before moving to the next stage. This process has been very effective in securing support and soliciting high-level participation in project decision making.

Fourth the strategies set out solutions that are relevant to the local conditions, reflecting the present and future needs. For this reason they are easily understood by a wide section of the community. The incremental approach provides a step by step order of activities where progress to the next stage will depend on the success of the current one. This is entirely consistent with prevailing local circumstances where limited resources, both financial and manpower, requires the phasing of development (Taule'alo 1996). It would also provide for the double checking of details to ensure that they are workable and to allow time for the transfer of skills and capacity building. Finally planning is an intensely political process that requires the support of the ultimate decision makers or it is ignored (Helleiner 1972). This is the case with PUMA and the development of the drainage and sewage strategies and augers well for their successful implementation.

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# Towards Sustainable Urban Services: Understanding the Contextual Setting for Planning and Urban Management in Samoa

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## Abstract

This paper outlines the contextual setting for urban growth including the provision of urban services in Apia, Samoa. The paper examines the geographical setting of Samoa, population factors, environmental issues and the key role of land management including land tenure in determining the pattern of urban growth in Apia. Institutional arrangements for planning and urban services are analysed at the national, Apia and village level and shortcomings identified. Institutional options for improved urban management arrangements are outlined and the factors that led to the decision by Government to adopt the Planning and Urban Management Agency (PUMA) are discussed in detail. The paper forms one of three papers presented at the PECC on the Samoan model developed in 2001 to improve urban outcomes, especially strengthened coordination for urban service provision.

## Setting the Scene in Apia and Samoa

Apia is the capital city of Samoa, the largest of the Polynesian countries in the Pacific. Samoa comprises two main islands, Upolu and Savaii, where the bulk of the population resides, as well as seven small islands (see Figure 1). The total land area is 2,828 km2 with an exclusive economic zone of 98,500 km2, the smallest in the Pacific. A rapidly growing urban Apia on Upolu Island clearly dominates the settlement pattern in Samoa supported by over 350 smaller rural villages. This includes the small Government designated town growth area focused on Salelologa in southeastern Savaii. The strong development pattern that has emerged is one where both rural and urban villages are generally located close to the coast along the fringing plain. Approximately 98 percent of the population live within this narrow coastal plain and in or around greater Apia with produce gardens and agricultural lands located inland (ADB 2000).

Samoa's population has nearly doubled in the last 40 years, from 97,000 persons in 1956 to 176,848 persons in 2001 (Government of Samoa 2002a). The natural rate of population increase is estimated at approximately 2.3% per annum, a rate that is associated with the relatively moderate population growth. Key features of Samoa's demographics over the last two decades have been sustained out migration primarily to New Zealand, Australia and the United States, a net population growth rate of just under 0.9 % per annum and the dominant influence of Apia and North West Upolu in attracting population from other regions within Savaii and Upolu. On an island share basis, Upolu and Savaii accounted for 76% and 34% of the

population share respectively in 2002, noting the population share for Upolu has continued to rise throughout the 1990s.

## Land Management

Land tenure is the most dominant factor in shaping the form and distribution of settlement and land use in the greater Apia urban area specifically and Samoa generally. Understanding the pattern and history of land tenure in the wider Apia area goes along way to explaining the current fragmented patterns of development and difficulties faced in implementing a more formal planning and urban management system. Land tenure and ownership systems introduced and legislated from the mid 19th century and onwards rather than an integrated planning system, have been the primary influence in Apia's development. There are three primary types of land tenure in Samoa and all are present in Apia especially the large tracts of freehold land:

- Public (16% of all Samoan land). Land vested in Samoa that is free from customary title and from any estate in fee simple (freehold). This land is reserved for public purposes.
- Freehold (4% of all Samoan land). This is land held from Samoa for an estate in fee simple. Freehold land was originally customary land willingly sold by villagers and registered as such under New Zealand and German administrations in the late 1800's and early 1900's.
- Customary (80% of all Samoan land). Land held from Samoa in accordance with Samoan custom and usage and with the law relating to Samoan custom and usage.

In Apia, alienation of customary lands from traditional owners to freehold and Government lands began in the 1850's as European settlers including missionaries and traders sought land for housing, churches and warehouses around Apia harbor as well as for agriculture. The largest areas of alienated lands were on the gentle plains and foot slopes on lands above Apia harbor as well as in North West Upolu, the latter lands suitable for development as coconut plantations. In 1893, Britain, Germany and the United States setup a Land Commission under the Berlin Act of 1889 to assess land claims by non-Samoans (Ward and Ashcroft 1998). As a result, freehold as well as Government lands were registered as being alienated, with further alienation except for Government purposes finally prohibited by law under the Samoa Constitution in 1962. Alienation of new lands to freehold has not occurred since this time, notwithstanding disputes on the status of existing alienated lands continue to be heard by the Lands and Titles Court of Samoa.

