

The Challenges of Education for Sustainable Development and Planning in Small Island Developing Countries of the South Pacific – A case study of the University of the South Pacific

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Abstract

Education for sustainable development is a life-wide and life long endeavour which challenge individuals, institutions and societies to view tomorrow as a day that belong to all of us, or it will not belong to anyone. While there is no universal model of education for sustainable development the goal emphasis and process must therefore be locally defined its own priorities and action. In the Small Island Developing States (SIDS) of the South Pacific sustainability is a complex goal. It requires multidisciplinary strategies taking into account of social and cultural, as well as ecological and economic factors. The size of these island nations brings particular risks for communities. Educational institutions have important roles in bringing understanding of threats to sustainability and helping devising strategies to address these threats. In this paper I will look at ways in which University of the South Pacific have adopted policies and strategies and in particular how the new major in Land Use Planning curricula have adopted planning and sustainability.

Keywords: sustainable development, Small Island Developing Countries (SIDC), multidisciplinary, strategies, education, institutions, planning, University of the South Pacific (USP), Land Management Department (LMD), Land Use Planning, School of Social and Economic Development (SSED), Education for Sustainable Development (ESD).

Introduction

“Education for sustainable development is a life-wide and lifelong endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone.”¹ Graduates of universities, technical and vocational institutions have a crucial role in making policies, inventing and implementing practical solutions to current problems such as environmental degradation and Graduates should therefore be aware of the concept and challenge of sustainable development. They represent the interface between nature, technology, economy and society, with a key role to play in helping society resolve environmental and development issues. The main concern is improvement of the quality of life through efficient production and rational use of natural resources.

¹ http://portal.unesco.org/education/en/ev.php-URL_ID

Two of the major issues in international dialogue on sustainability are population growth and resource consumption. Increases in population and resource use are thought to jeopardise a sustainable future, and education is linked both to fertility rate and resource consumption. Educating females reduces pregnancy and therefore by implication limits population growth. By reducing pregnancy rates and the threat of overpopulation, a country also facilitates progress toward sustainability. The opposite is true for the relationship between education and resource use. Generally, more highly educated people, who have higher incomes, consume more resources than poorly educated people, who have lower income. In this case, increase wealth increases the threat to sustainability.

Justification

The concept of education for sustainability in planning has a lot of benefits. All of these benefits are crucial for the sustainable developments of Small Island Developing States (SIDS). These include the quality of life, decision making, implementation and planning.

Quality of Life

Education and planning are central to improving the quality of life. Education has the potential to raise economic status of families, it improves life conditions, lowers infant mortality and improves the education attainment of the next generation, thereby raising the next generation chance of economic, environmental and social well being. Improved education holds both individuals and national implications. Basic education can improve the quality of life, technical and tertiary education can contribute to this improvement because economic improvement is greatly enhanced. Quality of life is achieved through efficient production and rational use of natural resources. In SIDS efficient production is hard to achieve for a number of reasons:

In many cases, failures in the private, social and even spiritual sectors have not occurred through lack of human capacity, or knowledge, nor of objectives and missions, but rather low productivity, inefficiency and corruption.²

Ultimately, the success of a local environmental management plan or programme will depend on the lifestyles choices adopted by the community and the value they place on the environmental resources they consume³.

² USP, (2000) Draft Consultative Reports; Background Papers;p20

³ GDRC, (2005) The Seven Triads of Sustainability-Lifestyles

Decision-Making

Good community based decisions, which will affect social, economic and environmental well being also depended on educated citizens. Development options, especially greener development options, expand as education increases. For example, an educated community may either support or oppose an office development nearby. They would assess it on the basis of its impact on the environment. Citizens can also act to protect their communities by analysing reports and data that address community issues and help shape the community response. Based on the quality of their data and information answered, community would support or oppose a proposed hotel development.

Implementation

An educated citizen is vital to implementing informed and sustainable developments. In fact, a national sustainability plan can be enhanced or limited by the level of education obtained by the population. Nations with high illiteracy rates and unskilled workforce have fewer development options. For the most part, these nations are forced to buy energy and import manufactured goods from the international market using hard currency. To acquire hard currency, these countries need international trade, usually this leads to exploitation of their natural resources like forests or fish, or conversion of land from self sufficient family based farming to cash-crop agriculture. An educated workforce is the key to moving beyond an extractive agriculture economy.

