

Planning for Sustainable Community Lifestyles – A Pacific Perspective

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Key words: Human settlements, population, natural disasters, land tenure, PICs, resource management

SUMMARY

“... If, in the future, human requirements are to be met in a sustainable manner, it is now essential to resolve these conflicts and move towards more effective and efficient use of land and its natural resources. Integrated physical and landuse planning and management is an eminently practical way to achieve this.” (Agenda 21, Ch.10)

Pacific Island Countries (PICs) have seen the push for better governance stimulated by economic planning over the last decade. Countries and Territories are now calling for the filling of the void in physical resource use/land use planning (*PIC National Assessment Reports for WSSD*). Many PICs do not have systems or procedures for integrated environmental and resource use planning, development and management. Such systems are necessary to ensure countries are able to cater for sustainable development (physical, ecological, economic, social and cultural considerations). Planning systems can bring certainty and confidence into development and environmental management processes especially when targeted at the local level - through the provision of adequate environmental information, policy integration, safeguards, planning strategies and development guidelines.

Using the Pacific as a case study, this paper investigates the role that surveyors have to play in providing long-term community based capacity-building activities to fully integrate environmental and development needs, using people and customs as the central parameters for decision making, management, fostering social cohesion and the promotion of sustainable livelihoods.

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1. INTRODUCTION: THE CHALLENGE OF READING THE SIGNPOSTS THEN WALKING THE ROAD

In a small village in the Pacific, the preacher would tell the villagers every Sunday about the bad impact of alcohol and kava consumption on their lifestyle and its implications for their society. However, the preacher himself was known to drink a lot and was occasionally seen to be drunk. The adults said nothing about this. One day a little boy found the courage to ask him about this apparent inconsistency in his behaviour. The preacher replied: “My boy, it is very simple, you must realize that I am a signpost and not the road”
adapted from (Judge 1977).

Unfortunately, many of the conventional academic and official approaches to sustainable development result in the production of numerous signposts but very few actually build roads, let alone walk them. As Judge observes, in other terms, there is a collective inability to put legs on the signposts.

This essay starts out by contextualising the Pacific Island Countries and identifying some of the common challenges they face in planning for sustainable community lifestyles amid a plethora of signposts. Then, by adopting the *Seven Triads of Sustainability* as a methodological framework, the role that surveyors and land economists can play in providing long-term community based capacity building activities is analysed in an attempt to look beyond the signposts, to plan and walk the road towards sustainable community lifestyles.

2. THE SOUTH PACIFIC IN CONTEXT

Perhaps we need to step back and contextualise the Pacific Island nations (see Map 1), which range from 12 nations to 22 nations depending on the definition of various regional organisations.¹ The Pacific islands region is unique because of the combination of geographical, biological, sociological and economic characteristics (Miles 1999). The region occupies a vast 30 million km² of the Pacific Ocean. The 22 countries and territories comprise some 550,000 km² of land with 7.5 million inhabitants. Notably, if the largest landmass, Papua New Guinea, is excluded from the summation, the remaining 21 nations comprise 87,587 km², with a total population of 2.7 million. The region comprises three sub regional groupings: Micronesia, Polynesia and Melanesia, with a diversity of people and cultures - over 2,000 different languages are spoken across the region.

¹ The University of the South Pacific (USP) incorporates twelve Pacific Island Nations, the Pacific Island Forum Secretariate (PIFS) incorporate 16 members including Australia and New Zealand, whereas the South Pacific Geoscience Commission (SOPAC) has a membership of 19 Pacific Island Countries/ Territories. The South Pacific Games (SPG 2003) in Fiji included 22, encompassing the full width of the Pacific Ocean, with an administrative responsibility for one-seventh of the earth’s surface (i.e. double that of the USA and almost triple the area of Australia).



Map 1: Pacific Island Countries

The common characteristics of the region include (Boydell 2004):