There are significant differences between customary and freehold lands that have been the determining factor in where and how development has occurred in Apia and its hinterland. Customary land can be developed by its customary owners in accordance with the authority of the family matai or chief and any conditions set by the village council or fono. Customary land cannot be subdivided or sold for freehold development -its development potential is severely limited. Conversely, freehold land -representing approximately 70% of the land tenure pattern in built up urban Apia and the wider urban fringe- can be sold, subdivided and leased while customary land can only be leased.

Given the above, the urban morphology of Apia constitutes a loose assembly of areas of freehold properties interspersed with villages on customary lands and with no independent local government administration.

## Urban Growth Rates

The rate of urban growth in Apia and the pattern of regional development in Upolu is to a large degree, a reflection of the manner in which the urban boundary of Apia is defined. Like many towns and cities in the Pacific, the issue of defining the urban area of Apia is problematic given:
- the coverage of 'urban' type services -water,

electricity, transport and waste disposal- is widespread in the Census defined Apia urban area, North West Upolu and Upolu generally;

- population is growing both within and outside the narrow Census defined Apia urban area; and

- the coastal road corridor between the small Census defined Apia urban area and Faleolo Airport in North West Upolu contains contiguous village development where one village abuts the other, thus complicating defining a precise urban boundary for Apia.

## Growth of Urban Apia Area
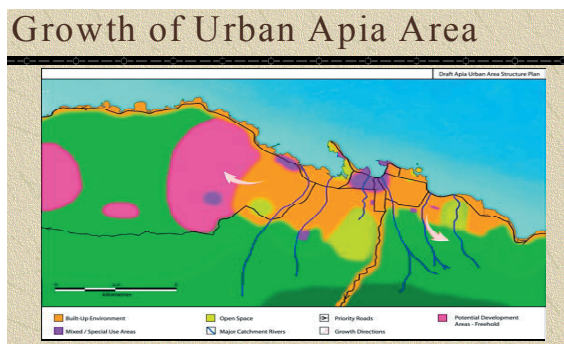


The 2001 Census indicates the population share for Apia and North West Upolu has risen from 46% in 1991 to 52% in 2001. The narrowly defined Apia urban area as defined by the 2001 Census had marginally increased from 35,489 in 1991 to 38,836 persons in 2002. However, if the two census districts to the east and west of the core urban area are added to reflect the contiguous Apia urban area, then the population of the existing built up urban area of Apia is 60, 872 persons or approximately 35% of the 2001 national population.

The implication of the above is that the population of Apia and its adjoining areas are rising and its growth corridor on the undulating coastal plains of North West Upolu will be the area in which this growth is accommodated. Estimates of Apia's urban share of national growth for planning purposes should be seen in the context of to what extent the growing North West Upolu corridor including Apia is effectively defined as urban in 'character'. The clear trend is that population growth will lead to

continued pressure on the resources of Apia as well as continued economic, social and environmental change within the wider regions of Upolu and Savaii. These changes will continue to lead to increasing demands for land, infrastructure and services, housing, changes in village size, home ownership and village and family social organisations and patterns, as is currently being experienced.

The villages are growing rapidly in the urban hinterland, with many having expanded to the extent their village boundaries blur the 'urban rural' divide. As a result, villages now form one linear strip of urban development between Apia and the international airport at Faleolo some 30 kilometres to the northwest of Apia. Traditional housing and plantation lands are being supplemented by modern housing and smaller gardens especially on customary lands, where open walled housing (fale) and large areas for gardening characterise households that support their livelihood based on a contribution from the 'subsistence' sector.

## Environmental Conditions

Environment issues are of increasing concern to Samoans. The effects of population growth on the environmental resources are becoming more evident. It is particularly marked in relation to deforestation and the associated problems of fresh water depletion and pollution, marine environment degradation, loss of biodiversity and soil erosion. The extent and level of environment concern is reflected in the sustained commitment to the inception of a national environment management strategy and government's continued insistence on implementation of these strategic recommendations in its annual Statements of Economic Strategies (SES) since 1997, and now strongly reiterated again in its current three-year Strategy for Development of Samoa (SDS).

The first major government commitment to environmental management was the codification

of the Land and Environment Act of 1989. This provided for the establishment of the Divisions of Environment and Conservation (DEC) within the Department of Lands, Surveys and Environment (DLSE).