Planning

Planning seeks to achieve a quality of life and environment, which we all aspire to but which cannot be attained through the fragmented decisions of individuals. In other words, to achieve the desired quality of life the planning agencies and all stakeholders would have to implement macro plans, while at the same time they should collectively possess the qualities of a good decision maker. Planning and the concept of sustainability are both important topics in university education. They complement one another. In fact both aim to achieve a better social, economic and environmental well being for communities.

Planning education issues include the content of planning courses, the delivery of planning education, planning as a profession and intellectual discipline, knowledge and skills, practice, contemporary challenges and policy changes.

There are many and varied key issues related to the sustainable development of SIDS. Some of these are dealt with in courses offered by various Departments at the Universities. However for the purposes of planning education the key issues of sustainable development that affect Small Islands Developing States (SIDC) include, poor performance of the economy, high population growth rates, poverty, remoteness and isolation, openness, susceptibility to natural disasters and environmental change, limited diversification, limited capacity, income volatility, access to external capital and environmental degradation. Nearly all of these issues are dealt with in programmes that deal with sustainability.

Literature Review

The intellectual basis for planning was grounded on social reform:

This disposition of the town and exploitation of the industrial labour force did not go entirely unheeded. The century was distinguished by a number of 'utopian socialists', a term coined by Karl Marx to describe a group of social thinkers whose attitude was unscientific and idealistic and who hoped to improve working-class conditions by individual benevolence, philanthropy and enterprise. These reformers concentrated on the development of separate new communities outside urban areas, there emerged a succession of plans based on a variety of political, social and philosophical ideas⁴

There is little doubt that systems of spatial planning in some form or the other will continue to be needed by society. There are two main reasons for this. First, the continued urbanisation of the world's population, and second, the challenge of sustainability and environmental change.

In addition there are three fundamental reasons why students choose to pursue planning course at university:

- they have an interest in understanding and shaping environments in many forms;
- employability and future job prospects; and

⁴ John Ratcliffe, 1981 p 36

- the diversity of topics covered in planning education.

*‘That what is attracting students to planning is the possibility to develop skills and the knowledge base necessary to become pro-active in the planning and creative management of urban and rural resources. The career orientated nature of the subject and the acquisition of broad range of transferable skills which are fundamental elements of this multi-disciplinary subject also seem to be important attractions’.*⁵

Two issues that are particularly relevant to the profession are changes in government (in the context of its relation with the market and the fragmentation of the public interest) and the growing emphasis on individual rights.⁶ This development was reiterated in the literature, ‘Readings in Planning Theory’, (1996). “A planner no longer owes loyalty to the public at large”.⁷

Moreover, the content of planning education is an area that has been widely discussed and debated by professional institutes, professionals and academics. Part of the debate is about whether they need to broaden the courses and also includes the issue of core or specialised courses. In the UK, most planning schools in their submission to the Royal Town Planning Institute Education Commission stated that they embrace and support the broadening out of courses in planning education. There is also some desire to increase flexibility in the content of courses. New areas that have been recommended include urban design and sustainability. This also raises the question on core and specialised studies. Some schools advocate a more flexible approach with a severely reduced emphasis on core subjects.

Most important of all, the intellectual basis for planning is not well defined and is subject to some continued disagreement. The main contenders are policy co-ordination/urban management and environment management. Critics have suggested that planning expertise centred simply on knowledge and skills in managing statutory planning system. In many Western European countries where there are no strong separate planning professions, there is more distinction of the different types of planner, especially in the separation of policy experts with their base in urban and regional geography and the urbanists with their base in architecture and urban design.