- *Remoteness and geographic isolation:* whilst historically this has had ecological benefits, with economic advancement travel within countries and within the region remains difficult.
- *Environmental fragility:* many unique species have evolved as a result of geographical and ecological isolation. Pacific island habitats are vulnerable to damage or destruction through changing land use, population and consumption.
- *Rapid population growth:* resulting in increasing commercialisation of subsistence based economies and resultant increased exploitation in natural resources – notably land, forests and fisheries.
- *Limited land resources:* in terms of soil and forests, with terrestrial and nearshore resources vulnerable to overexploitation and pollution.
- *Poorly functioning and immature land markets:* a poorly functioning land market leads to several ills including land speculation, the creation of slums and squatter settlements, environmental deterioration and an inefficient urban development pattern which increases the cost of doing business in the city and adversely affects the urban economy (ESCAP n.d.). Pacific land markets lack the efficiency, equity, environmental soundness and compatibility to be classed as well functioning.
- *Access to land:* the communal and traditional nature of land ownership is very different in the Pacific islands when compared to its larger neighbours of Australian and New Zealand, and other parts of the globe. The majority of land was never alienated under colonialism, with 83-100% remaining vested in the indigenous owners.
- *Housing:* land and housing have particular significance for the urban poor, as a house provides both shelter and a place for income generation. Urban settlements of the poor in the region are often characterised by home-based workshops from which the poor earn their incomes. When the poor are locked out of the formal land and housing markets they revert to the informal land and housing markets to meet their needs with resultant establishment of slums, squatter settlements and illegal subdivisions.
- *Dependency on marine resources:* traditional dependence on marine resources for daily needs, tools, transport and waste disposal was largely sustainable. The oceans marine diversity represents the sole opportunity for economic development in nations such as

Marshall Islands, Kiribati and Tuvalu, but contemporary demands are often associated with donor aid opportunities and in many nations, non national demand is unsustainable.

- *Poverty*: income distribution is often very uneven. Rural communities are generally at or below the poverty line. Urban drift ensures a more apparent level of comparative poverty in urban and peri-urban areas.
- *Limited diversification*: small domestic markets with low production levels and relatively un-diversified distribution.
- *Limited capacity*: small size and large distances result in weak public and private sector capacity.
- *Vulnerability*: critical environmental, ecological, and economic risks (exposure to events in global markets) have to be added into the equation - cyclones, earthquakes, tsunami, volcano, landslides, and the additional challenge of global warming consuming our raised atolls.

The Pacific Islands Environmental Outlook identifies that the region will continue to face a steady and often serious decline in environmental quality, most marked in the rapidly growing urban areas (Miles 1999).

3. FLAG POSTS AND SIGNPOSTS

The Barbados Programme of Action (BPoA) presented “a basis for action in 14 agreed priority areas and defines a number of actions and policies related to environmental and development planning that should be undertaken” (BPoA 1994).

The integration of environmental considerations into national decision making processes was considered to be the single most important step for Small Island Developing States (SIDS) to ensure sustainable development principles guided all future development (Clause 46). An interdisciplinary approach was advocated for planning and decision-making as well as community participation from the outset of the development processes (clauses 47 & 73). Recognition that the human face of the environment–development nexus needed to come to the fore for sustainable development is further recognised elsewhere in the BPoA (clauses 34, 49, 64, 76, 80 & 81).

Clause 19(e) of the Johannesburg Plan of Implementation (JPoI 2002) makes particular reference to the use of improved decision-making, inclusive of Environmental Impact Assessment as a means to deal with unsustainable patterns of consumption and production.

In difference to their SIDS colleagues, most PICs lack resource/land use planning systems, as well as the basic data and information sets upon which to institute sound integrated planning processes.

The scenario therefore reflects the situation typified by Clause 49 of BPoA whereas strategies and many sector plans for sustainable development exist, but the frameworks for implementation into decision-making and policy processes are discordant. The coordination and integration necessary for confidence, certainty, and equity in development processes is therefore missing. Coordination in development planning processes, which mainstream

environment, traditional values, and participation, is essential for improving lifestyles through sustainable development.

In preparations for the 2002 World Summit on Sustainable Development and now the ten year review of Barbados (BPoA+10), Pacific SIDS have contemplated the barriers to sustainable development and have overwhelmingly argued for improvements to their national enabling environments for sustainable development. The National Assessment Reports (NARs) highlight the lack of integrated planning & decision-making systems to provide the platforms to bring disparate sector initiatives together in the development assessment and management process.

At the regional levels, governments and community representatives have also nominated the lack of coordinated and consistent land and resource use policy and practice frameworks as the key barrier to achieving sustainable development (for example, see UNCCD Country Reports, 2002; FEMM 2002; SPREP Ministers Meeting, 2002; Pacific Synthesis on Sustainable Development, 2003).

At the recent Nassau, Bahamas Meeting of SIDS (Jan 2004) in preparation for the International Meeting in Mauritius (BPoA+10) in January 2005, Pacific SIDS were again strong in calling for improved use of integrated planning systems to accommodate the implementation of many sustainable development initiatives. Improved national and sub-national land/environmental planning, providing the bridge between economic and physical resource use planning, is seen as the appropriate foundation to address the void in current systems (McIntyre and Wilson 2004). They are now seen as the means to:

- Coordinate physical development processes;
- Deal with multiple demands on land resources;
- Build up and integrate Environmental Impact Assessment (EIA) capacity;
- Institute incentives for decentralization of settlement;
- Cater for holistic integrated natural resource management;
- Provide the framework for economic valuation of natural assets – and integration into decision making;
- Promote coordinated infrastructure provision in particular energy, communications, water and sanitation
- Enable incorporation of Adaptation measures into development processes.