Out of the 12 policies recommended for development in the NEMS, six have already been in place. At the national level, policies exist for Waste management, protection of Water resources, Management of population pressures on the environment, Land Use, Heritage and Forestry Resources. A national Coastal Infrastructure Asset Management Strategy (CIMS) has also been established with the blessing of government in early 2000. The development of an urban plan for Apia presented an opportunity to implement these environment policies as well as attracting urgent attention to formulation of policies in the area of air quality protection, atmospheric protection, the protection of marine resources and others.

**Current Planning and Decision Making Structures**

Understanding how decisions on land use and development such as urban services are made is fundamental to the question as to whether the current planning system needs to be 'fine tuned' and if so, to what degree, how and why. There are three levels of planning responsible for the current patterns, issues, and concerns emanating from urban development in Apia, namely national, Apia and village level arrangements. They all involve a range of stakeholders that includes villages, Government agencies and the business community. The outcome of the above processes and institutions is the interplay of modern Government and traditional decision making structures that are determining the social, economic and environmental outcomes including the spatial patterns of development, now emerging in Apia.

National Planning
The Government of Samoa has a clear statement of its economic, social and environmental development aspirations based on macro economic stability and efficiency of the public sector combined with sound investment in social services, good natural resource management, a healthy private sector and support from migration (Government of Samoa 2002b). The performance of the economy -from a recent low of 0.8% GDP in 1997 to 3.1% in 1999 and an estimated 7.3% in 2000- has been the result of an extensive programme of continuing economic, financial and public sector reforms. As a result, Samoa's growing economy is widely recognised one of the success stories of the Pacific.

National level economic planning is the responsibility of the Treasury Department and comprises four major components:
• national strategic planning, embodied in the Strategy for the Development of Samoa (SDS);
• performance budgeting;
• sectoral planning; and
• project planning.

The SDS is the overarching strategy to be followed in achieving outcomes and objectives at the national and sectoral level in Samoa. The SDS is the outcome of a well developed national planning process commenced in the mid 1990's and comprises a concise vision for long term national development, a macro economic framework addressing fiscal, monetary and balance of payment policies, and a summary of priority strategies and policies to guide sectoral development for the ten identified sectors. However, while Samoa does have a comprehensive set of national planning objectives dealing with national development as embodied in the SDS, it does not have any comprehensive system for setting urban planning, policy and management objectives at the Apia level. The emphasis is on policy setting for the national sectors identified in the SDS such as health, education and infrastructure, the result being that policy analysis and goal setting for the rising urban planning and development problems of Apia are conspicuous by their absence.

Apia Level
Legislative and institutional arrangements for managing urban change and growth were absent at both the Apia and national levels until government agreed to establish PUMA in March 2002. There was no lead agency such as a designated Government agency or municipal authority for Apia, with

the responsibility for de facto urban planning and management activities. This was fragmented across many national agencies. There was no bureaucratic structures for wider urban planning and management such as planning for future growth areas on the north western Apia fringe or coordinating the activities of service and regulatory authorities that underpin Apia's existing and future urban growth. With the exception of the village council (fono) and the mayor (pulenu'u) located within Ministry of Internal Affairs (MIA), there are no political structures for ensuring that planning and development activities are responsive to wider community and public values and concerns. Political and social organisation has centred on the urban village with the church, women's committees and other groups playing a key role in village affairs. In a planning context, there is no formal link between the urban villages, national Government agencies and other key groups. The implication of the above is that no one agency has the responsibility of defining and coordinating the urban outcomes that stakeholders are increasingly seeking.

## Village Level

In contrast to the range of Government agencies who operate independently at the Apia level, there is a clear structure of social systems at the village level that are responsible for the control and management of village level activities. To a large degree, the type of land holding defines the organisational structure that dominates the village decision-making structure. As land in the villages of Apia is a mix of tenure types, namely, customary, freehold, and a mixture of freehold and customary lands, then land tenure type determines both the decision-making structure and process.

Villages designed along traditional forms occupy customary lands owned by extended families or the aiga. A matai or chief represents each family and participates in the village council or fono. This is the overall decision-making body responsible for community affairs and development in the traditional or customary village. The fono comprises all of the matai within the village. Freehold communities, however, are comprised of individual land parcels whose owners are generally from other villages that have resettled to a piece of freehold land. Government representatives (sui o le malo) monitor and facilitate programs in these communities. There are also mixed village communities consisting of customary land with pockets of freehold land acquired by households primarily from the sale of Government, church or individual lands.

The traditional Samoan community is based on the aiga or extended family system (O'Meara 1990). There are three major groupings in a traditional or customary village. These include a) the alii ma faipule or village fono which is made up of various strata of matai b) the women's committee or komiti tumama composed of different women's groups called sa'o tamaitai, faletua ma tausi (females married within the village group), and aualuma (females born and raised within the village) and c) the untitled men or aumaga.