⁵ Brown, C; Claydon, J; Nadin, V; p2 (2002), Background Paper 3- Educational Process p2

⁶ ibid Background Paper 2 Planning, Planners and Professionalism, p7

⁷ Campbell, S; & Fainstein S; (1996) Readings Planning Theory p 45

Moreover, an important part of higher education is the contribution to society that comes through the production and dissemination of knowledge. Understanding the “how” and “what” the planning system contributes to sustainable development is not only important to practitioners but for wider society too.⁸

Methodology

A qualitative approach was used in trying to answer the research question posed in this essay. In doing this investigation also encompasses on the role of the USP as a major provider of higher education, and in particular in meeting the needs of the member countries through its policies particularly on sustainable development. The author is of the opinion that the wider role of the University should also be investigated because it sets the framework of high priority areas through its Vision, Mission and Strategies. Academic Departments on the other hand are responsible for the implementation of these strategies. For the purpose of this paper, in addition to the role of the USP, the role and functions of the Department of LMD was also fully investigated.

Data Analysis

The University of the South Pacific.

Established in 1968, the USP is a unique regional university serving the needs of 12 Pacific Island Countries (PICs)⁹. Under its Charter, the University’s mission is:

...the maintenance, advancement and dissemination of knowledge by teaching, consultancy and research and otherwise for the provision of appropriate levels of education and training responsive to the well being and needs of the communities in the South Pacific...(USP Charter, 1968).

With its member countries, many of them SIDS, spread over one third of the Pacific Ocean. USP has served its region for over 35 years and established a sound reputation. USP has produced many of the graduates who are now leaders in many fields in their own home countries.

The key aim of the University is to provide both teaching and research that is of high quality and is internationally recognised. One of the key areas of challenge is in the

⁸ Brown,C; Clayton , J; Nadin, V; (2002), Background Paper 2 p8

⁹ Cook Islands,Fiji, Kiribati,Marshall Islands,Nauru, Niue,Samoa, Solmon Islands, Tokelau,Tonga,Tuvalu & Vanuatu

Environment. SIDS experience levels of environmental risk that are rare in large countries e.g. cyclone, tsunami, geothermal activity, earthquakes etc. In part this is a simple consequence of small size whereby a single natural event can bring damage across virtually a whole country and risk pooling at national level is often not feasible. There are now serious concern that global climate change is leading to rising sea level and greater frequency of tropical cyclones in parts of the region. Atoll states are particularly at risk but so are important coastal areas of larger island countries. Damaging human impacts on marine and terrestrial environments have been increasing and the need to foster more sustainable forms of development is recognised by governments. In its objective, the University will “ *regularly review of academic programmes and research, taking into account quality, relevance, need and feasibility*” ¹⁰

In addition, in developing action plans the USP recognises the constraints of finance and other resources at its disposal. It fosters academic work within its area of current and developing competence to meet the broad policy priorities of member countries, which at present are:

- Economic development
- Socio-cultural developments
- Governance and law and order
- Science
- Environment
- Information and communication technology

Close attention is being given to allocating priority to other specific areas, including studies of environment and sustainable development, building on existing strengths in several schools and the establishment of the Pacific Centre of Environment and Sustainable Development (PACE_SD) in 2001. Endorsing the view that good education is the foundation for enlightened planning, decision making, action and codes of behaviour required for the conservation and sustainable use of natural resources, USP has been actively pursuing a policy to promote both formal and non-

¹⁰ USP, (2000) Draft Consultative Report p27

formal environmental education. The degree, diploma and certificate programmes in this area include:

- BSc degrees in Environmental Science with Geography, Biology, Chemistry, Physics and Earth Science as core disciplines and BSc in Marine Science
- BA degrees in Environmental Studies, Geography, Population Studies and Marine Studies and Land Use Planning
- Diploma and Certificate Programmes in Tropical Fisheries.
- Diploma Programmes in Environmental Education, Fisheries Management and Population Studies
- Postgraduate courses and programmes with special emphasis on environment and development offered by the centre for Development Studies and recently, The Postgraduate Certificate in Climate Change and Vulnerability and Adaptation Assessment

Quality Management

This includes the commissioning of external advisors, whose role is to review and evaluate the courses and programmes at USP and make recommendation for improvement where required. All Departments are reviewed regularly by External Advisors and their recommendation followed up by the USP.

Quality performance of staff is currently assessed annually through a formal staff review process. New academic initiatives are scrutinised in various committees of the University. An enhancement led approach to Quality Management is now being introduced. An important aim of the University is to determine priorities and set objectives for quality enhancement as part of the strategic planning process. Critical aspects of this include the effective use of resources, particularly in the improvement of the quality.