Integrated planning systems will enable PICs to address Settlement issues, instigate and coordinate wise sanitation and water resource management capacity development, and to balance consumption with environmental thresholds - consistent with advocacies of Agenda 21, BPoA, Millennium Development Goals (MDGs), and the JpOI.

Providing appropriate characterised information and stimulating the wise use of EIA and strategic environmental assessment (SEA) methods, approaches and tools as part of integrated decision making is seen as the first catalytic step toward integrated planning systems.

4. ROLE OF FIG

The International Federation of Surveyors (FIG) have played a leading international NGO role in the Sustainable Development agenda, particularly in conjunction with UN agencies. In 1991, when FIG published ‘Sustainable Development: a challenge and a responsibility for surveyors’ (FIG 1991) its objective then, and now, was “to ensure that the surveyors’ professional skills are used to promote environmentally sound planning and management of natural resources and human settlement”. FIG has further addressed the issue of sustainability in its Agenda 21 document (FIG 2001). The objective is to extend the 1991 activity and to incorporate the work of UN Habitat in 1996 as well as its own Bogor and Bathurst Declarations (Bullard 2002).

To quote from the Bathurst Declaration (FIG 1999):

“Land is an asset that has many actual and potential functions, but in particular it has two key features from a sustainable development perspective:

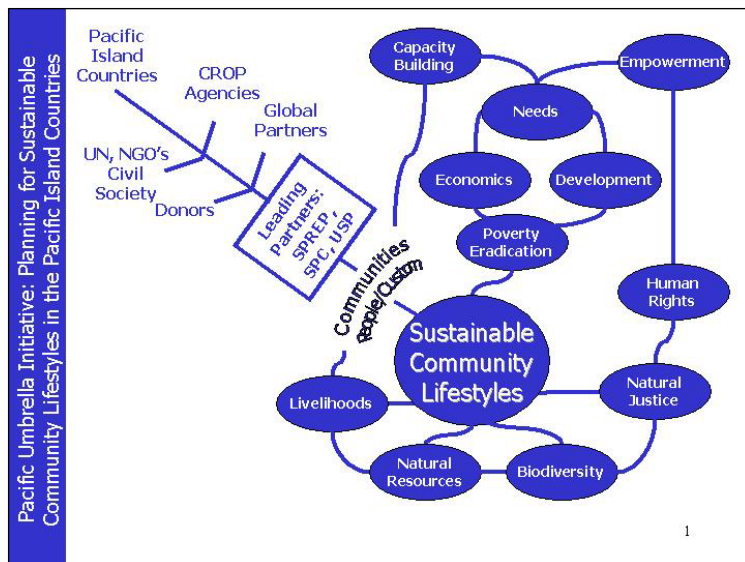
- Land, as a scarce and fragile resource, is an object for environmental protection.

Achieving this protection is a function of the application of appropriate policies principally at a local level. Measures to accomplish this include regulatory or restrictive provisions such as conservation orders and zoning and planning provisions. They may also include the development and creation of new markets in environmental rights that make the provision of environmental goods a paying proposition. This leads to the enrichment of existing conventional land markets with environmental rights.

– Land is equally an asset for economic and social development.

As an object with secure land rights it has the capacity to underwrite and accelerate economic development through the treatment of land rights as marketable commodities. Its capacity for wealth generation, for attracting and locating investment, and for opening up opportunities for the development of the financial sector is critical to sustainable economic and social development. On the other hand, for many communities the “commodification” of the land may not support sustainable development or, alternatively, the concept of treating land rights as a commercial commodity may be unacceptable. Such communities may regard sustainable development as an integral part of the social structure”.

These two key features form the basic elements of land in relation to sustainable development and frequently generate the basic conflicts or tensions that require resolution to achieve sustainable development. Resolving these inherent tensions and conflicts requires appropriate awareness and understanding of land tenure systems through relevant education and information. It also requires appropriate land information systems to enable informed decision-making.



5. PACIFIC UMBRELLA INITIATIVE

The Pacific Umbrella Initiative: *Planning for Sustainable Community Lifestyles in the Pacific Island Countries* (DESA 2004) was a regional collaborative initiative, developed in preparation for the 2002 World Summit on Sustainable Development.

Despite well meaning promises of support at WSSD and subsequently, do initiatives like this remain merely signposts (see Figure 1)? Alternatively, is there scope for us to link these initiatives with the skill set of surveyors and land economist to ensure that the road is clear and there is the will to walk it?