The mixed communities -freehold lands within customary villages- are headed by the village fono due to ties to customary land, but in practice this varies within each village. In traditional villages, the village fono primarily carries out the administration of village affairs such as broad land use planning and development -for example, use of plantation lands, land for schools and churches, construction of access roads for villagers to work the plantations- as well as village beautification, waste disposal and peace and order. However, due to the presence of freehold lands in the mixed community villages and lack of household kin ties in the village, the fono can only exert a limited influence regarding village planning and development including social order and control.

There are a number of social groups within the customary village that perform various functions as they relate to village and family activities, the main groups being the matai and village fono. The matai has authority over land use and development of family lands that are under their title. Family members seek the permission of the matai before building a house or developing non-residential activities. The aiga or extended family usually selects a matai to represent the family in the village

fono. An average of 15 families form a village and the matai representative's form the village fono. The fono make rules and regulations on nearly all aspects of village life ranging from development matters on village lands to social behavior such as curfew times, mode of dress for women, length of hair, and times for youth watching television and videos. Each fono chooses a pulenu'u or a mayor to head the village council and they are confirmed for a three year term by the MIA. The pulenu'u represents the village to the Government, bringing the different community concerns to the Government and Government's response back to the village fono for discussion.

While Samoa has legislation (in the Village Fono Act 1990) providing for the village elected local councils which have traditionally played a major role in land use planning and development systems, it differs from planning systems in many other Pacific countries like Fiji as well as Australia and New Zealand, as application and the force of laws and rules it makes (most of which sometimes clash with mainstream statutes) is only recognized second to the laws of parliament. Nevertheless and as noted above, the village fono system builds on to an institution that plays a fundamental role in the Samoan socio cul-

tural order, especially on customary lands, with linkages with the Government well established through the pulenu'u and the sui o le malo. Local villages have a strong system of control, regulation and guidance that impact directly on both village and family activities, but primarily on customary lands. Hence it would be misleading to conclude that Samoa or Apia has no form of local government system.

## Provision of Urban Services

While development controls and a regulatory framework exist in a basic and fragmented form, primarily in the Department of Lands, Surveys and Environment (DLSE) -for example, subdivision controls exist under the Survey Ordinance- and the Department of Public Works (PWD), the fact that there is no legislative or administrative systems for preparing, adopting and administering integrated plans has resulted in there being no recognised plans for the Apia urban area. In the absence of any agreed urban plan and outcomes, the existing planning and development process operates within an urban policy vacuum and on a piecemeal basis. The key agencies and main area of responsibility are summarised in Table 1.

Table 1: Main Institutions Responsible for Key Urban Services – Apia.

| Main Institution | Key Area of Service Responsibility |
|---|---|
| Department of Lands, Surveys and Environment (DLSE) | * management of Government lands<br>* collection and disposal of solid waste<br>* environmental impact assessment<br>* environmental management plans<br>* subdivision approval |
| Department of Public Works (PWD) | * roads and drainage<br>* public buildings<br>* approve building plans and monitor construction |
| Ministry of Agriculture, Forestry, Fisheries, and Meteorology (MAFFM) | * watershed management<br>* meteorology<br>* hydrology |
| Electric Power Corporation (EPC) | * electricity services |
| Samoa Water Authority (SWA) | * water supply<br>* proposed sewerage scheme |
| Samoa Land Corporation (SLC) | * supply and development of Government land |
| Transport Control Board | * transport policy |
| Village fono | *guidance, control and provision of a range of village community and development activities |

The same responsibilities are also present in the rural areas where services that were historically restricted to urban Apia have been recently extended to rural villages and the big island of Savaii, such as municipal rubbish collection and landfill disposal of solid waste.

There is generally a high coverage of service levels in the provision of water supply -94% of households in the Apia urban area had piped reticulated water (2001 Census)- as well as main roads in urban Apia, despite increasing concerns of road maintenance. There is also a solid waste household collection service for not only Apia but for both main islands. Significantly, sanitation in Apia is by septic tank, pit latrine or a handful of package treatment plants for commercial buildings. There is no reticulated sewerage system for the urban area of Apia or elsewhere in Samoa. This is despite the Apia central business area and adjoining customary villages being built on the floodplain, having a high water table and being subject to annual wet season flooding.

## Institutional Arrangements for the Samoan Model - Puma

### General

Given the above contextual setting for growth, the Government decided on the latter half of 2001 to liaise with stakeholders on options for an improved planning and urban management system.