Distance and Flexible Learning.

Distance and Flexible learning, with multi-modal teaching allowing students to learn supported by a range of print based, video broadcast and electronic (e.g. WebCT) resources, in addition to face-to-face on campus classes and flexi schools around the region. The USP has a dedicated satellite, which facilitates audio, video and teleconference communication with students at other centres.

USPNet now delivers the University's programmes via a dedicated satellite to its 12 member Countries through 14 USP centres. The University has been using video broadcasting as an integral part of flexible multi modal teaching and learning. Technologies such as Web Course Tools (WebCT) have been adopted over the past few years.

Participation at International Level.

Pacific Island Countries (PIC's) had a strong presence at the World summit on Sustainable Development held on the 26th August-4th September 2002 held at Johannesburg, South Africa and this included a seven member delegation from USP. This delegation was divided into groups and attached to Pacific Island Country National Delegations. The presence of a large delegation from Pacific Islands Countries was to ensure that the interests of SIDS were recognised and included in global deliberations on sustainable development.

Apart from the above, recently the University of the South Pacific has been identified as a Regional Centre of Expertise (RCE) for the promotion of Education for Sustainable Development in South Pacific Island Countries. This was launched at the International Conference on 'Globalisation and Education for Sustainable Development- Sustaining the Future' which was held in Nagoya Japan in June this year.

Land Management and Development (LMD)

The LMD at SSED, in USP is the premier group for professional and other land management, land use planning, real estate and geomatic education and research in the South Pacific Region. Among other issues it deals with, land is central to the study done at the Department.

Land is the real foundation of social and economic activities in the Pacific Region, as it is elsewhere in the world. Pacific Society is becoming increasingly concerned with how land is used and distributed. The supply of land is limited and there is increasing demand that it be used wisely and sustainably. Often conflicts arise between groups that hold differing views on proper land use, or the enjoyment of their respective property rights. Prudent land management, grounded in an understanding of land use

planning, real estate principles and geomatics, will ensure that land as a resource will be optimally used and protected for the good of society and future generations.

The Department is responsible for professional and other land management, land use planning, real estate and geomatics education and research in the South Pacific Region. The Department was established in 1981 and has developed an alumnus of property professionals operating in government and private sector through the USP member countries and beyond. The University strongly promotes the Department and offers undergraduates programmes in Real Estate, Land Use Planning and Geomatics, a Postgraduate Diploma in Real Estate and Research Programs at Masters and Doctoral level. With strong emphasis on three pillars of sustainable development, the LMD is involved in all aspects environmental, economic, geographic, legal, spatial and social information for prudent decision making by regional governments, organisation in the South Pacific Region. The Land Management Department educates land and property specialists dealing with identification, planning, acquisition, development, management, investment, valuation/appraisal, land tenure and disposal of land and buildings and real estate appropriate for the region (see figure 1 below).