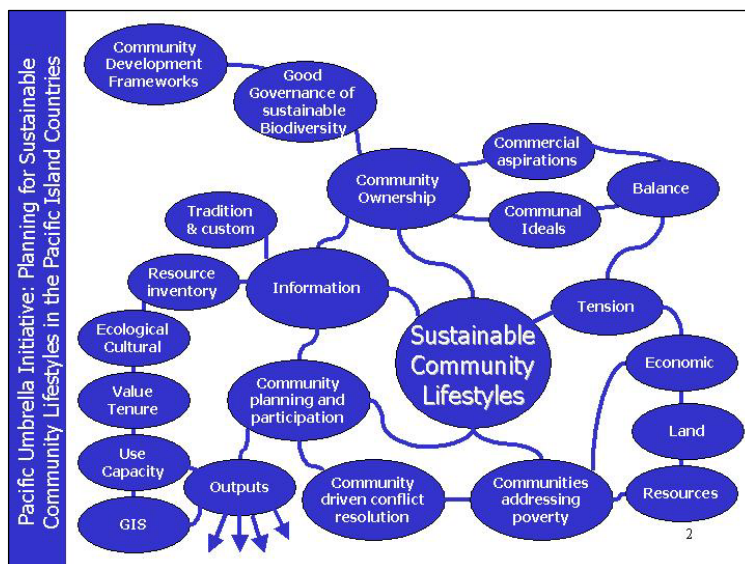


Figure 1: Planning for Sustainable Community Lifestyles (2)

In real terms, the broad scope of the Surveying profession [refer to FIG Definition of the Functions of a Surveyor (FIG 2004)] has the core stewardship skills to assist the communities in developing countries and Pacific SIDS in managing their legal, social, economic, and environmental resources. As Figure 2 shows, the road map for sustainable community lifestyles strives to find balance amidst economic tension that surrounds land and natural resources. Linked in with this are

components of value and tenure that address the commercial aspirations that abound alongside community ownership of resources, often (in the Pacific) within a hierarchy of feudal aristocracy. The inclusion of GIS is important as the visible aspect of spatial data. However, despite the technological advancements in our profession and the presence of some 29 sources of spatial data in Fiji, these spatial data sources are not integrated or accessible to the poorer members of the community targeted by the umbrella initiative.



The ‘usual’ signposts are incorporated into Figure 3. They are an integral component of the initiative, and with positive intent, all point in the direction of the central goal of Sustainable Community Lifestyles. How do we give these signposts ‘legs’, so that they can join us on the road? This actually raises the question of who the signposts are actually designed for? Are they there for the communities, or are they a necessary ‘checklist’ item that the intermediaries within UN, CROP, NGO or Government

Figure 2: Planning for Sustainable Community Lifestyles (3)

agencies need to include so that the donors will be comfortable that they have been considered within their own respective funding ‘checklists’?

As Judge observed, whilst those concerned with recommending social change and especially change in personal lifestyles are able to produce many practical and imaginative proposals, it is very apparent that the individuals making such proposals are unable to make any major change in their own personal lifestyles and frequently do not recognize the need to do so (Judge 1977). The situation is arguable compounded when the signposts are evolved by western (or developed economy) culture with well-meaning intent for those in developing economies who aspire for best of both their traditional customary ways and western materialism / commercialism. To want the best of both worlds is an understandable response of human nature, despite clear messages indicating that choices need to be made (Boydell et al. 2002) with associated costs and benefits to the three pillars of sustainability. It is salutary to note that pre-European contact, community lifestyles in region endured sustainably for hundreds of years.

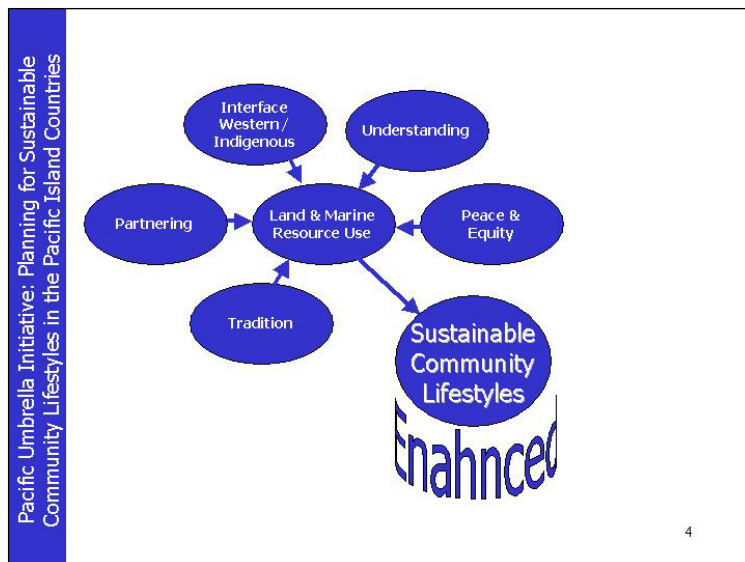


Figure 4: Planning for Sustainable Community Lifestyles (4)