An integrated planning and urban management system is the means by which to manage the environment and the use of resources. The system provides the overarching tool by which to plan sustainable forms of development that will meet the community and Government's desired outcomes and expectations for social and economic development, as well as environmental protection. As noted in the my earlier paper,

the spatial pattern in villages in Apia has not just happened by chance -they result from the interplay of social, cultural, economic and political processes and institutions on the natural and biophysical environment including historical decisions made to alienate land in the 1800's.

### Functions within the Integrated Planning and Urban Management System

If the purpose of the integrated planning and urban management system is to improve the quality of life in the Apia area as the priority area requiring sound and effective planning but with possible application at the national level, then the major functions based on these core components that need to be carried out by the new planning and urban management system have been identified as:
- making plans and policies for effective planning and urban management;
- operating a regulatory framework for the control and assessment of development; and
- undertaking an urban management function if the objective is to strengthen and provide coordinated urban management services between key infrastructure providers.

### Institutional Options

The stakeholder review identified the possible mechanisms and processes needed to shape and achieve the system components and outcomes. These have been identified as:
- institutional options;
- strategic planning framework;
- regulatory framework;
- coordination mechanisms; and
- legislative framework.

In terms of institutional arrangements, the possible range of models to accommodate an urban planning and management system in Apia is extensive. Two possible options for the short to medium term are outlined below, namely:
- a Planning Division within an existing Government institution; and

• an independent Planning Authority or Commission.

## Option One: A Planning Division within an Existing Government Institution

One possible pragmatic approach would be to establish a Planning and Urban Management Division within an existing Government institution. One of the advantages of this initial approach is that it builds on existing resources and capabilities and potentially enables a quicker start to address urban planning and management challenges. It could also provide a learning phase that may prove valuable prior to the creation of a new institution such as a Planning Commission or municipal authority in the medium to longer term. The Division could be responsible for all matters associated with coordination of urban planning and management and would bring together all the key decision makers into one group to achieve a more integrated and coordinated approach. The Division would deal with urban planning, regulation and with the coordination of the provision of urban services, or possible both urban and rural planning functions. However, by the nature of the issues and concerns that the system is dealing with, the Division is a short to medium term option that will evolve over time.

## Option Two: A Planning Authority or Commission

Another institutional model with potential is an independent Planning Authority or Commission responsible for land use and development planning for a region such as the greater Apia urban area or Samoa at the national level. Instead of being accountable to a town council or other form of local council, the Planning Commission may be directly accountable to the state or central Government. In Samoa's more developed neighbours (Australia and New Zealand), examples include the Loddon-Campaspe Regional Planning Authority, the Albury-Wodonga Development Corporation and the former Geelong Regional Commission. These agencies provide integrated development plans for the region through the use of expertise covering social, economic and environmental issues. They are generally not responsible for administration of plans but leave this function to local Government bodies.

## Other Options

In the medium to longer term, say 5 to 10 years, the Planning and Urban Management Division (proposed Option One) might progress to be a separate accountable entity such as that proposed in Option Two. In addition to the two options discussed above, there may be opportunities to combine the institutional arrangements in various ways as the preferred option develops over time. In the longer term, it might be possible to attach a Planning Commission or Authority to a Urban District Council in the form of a Municipal Authority or establish a Council of Fono.

Institutional possibilities such as a formal local Government or Municipal Authority have been canvassed for implementation in the short term. Various models of local government and regulation have been tried in the past in Samoa by the colonial administrations including New Zealand and Germany in the late 1800's and early 1900's. Even as recently as 1994, an Apia Municipalities Bill was drafted to establish local government but was never passed through Parliament. Project consultation suggested that issues of costs, who pays for services and the importantly the political implications of introducing another competing layer of government in a small country are sensitive issues. Councils are generally empowered to raise revenue through the imposition of charges for services, levies on service users or more broadly through rates levied on property owners in the agreed Council area. Cost recovery by such direct means as imposing rates on the community are not considered as being acceptable by stakeholders at this point in time. A move towards a form of Council, however defined, is a medium to longer term option.

## Preferred Institutional Arrangements

The preferred institutional arrangements for a new planning and urban management system for Apia but with potential application at the national level were agreed by Government on the 27th

March, 2002, were based on the establishment of a new Division within DLSE. It was agreed that:

- initially at least, the institutional structure should provide for all three core planning and management functions to deal specifically with the rising planning problems in Apia -that is, plans and policies, regulation and urban management and urban services coordination - to be within one body;
- the body should have the capacity and authority to act as a purchaser of both planning and management services and that it would only provide those services which could not be provided more efficiently by others; and
- initially at least, the structure would be established as a relatively independent and autonomous body which would be part of the DLSE. At a later stage, some or all of the structure might be transferred from DLSE and placed into a new single purpose body such as a Municipal Authority or Planning Commission;
- the preferred structure should have responsibility for land use and development policy and planning at all levels -that is, in the priority Apia urban area and as resources and capacity allow, in the rural areas- given that the skills required for planning and policy work at these levels are similar and are in short supply. Further, in a country the size of Samoa and with limited resources available, it would be costly and inefficient to duplicate the provision of planning and policy inputs at the national, urban and rural levels.