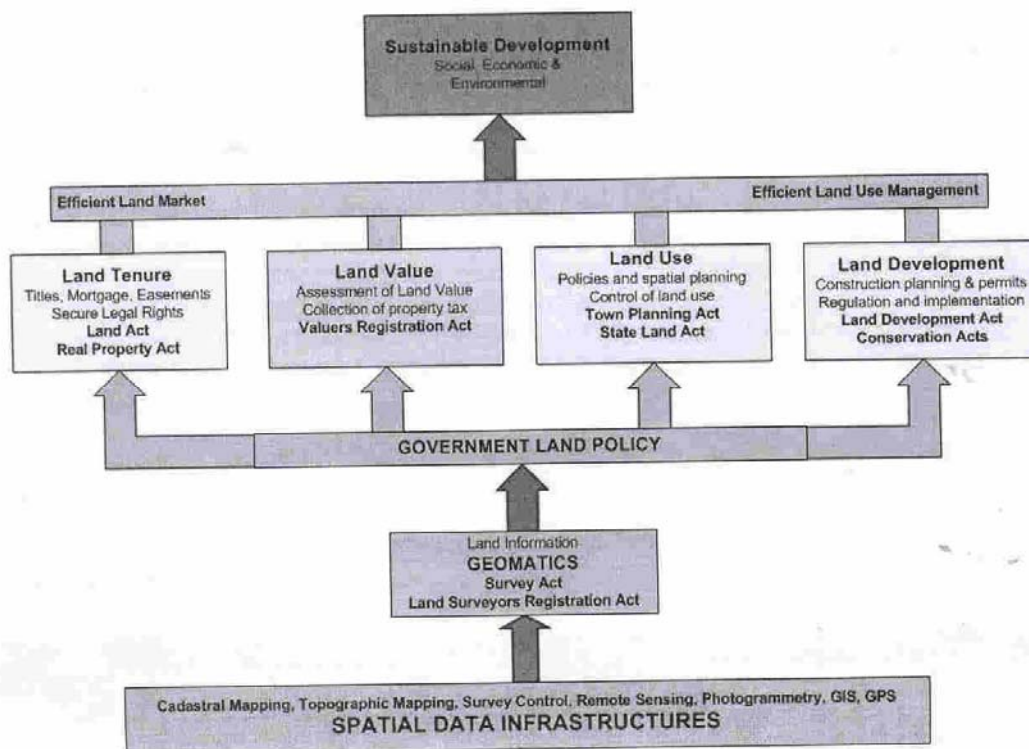


Figure 1

Source; Boydell and Curley (2004)

Given the importance society places on land in the region, the Department has established a high profile and over the last seven years has become research active. The evolution from emphasis on professional qualifications to prioritisation of academic qualifications has catalysed a developing, but thus far modest, research output as departmental staff strives to upgrade their qualifications and research output alongside Graduate Assistants and postgraduate scholars.

The Place of the Department

The LMD is one of the founding departments in the new Faculty of Island and Oceans, which will come into being in January 2006. This new Faculty has an essentially Pacific Focus, comprising a synergy of the complementary disciplines of the:

- School of Marine Studies (including the Marine Studies programme, Marine Affairs Programme, Institute of Marine Resources, Atoll Research unit);
- Department of Geography(including GIS, Population Studies);
- Department of Land Management;
- Department Of Tourism and Hospitality; and
- Oceanic Centre for Arts and Culture

Academic Programme

The Department underwent a major review to mainstream its offerings and make them more attractive as ‘double major’ offering, in response to the External Advisers report in 2001. USP students are largely donors funded, and aid donors and member governments have always emphasised a double major approach to undergraduate studies. In 2004 we commenced a Certificate, Diploma and BA Major Programmes in Real Estate and Land Use Planning. In 2005 a Certificate in Geomatics was added with a Diploma Geomatics undergoing the approval process. The BA double major in Real Estate and Land Use Planning continue to satisfy the academic requirements for the Valuers Registration Board of Fiji, and the Diploma in Geomatics will satisfy the registration requirements for Surveyors Registration Board Fiji. All programmes have been developed in conjunction with respective registration boards and professional bodies (Institute of Valuation and Estate Management and Fiji Institute of Surveyors). Similar bodies are yet to evolve in other countries. The department is an academic

member of the International Federation of Surveyors (FIG) and the Australasian Spatial Information Education and Research Association (ASIERA)

Until 2004, the Department offered a single major in BA Land Management and Development of comprising 20 prescribed subjects with a choice of Urban and Rural Options. Rural option students spent Semester 1 of their 200 level studies at Alafua Campus, the Agriculture School in Samoa. This option resulted in a Fiji Sponsor perception that all students had to study on the Agricultural Campus in Samoa, with associated costs. This resulted in a withdrawal of Fijian Affairs Board, Public Service Commission and Multi-Ethnic Affairs scholarships in 1998/9, which took 3 years to restore. The Department also offered a six course BA Major (LD) in Land Management

The new programmes have attracted significant increases in student enrolments (all course have seen a 50% increase in 2005 (with exception of RE 307), which for 2005 is summarised in Appendix 1.

There are six core courses in the Land Use Planning programs; LP 101, Principles and Problems of Land Tenure, `LP 201, Town and Country Planning, LP 204, Planning and Environmental Law, LP 300, Planning Research Subject, LP 303, Land Economics and LP 309, Property Development.