In today's Pacific, *hybridisation* is seen as the middle road, which takes the best from both systems to find a new way... but that road is yet to be trodden and thus far, 'hybrid' is just another signpost. The critical component of Figure 4 is the *enhancement* of sustainable community lifestyles though informed, equitable and conscious utilisation of land and marine resources. Again, the figure is based on signposts grounded in a soft systems ideal, rather than real, world (or in this case Pacific Island) view.

However, in this evolution the peaceful hybrid model is demonstrated.

So how can the expertise of the surveying and land administration profession be integrated into the sustainable development model, to lead by example and walk the road rather than merely providing signposts?

6. THE SEVEN TRIADS OF SUSTAINABILITY

The Seven Triads of Sustainability (GDRC 2004) are key ingredients that define and drive sustainability, particularly at the local level. There is considerable overlap and interlinkages among the seven triads, and they cannot be implemented in isolation. The descriptions of each triad outline its three key components and related issues, but the real challenge within the planning and implementation proves is to convert these components into locale-specific procedures and working methodologies that will achieve the desired result - achieving sustainable community lifestyles (which is the goal of the final triad):

- Participation - *Sustainability is about fostering participation - with dialogue, cooperation and communication*
- Decision Making - *Sustainability is about inclusive decision making - with consensus building, review and hearings, awareness building*
- Partnership - *Sustainability is about strong partnerships - with interdependence, clustering and networking*
- Governance - *Sustainability is about good local governance - with transparency, efficiency and accountability*
- Knowledge and Information - *Sustainability is about managing knowledge and information - with appropriateness, timeliness and accessibility*
- Continual Improvement - *Sustainability is about ensuring continual improvement - with monitoring and evaluation, feedback, and needs assessment*

- Lifestyles - Sustainability is about creating good lifestyles - with behaviour, values and ethics

Can we really read and interpret these signposts without having already walked the road?

How many of us have walked the road and experienced the challenges of those facing the development dilemma of hybridisation in the Pacific? Is it appropriate to promote out of culture solutions? Is hybridisation actually compromise, on the basis that we cannot actually have the ‘best’ of tradition and commercialism within one model?

Planning for sustainable community lifestyles falls into Rittel’s 1970s definition of a ‘Wicked’ problem, which has been further popularised by Buckingham Shum (Buckingham Shum 1997). The concept of wicked problems as unstructured conditions to be alleviated, rather than problems to be solved, is not new to the FIG audience. The transformative approach of applying a ‘soft systems methodology’ (SSM) building on Checkland’s conceptual models (Checkland 1981; Checkland and Scholes 1990) was recommended by Mike Barry and Clarissa Fourie in Nairobi in 2001 (Barry and Fourie 2001). There may be some merit for the facilitators of the Pacific Umbrella Initiative to walk the soft systems thinking road in an intellectual attempt to model the way forward for the initiative, to transform the intent to a reality. The four models in the above figures are drawn from the ‘ideal’ system for a particular view of the situation that is the ‘wicked’ problem, and should not purport to represent the real situation or the only transformative methodology to address the reality.

The four models (Figures 1-4) representing the road map towards sustainable community lifestyles satisfies Checkland’s *Five E’s* (efficacy, efficiency, effectiveness, ethicality and elegance) as well as GDRC’s *Five E’s of Sustainability*(GDRC 2004):

- *Economy* - Compatible with Nature — considering economic development plans that protect and/or enhance natural resources through improvements in management practices, technology, efficiency, and changes in life-style.
- *Ecology* - Natural Ecosystem Capacity — understanding natural system processes of landscapes and watersheds to guide the design of sound economic development strategies.
- *Equity* - Societal Well-Being for All People — guaranteeing equal access to jobs, education, natural resources, and services for all people -- balancing the playing field.
- *Education* - Life-long Learning, Awareness, & Training — citizens and organizations obtaining adequate and comprehensive information in creating authentic choices for action intended to affect sustainability; developing interdisciplinary curriculum to train students for careers in sustainable development.
- *Evaluation* - Measuring the making of a Difference — identifying key sustainability indicators that measure the direction and extent of impact from economic and social activities on natural and human systems; providing feedback to allow for corrections in ongoing work toward sustainability.