## Core Functions in Planning & Urban Management



| Planning and Urban Management | | |
|---|---|---|
| Planning | Regulating Development | Urban Management |
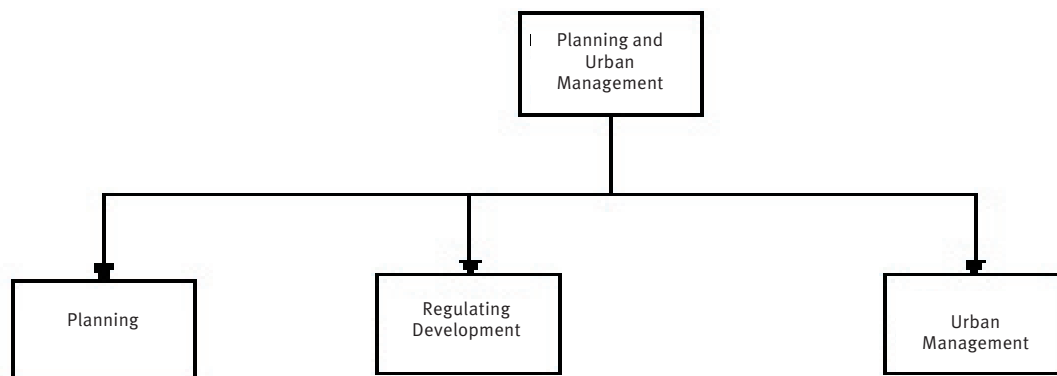
Generating policies and plans

*Policy formulation*

*Setting standards*

*Developing Guidelines*

*Preparing Plans*

*Responding to Appeals*

Operating the regulatory framework

*Conducting development assessments & providing consents*

*Referral of applications to appropriate agencies*

*Issuing licences for events*

Providing coordinated urban management

*Coordinating provision of urban services*

*Developing and implementing urban improvement plans*

*Community education about urban issues*

*Communication with the*

*Provision of administrative functions including*
*Office administration*
*Record keeping*
*Budgeting and Reporting*
*Monitoring and Evaluation*
*Legal (and legislative) arrangements*

The result of the above is that Government agreed to the establishment of a Planning and Urban Management Agency (PUMA) in June 2002 to deal primarily with urban issues in Apia as well as rural, regional and national planning and policy concerns. It was agreed that PUMA would be an identifiable and accountable body and would have a Planning and Urban Management Board comprising six government representatives and six community representatives. Organisationally, PUMA will have staff of approximately 25 professionals comprising primarily of existing staff from DLSE and PWD, thus making it potentially efficient, effective and low cost (See Figure. 2).

A new **Planning and Urban Management Bill** has been prepared to ensure the key system functions and objectives as outlined earlier in the paper are achieved. A draft of this draft Bill as prepared by April 2002 consisted of three primary components namely the objectives of planning in Samoa, strategic planning, and development assessment. Significantly, the draft Bill places a strong emphasis on the need to reach consensus with stakeholders and the making of agreements with individuals as well as villages including the fono.

**Current Priority Projects**

There are a number of immediate priority outcomes -key milestones- that need to be achieved in the first six months or at most 12 months following the establishment of the planning system including PUMA. These will include among others the development of urban structure plan, sewerage and sanitation plan, drainage master plan, urban services coordination and planning such as municipal solid waste management services, new town plan for Salelologa Savaii.

**Sanitation (Sewerage)**
Identifying areas of sanitation needs that arise due to physical constraints and land use, and appropriating suitable solutions to these area needs has become a priority for urban

development in Apia. These physical constraints include low-lying land, high water tables, and slow draining soils in central Apia. Land use ranges from residential to commercial, with the bigger and more concentrated commercial activities being located generally along Beach Road.

Options of solutions for sanitation are being explored under the second phase of the PUMA project (2002). These range from low cost dry vault toilets for residential properties to small sewerage scheme for central business area. Plans for sanitation would need to be integrated with land use planning and include regulations.