If we examine the contents of these courses teaching emphasis is on combinations of knowledge, issues, skill, perspectives and values for education in sustainable development. Moreover each of these items are central and discussed together with the three components of sustainable developments, i.e. environments, economy and society. The areas focussed on include issues that affect our environments, such as natural events for example tropical cyclones, droughts, tidal waves, tsunamis, floods, fires and earthquakes, global warming, the breakdown in the earth's protective ozone layer, pollution, nuclear radiation, unsustainable fishing methods etc, squatting, improved understanding of our island environment, natural as well as cultural environments, protection of habitats and the ecosystem. Education materials sometime include traditional and indigenous knowledge.

In addition, this new curriculum complies with the “Strength Model” i.e. lecturers and administrators understand the concept of sustainability and are familiar with its principles. Lecturers had identified potential areas of existing curriculum in which to inset examples that illustrate sustainability, including additional knowledge, issues, perspective, skills or values.

Lecturers have created awareness through discussion at the weekly industry participation four-o clock forum, and via Close Up current affairs programme on Fiji TV show, and these contribute to the larger ESD picture. These contributions were woven together to create ESD programs that are taught overtly to pupils and students. In this approach, the synergistic strengths of combined educational disciplines convey the knowledge, issues, skills, perceptions and values associated with ESD

No one discipline or University Department can or should claim ownership of ESD. In fact ESD poses such broad and encompassing challenges that it requires contribution from many disciplines

At USP, Geography, Economics, Marine Studies, Biology, Chemistry, Earth Science, Centre for Development Studies and the Department of Land Management and Development all offer programme on ESD. Other majors also offer part of their programme on ESD.

Participation on fieldtrips or field exercises and completing associated assignments or tasks, inviting guest lecturer such as those from office of Planning and Environment have all expanded the vision of how to teach for creativity, critical thinking and desire for life long learning- all mental habits that support sustainable societies.

The concept of sustainability continues to evolve as society changes and as or awareness and perception of earth, humanity and human environmental interactions correspondingly evolve. Subtle changes, such as shift in focus or emphasis, will of course be regional in nature and reflect the conditions of local ecosystem and culture. As a result, of the maturing nature of sustainability issues, those educating sustainability should continually adapt the content, scope and methodology with geographic and temporal contexts. This constant adaptation will require flexibility on the part of educators as they work together on local and international projects.

Definitions and practices that are admirably effective in one part of the world can be ineffective or inappropriate in another.

Challenges and Barriers to Education on Planning and Sustainability

The seven “Triads of Sustainability” which have been put forward by the Global Development Research Centre have been adopted and include: participation; decision-making; partnership; governance; knowledge and information; continued improvement; and lifestyles.

Participation

The participation Triad has commitment, communication and Co-operation as its three defining corners. For an innovative community effective and comprehensive participation enable exchange of ideas and opinions both among themselves and also from external expert and resource person. The community fully participates if they are made aware of issues concerning sustainability. Expert and resource person can also participate if they have the knowledge. It is at USP and more particularly at LMD where they learn to dialogue, co-operate and communicate. When they pass these characteristics onto the wider community they are seen to be contributing to planning and sustainable education.

Decision-Making

Decision-Making has consensus building, awareness building and review and hearings as its three defining corners. Therefore taking effective decisions that have positive impact on the environment as a whole- local and global is imperative. Creating collective agreements and opinion reached by the community is important. In addition, it is absolutely essential for teachers to be involved in the process of building consensus concerning ESD. Ministry of Environment needs to work with both formal and informal sectors of the education community to implement ESD (consensus building) for action; initiating action on decisions taken necessitates the overall understanding of the causes and effects (awareness building), and active involvement of all members of the community to discuss and debate the issues concerned (review and hearing). In some SIDS some customary forest owners have taken the decisions not to cut their forests. Similarly, traditional fishing ground owners have prohibited fishing up to certain periods. These are two examples of

collective agreements as a result of awareness of the concept of sustainable developments.