Both the Checkland and GDRC combinations of Five E’s are complementary within a soft systems methodology, as applied to planning for sustainable community lifestyles. As Barry

and Fourie concluded, “SSM or at least aspects of it, provide a suitable framework for tackling wicked problems that in themselves are difficult to articulate and define, and for which a clear set of generally agreed objectives cannot be established” (Barry and Fourie 2001).

7. INTEGRATION OF THE SURVEYING AND LAND ADMINISTRATION PROFESSION INTO THE SSM MODEL

Where does the surveyors ‘functionality’ fit into the Bathurst Declaration (FIG 1999)? It is implicit, but within the sustainable development agenda there is a critical need to explain our role and services.

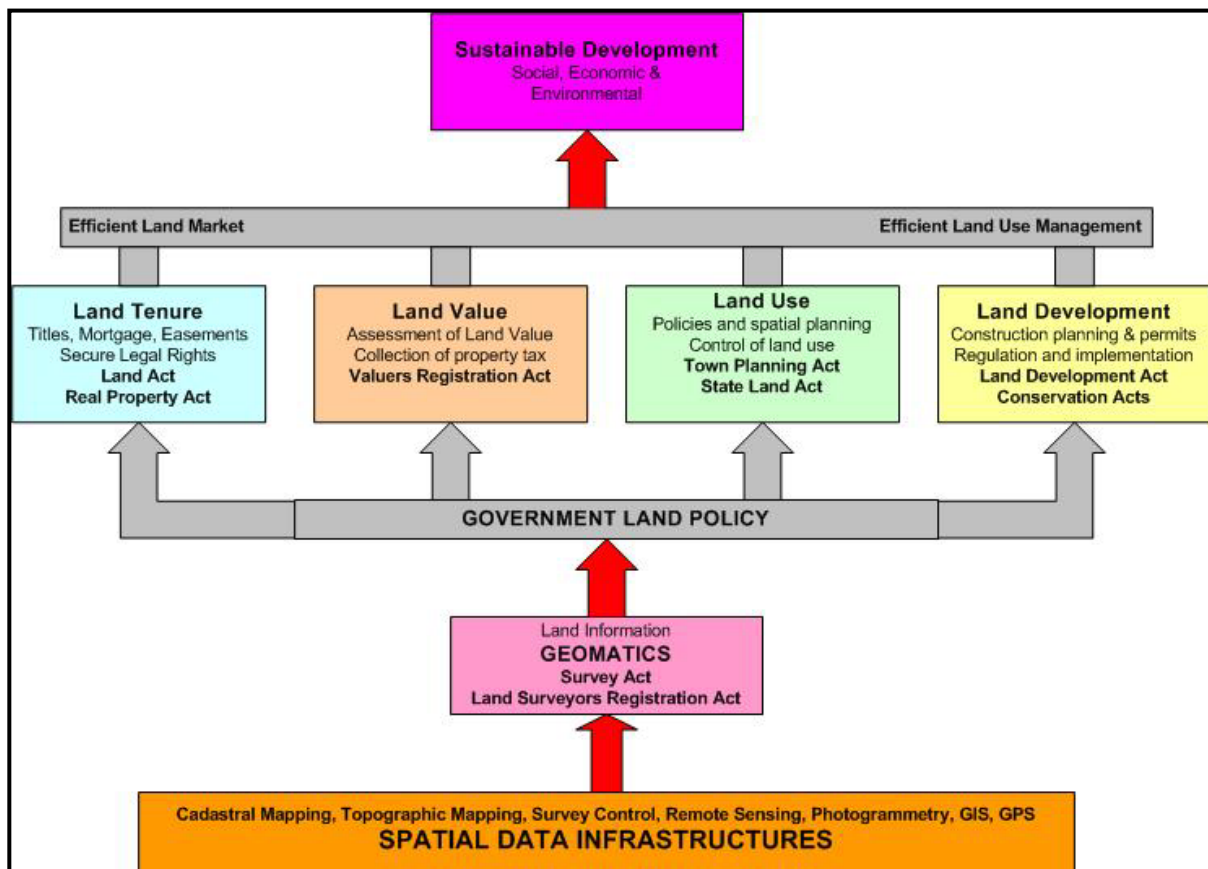
Recommendation 6: *Encourage* all those involved in land administration to recognise the relationships and inter-dependence between different aspects of land and property. In particular, there is need for functional co-operation and coordination between surveying and mapping, the cadastre, valuation, physical planning, land reform, land consolidation and land registration institutions.

Recommendation 15: In view of the crucial importance of human resources in the management of land, *ensure* that there is sustained education and training in land administration. In particular, international agencies should seek to develop a multi-disciplinary, multi-national training courses in land administration and make these available at the local level through the use of modern information technology.