**Drainage**
Drainage issues in Apia have in the past been a approached on a site specific or "as needed" basis. It was apparent that a "wholesome" approach to the entire catchment area is required to ensure that future plans and policies for management of land use and development activities are formulated in a coordinated manner. An integrated Catchment Management provided the strategic framework for the development of detailed plans and polices on a catchment basis that are all inter related. Assessment of information pointed out that focus of any drainage remediation activities needed to concentrate on moving drainage through the Apia town area through the reclaimed floodplain of Vaiusu Bay to the ocean. While extensive drainage infrastructure works have been carried out in Apia in the past, little attention had been paid to drainage in the areas west of Fugalei and the north of Vaitele Street. It was established that within Vaiusu Bay a combination of litter choked, narrow and physically constrained drainage channels, and uncontrolled infilling of existing drainage lines are factors significantly exacerbating flood events in Apia. Responding to these issues should shine some light on the direction for options to address them.

The development of options for drainage in the Apia urban area particularly in the Vaiusu Bay

area floodplains is currently being explored under the second phase of the PUMA project (2002).

### Municipal Waste

A National Waste Management Policy in now in operation to guide data collection and updating, the development of strategic plans for better waste collection, transportation and disposal of waste, and promoting awareness through education.

PUMA's section for Urban Management delivers urban services relating to waste collection and disposal as well as planning the design and implementation of them.

### Salelologa Township (Savaii)

A new town has been proposed for the big island of Savaii to relieve the pressures on the main capital of Apia. This also reemphasizes government policy that "what is good for Apia should also be good for Savaii". The essence of this proposal is however to develop a main service center in Savaii and to build an economic base in Savaii to keep Savaiians on their island, relieving the internal rural-urban drift to Apia. Cabinet is currently considering the proposal by PUMA of initial ideas for this new town.

## Conclusion

This paper has looked at the contextual setting of development in Apia including recent initiatives to establish a new planning and urban management system to address growing urban development issues in urban Apia and as resources and expertise allow in the rural areas of Samoa. What has emerged is that there are three levels of planning responsible for the current planning and development outcomes in Apia that lack coordination and integration. Importantly, there is no land use or environmental planning system and as such, there is no single piece of legislation that exists to deal with integrated planning and development processes and resulting environmental outcomes. At the national level in Samoa, there is no comprehensive mechanism for setting urban planning and development objectives at the macro level that can be applied at the Apia urban or wider level.

At the Apia level, there is no lead agency such as a municipal authority or designated Government agency for Apia, with the current responsibility for urban planning and management activities fragmented across many national agencies. At the local village level, what emerges is a strong system of control, regulation and guidance that impacts directly on both village and family activities, primarily on customary lands via the matai and village fono.

Stakeholders have now agreed to key urban outcomes that they wished to be achieved including key system components, core functions and institutional arrangements. The result of the above was the agreement by Government on the 27th March, 2002, to establish PUMA as the key lead planning and urban management body for Apia but with the ability to take a role in the planning of rural areas where development pressures such as coastal infrastructure, coastal resource management, and tourism arise.

Implementation of PUMA is now underway within the DLSE. It's new reallocated staff are now located at separate offices at Vaiala, Apia and tackling priority issues including drainage, sanitation and new township in Savaii.

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# Apia
**Discussion**

**Jérôme Yansaud**

I would like to let you know about an observation we drew from one of our experiences in French Polynesia, specially in such floodable areas or near our lagoon, in our mangrove, areas where the groundwater is just under the surface. I wanted to tell you that any individual sanitation treatment system, sceptic tank or improved latrines is totally useless, not only in terms of hygiene and of public health but also in terms of environment preservation. What I would like is only to suggest to you, in such places, to try to consider other solutions such as public toilets connected to a collective sewerage system with a treatment, even a light one, and an evacuation in the sea, outside this mangrove, because you are apparently going to try to invest funds to improve these latrines, try to put up sceptic tanks... but, sincerely, these solutions are inefficient for this type of dwelling and these types of areas.

**Tu'u'u leti Taule'alo**

I think that this is the sort of thing we need to develop as we go. As I said before, in Apia, there is no public system, reticular system, and here again, if we are looking at the cost involved, we come back to the question: how are we going to pay for this in the short-term. This is what we need to go through, particularly when we develop these strategies. Certainly we will need to build up the septic tanks and we may be looking at just holding tanks within neighbourhoods and then bringing in disposal trucks to empty them from time to time. I do not know, but certainly with the pit latrines, again, we may have to build them up, if need be, and as long as they do not drain into the neighbouring drains then that should work in the short term.

**Chris Kissling**

I was interested that you indicated that you have strong political backing for some of the initiatives that you are undertaking.

In terms of education, awareness raising of the consequences of doing nothing or doing something, to what extend do you involve the village leaders, the Matais, how do you get to them to train them, to raise their awareness so that it flows from them on to the village communities?

**Tu'u'u leti Taule'alo**

This is an on-going process. I think that the feedback that we are getting so far from the village leaders and community leaders is that they are starting to appreciate that it is in their interest that we deal with the urban problems that we have. So, rather than ask the government to provide some sort of solutions to what's happening, it is becoming a community solution. It is in their interests that these strategies for urban sewerage and drainage should be looked at very quickly because of the many problems that we mentioned.