Formal education and training opportunities are already in place in the for the twelve member nations of the University of the South Pacific (USP region), having established a Bachelor of Arts Degree in Land Management & Development in 1981 with the support of the Commonwealth Association of Surveying and Land Economy (CASLE). Today there are Certificate, Diploma, and Degree offerings in both Land Use Planning and Real Estate, as well as Postgraduate Diploma in Real Estate and research Masters and Doctoral offerings in Land Management and Development. In response to regional demand, a Certificate in Geomatics is planned to commence in 2005, with Diploma and Degree offerings to follow. Courses from Certificate to Masters level are delivered using the latest information technology, with multi-party satellite conference facilities supported by Web Course Tools (WebCT) under the auspices of USPNet.

The University of the South Pacific land management and development model has evolved independently to, but conforms with, FIG global exemplars (Enemark 2001, 2004). Spatial Data Infrastructures and Geomatics provides an essential Land Information foundation for Government Land Policy, and to Land Tenure and Land Value (for efficient land markets) alongside Land Use and Land Development (for efficient land use management) (see Figure 5). Collectively, these components play a critical role in understanding (and hopefully striving to balance) the social, economic, and environmental pillars of Sustainable Development.

Figure 3: A Global Land Management Perspective, applied to the USP situation (Curley, 2004 for University of the South Pacific internal policy paper – adapted from Enemark, 2004)



Despite the availability of formal education at the university level, there remains an impediment to the subsequent ‘training’ component. Whilst this issue is addressed in a separate paper (see FIG Jakarta 2004 paper TS3.4 Bob Curley and Spike Boydell (Fiji): The Regulation and Representation for Surveyors in the Pacific Islands Countries), it is appropriate to mention here that with the exception of Fiji (within the USP region) and Papua New Guinea (in the wider Pacific Island remit) none of the other countries have established surveying and land administration professions. The situation is compounded by external pressure (and funding, e.g. World Bank, Asian Development Bank, Commonwealth and AusAID) for surveying and valuation legislation. This results in a situation that there are in some cases no nationals in-country who are legally eligible to undertake surveys or valuations under the new statutory registration requirements (for example in Kiribati, Marshall Islands, Samoa and Vanuatu).

Beyond Recommendations 6 and 15, and possibly 19 (*Undertake* analyses and *develop* performance indicators) of the Bathurst Declaration (FIG 1999), there is little to directly define the role (and the road) of the surveying and land administration professions in taking a leading role as land administrators in the Sustainable Development process. This does not lend particular support to professions direction in planning for sustainable community lifestyles. However, FIG identifies that the surveying profession plays its part in

implementing sustainable development through “inter alia, the planning and management of land, sea and water resources; the surveying and registration of real property; and the handling of geographic information” (FIG 2001).

Given the breadth of the global sustainable development agenda, the members of the profession dealing with sustainable community lifestyles need to rightly tread their own path in conjunction of the local stakeholders that they serve, advise, represent, and support on a case-by-case basis. Perhaps this is as it should be, given FIG President Magel’s comments on the FIG Agenda 21 publication, in that “it wisely refrained from giving criteria or measurable criteria of being measured, even though this is what many desire” (Magel 2001).

There is a sense that whilst surveyors’ can clearly see the contribution that they can make to the sustainable development process and, by implication, planning for sustainable community lifestyles, the development community and developing world beyond the profession may be less aware of their role. As Professor Magel rightly explains (from the perspective of a fellow surveyor), “...Sustainable Land Development and Land Management are not possible without the fundamental contributions of surveyors in the context of Good Governance and the aims Sustainability” (*ibid.*). However, within the context of the same paper he goes on to state, “This is not the place to present in detail the many indispensable contributions of surveyors to the tasks described above concerning Urban and Rural Land Development and Land Management”. We would argue that it is important to be explicit and detail the contributions, frequently and in as many forums as possible, so that the development community, and the grass-roots stakeholders, start to pay attention and realise the need for incorporating the breadth of the surveying and land administration community in planning for sustainable community lifestyles.

There is a need for FIG, as well as the surveyors it represents in the international development arena, to be more explicit in marketing the functions wherever possible. Whilst there is a sense that a paper presented at a FIG meeting is ‘preaching to the converted’, the accessibility of such papers electronically means that they will hopefully be read by those beyond the bounds of the profession. On that basis, there is relevance within the sustainable community lifestyles planning process to explicitly reiterate the surveyors functions here:

“The surveyor’s professional tasks may involve one or more of the following activities which may occur either on, above or below the surface of the land or the sea and may be carried out in association with other professionals.

- The determination of the size and shape of the earth and the measurement of all data needed to define the size, position, shape and contour of any part of the earth and monitoring any change therein.
- The positioning of objects in space and time as well as the positioning and monitoring of physical features, structures and engineering works on, above or below the surface of the earth.
- The development, testing and calibration of sensors, instruments and systems for the above-mentioned purposes and for other surveying purposes.

- The acquisition and use of spatial information from close range, aerial and satellite imagery and the automation of these processes.
- The determination of the position of the boundaries of public or private land, including national and international boundaries, and the registration of those lands with the appropriate authorities.
- The design, establishment and administration of geographic information systems (GIS) and the collection, storage, analysis, management, display and dissemination of data.
- The analysis, interpretation and integration of spatial objects and phenomena in GIS, including the visualisation and communication of such data in maps, models and mobile digital devices.
- The study of the natural and social environment, the measurement of land and marine resources and the use of such data in the planning of development in urban, rural and regional areas.
- The planning, development and redevelopment of property, whether urban or rural and whether land or buildings.
- The assessment of value and the management of property, whether urban or rural and whether land or buildings.
- The planning, measurement and management of construction works, including the estimation of costs.

In the application of the foregoing activities surveyors take into account the relevant legal, economic, environmental and social aspects affecting each project” (FIG 2004).

With this critique in mind, in concluding, the advisory roles that the surveying and land administration profession can play in planning sustainable community lifestyles in the Pacific include, but are not limited to, the Habitat Agenda Key Commitments (which equally address the common ‘limiting’ factors of the South Pacific region):

- *Shelter* – advising on property rights, security of tenure, housing, credit and financial services, utility provision
- *Social Development & Poverty Eradication*- safety issues, gender issues relating to land
- *Environmental Issues*- well planned settlements, riparian rights and water catchment management, waste management and pollution control, disaster prevention, effective and efficient transportation, EIA and SEA
- *Economic Development* – efficient land markets, land value, land development, transfer of property rights, land and property as a factor of economic production, creating subsidiary rights, land productivity, distribution of surplus (rent), public-private partnerships (PPP)
- *Governance* – survey, valuation, planning, tenure, development, land registration, within a legislative framework, dispute transformation, land taxation, transparency of spatial data and land information systems and structures, promoting gender equity, education and training
- *International Cooperation* – adapting (hybridising) international practice to local challenges, i.e. ‘think global, act local’ as the inverse of the 1990s globalisation mantra.

8. IN CONCLUSION, TAKING THE FIRST STEPS

Critical to the whole process is will, commitment, and motion. Motion along the road. Even in the case when individuals (both the surveyors as advisers/facilitators and the grass-roots member of the community whose sustainable 'lifestyle' is being planned as part of this process) recognize the desirability of making such changes in their own lifestyles and are motivated to do so, they still experience an inability to make any basic changes. Even when this inability is recognized consciously, such individuals find themselves incapable of re-educating themselves to facilitate any such change (Judge 1977). They can analyse the matter, formulate the desirable options, but are unable to act upon them for themselves.

Whilst it is normal practice to ignore this basic difficulty and to disassociate it from collective concerns for micro-social change in lifestyles, the lifestyle will only be realised when each member of the community subscribes to the shared vision and makes the commitment to go beyond the signpost and walk the road to sustainability.

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BIOGRAPHICAL NOTES

Spike Boydell PhD FRICS is a Chartered Surveyor with a background in valuation, environmental issues, land tenure, and sustainable development. As Associate Professor and Head of the Department of Land Management and Development at the University of the South Pacific, based in Suva, Fiji, he provides academic teaching, research, consultancy and professional liaison leadership in property valuation, land management and environmental issues. With a strong emphasis on the 'three pillars' of sustainable development, the Department of Land Management and Development is involved in all aspects environmental, economic, geographic, legal and social information for prudent decision-making by regional governments, organizations and individuals in the South Pacific Region. Spike is a UN Visiting Expert in Land Tenure, RICS International Native Title Spokesperson, and RICS International Environment Faculty Board Member for Oceania. He is Chair-elect (2006-10) of FIG Commission 8 (Spatial Planning and Development).

Matt McIntyre is a Planner with experience in the management and coordination of environmental planning and sustainable development programmes and projects. Experience in all levels of government has centred on community development frameworks, community projects, integrating environment and development (decision-making), environmental impact assessments, natural resource investigations, policy documentation and institutional process reviews. Matt currently works at the South Pacific Regional Environment Programme (SPREP), a Pacific region IGO, and coordinates the Sustainable Economic Development Division. He has been heavily involved in the design and implementation of the programmes in this lead area of SPREP, including the regional and national preparations for the WSSD, and now the preparations for the Barbados Programme of Action review to be held in 2005. His current position involves liaison and collaborating with UN organs, regional and international NGOs, IGOs and Civil Society as well as many developed country donor agencies.

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