So, yes it's what we have done with the community, we have had consultation meetings with selected target groups. In Samoa, unfortunately, you cannot have everybody meeting at the same time: you have the Matai, the chiefs, and then you have the Women's Committee, and even among the women, they don't mix, there's the wives of the chiefs, and then there are the wives of the ordinary non chiefs... and so you have a large number of target groups that you've got to deal with individually. But it is something that we are doing and that we will continue to do. We did this when we initiated these ideas and we will continue to take them through every step of the way. Once we have developed the technical aspects of these strategies, we go on to the monitoring of these

strategies, to their implementation..., we've got to take them through it. So it is ongoing and so far, as I said, they see the needs and the strategy is based on their needs. They see this as coming from them and it's sort of leading on. But here again, nobody has a lot of experience on these things, it is empirical for us and we are sort of learning as we go through. It is that way.

**Paul Jones**
I would like to add to Chris' point, and this is obviously an outsider's point of view, but I think that there are two points to make.
In terms of the consultation, the actual formal consultation with the customary villages is actually done through the Ministry of Internal Affairs. I just can't walk out to the villages, by myself or with my colleagues. There is a very formal process to go through for this information sharing, everyone wants to know what it's about, they take it back to the village, to the Fono and go through this sort of back-and-forth process until there is some consensus.

The second point which I think is very strong is that you must remember this whole sort of awareness progress, specially through the Matai. The Matais are everywhere, right across the society, not just in customary villages; both my colleagues here are Matais, they are heads of their families, and their families consist of people that mainly live on customary lands and freehold lands and mixed-customary and mixed-freehold. So there is a whole classing but generally there are a lot of linkages. My view is that we talked about this coalition for change and we'll talk about it later and I think that is the reason why, because of this mixing that seems to go on and the fact that the Matai title cuts across all structures.

**Tu'u'u leti Taule'alo**
In Samoa, for public awareness we use all sorts of forum, media, we even used the Church and now we are inviting the Church pastor to come along and speak on certain issues. We use children doing dances and school children singing songs. You know, anything is open. Just before we came,

we had a week we dedicated to the environment -every year we have this environment week- and the goal is to create public awareness for the environment and related issues. We also use all sorts of media, local press, TV, the church, the school children, the dancing, the singing, the pamphlets, you name it, anything as long as it gets the message across, and it seems to be working. Different things work for different people.

**Bernadette Papilio - Halagahu**
I was thinking about awareness raising concerning environment . Apia is the Headquarters of the Regional Environment Program, SPREP, and I was just wondering if you could not associate SPREP to your awareness raising actions, and also politically to sensitise your leaders. I was thinking about that argument that Apia, I mean the political leaders of Samoa, were trying to house SPREP and therefore it should be a model for environment protection. Being housing the headquarters of SPREP could be a good argument for your programs.

**Tu'u'u leti Taule'alo**
Yes, I forgot to mention that we also use SPREP for environmental awareness. Again last week, when we were doing that "Environment week", we had SPREP at the opening day. It was quite successful because a lot of our people have never been to SPREP, it's like a big office up in the National Park and no one gets to it. This time they opened the doors, it was quite successful. We were very much impressed with how much richness SPREP was able to create in the local environment. We also really use them, that's one of the advantage of having a regional organization in your country... you hassle them, you push them, you ring them up... you do whatever you can to get them on your side.

**Nola Kate Seymoar**
For those of us who are from outside the region, what does SPREP mean?

**Taulealeausumai Laavasa Malua**
South Pacific Regional Environment Program.

We don't just work with SPREP. We have also done awareness programs with SOPAC and other regional programs in the Pacific. It was within an area of interest to certain regional organizations, like SOPAC for national disasters, and so forth... We do a lot of work in that area: if it's got to do with fisheries we've got FFA... There are related issues that we've got to incorporate into our awareness programs.

*To our readers:*
*The recording of some part of this discussion failed. In italics you will find the essential idea expressed when the recording failed.*
*R. Guild asked who was at the origin of the creation of the PUMA*
*T. Taule'alo answered that the PUMA was created at the initiative of some Samoans, to answer recriminations, and added that it was created at "the right time". The Government asked the help of the ADB to fully understand the local situation.*
*A. Simpson asked questions on how Apia City merged with the surrounding "rural" populated areas. How does one carryout urban management, deal with environmental impact, manage increased waste water, etc., when the source of the problem might be from outside the urban boundary?*
*T. Taule'alo answered that PUMA takes care of the whole country.* ■