In addition, the first step is to develop awareness within the educational community and the public that orienting education to achieve sustainability is essential. At USP the Council Members, Senate and Board of Studies members are aware of this, and environment has been placed in the USP Strategic Plan as a priority area. Lecturers and program co-ordinators have reoriented their programs in order to focus on priority areas such as the Environment. Some lecturers have even gone to the extent of working with the community in their research to educate and to further achieve the concept of sustainability. In figure 1, it shows that the programme of land use planning fully embraced the concept of “Sustainable Development”. The Department has incorporated the concept of “Sustainable Development” in most of their courses. Educational materials should always try to include some traditional knowledge where appropriate, local language, habitats, places, people and system for using living resources.

Partnership

The Partnership Triad has interdependence, networking and clustering as its three defining corners. Partnership is a relationship between individuals or groups that is characterised by mutual assistance and responsibility for the achievement of agreed, specified goal.

The key to effective community partnership is that members of the community bring to the table different resources, skills and knowledge needed to take action. This calls for mutual respect of each member’s strength and weaknesses (interdependence), of interacting with people who have similar interest, or concerns or providing support (networking) and bringing together the different skills and resources needed for particular/specific action (clustering). At USP, it has worked in partnership with member countries in order to identify priority areas. This area includes economic development, socio-cultural developments, governance law and order, science, environment and information and communication technology. The LMD have worked closely with Fiji Institute of Valuation and Estate Management and also the Property Industries including the Department of Lands and the Department of Planning and

Environment on the content, delivery and contemporary challenges as well knowledge and skills of the courses that they offer.

Another example of partnership is the Pacific Type 11 initiatives: community planning. This initiative will help governments and communities develop capacity to fully integrate environmental and development planning at the national and sub national level. It primarily focus on community based planning approaches and capacity to use tools covering; integrated legal framework, institutional and policy frameworks, integrated land use planning systems and information enhancement and management. Public participation process whereby stakeholders examine the needs and desires of a community and identify essential elements of basic and secondary and as well as tertiary education can be adopted in many types of communities. Seeking opinions of parents and workers to shape the education of their children will be a totally new idea in some cultures. This should be introduced slowly and in accordance to culture and traditions. Ongoing liaison is done with Fiji Institute of Valuation and Estate Management, Fiji Institute of Surveyors and the Valuer's Registration Board and the Survey Registration Board.

Popular thinking promotes the myth that an informed society is solely the responsibility of the Ministry of Education. In reality, however the Ministry for Environment, Health has also a stake in ESD just as they have a stake in ESD and sustainable development. Ministry of Environment needs to work with both formal and informal sectors of the education community to implement ESD.

Governance

The Governance Triad has transparency, accountability, and efficiency as its three defining corners. Good governance occurs when societal norms and practices empower and encourage communities to take increasingly greater control over their own developments, without impinging upon the accepted right of others.

Good governance is enabled by the free flow of information. Process, institutions and information are directly accessible to those concerned with them, and enough information is provided to understand and monitor them (transparency). In an innovative community, empowered and responsible members have more authority and responsibility for decision-making can improve delivery of the city's aim and

objective, and can improve management of human and financial resources (accountability). Making the best use of proximate and available resources to maximise the output achieved is also key ingredient of a community governance system (efficiency)

USP must not only honour its commitment to good governance in its operations but also support member countries in achieving it through training, consultation and research. In addition USP must take the lead role in embracing the triad of Governance in order to stamp out issues of low productivity, inefficiency and corruption.

Knowledge and Information

The Knowledge and Information Triad has appropriateness, accessibility and timeliness as its three defining corners. Knowledge and information lies at the core of a community's ability to become innovative- to become aware, to take decisions, to communicate and to act.

In order to be able to carry these out, it is essential that communities have knowledge and information that is appropriate, easily accessible in a form that can be understood and made available in a timely manner.

Knowledge and information also includes such issues as learning, formatting and packaging information, targeting, delivery mechanisms and information sharing, technologies (ICTs).

The flexibility of programs at USP allows the program co-ordinators to decide on the method of implementation whether to create another or "add on" subject or to reorient the entire education programs and practices to address sustainable development. Experimentation will determine what level of ESD will be appropriate and successful to meet the community's sustainable development goal. The introduction of Distance and Flexible Learning have enable knowledge and information to reach such a wide audience in print based video broadcast and electronic resources (e.g. WebCT). USP has dedicated satellites, which facilitates audio video and teleconference communication with students at other centres.

Continued Improvement

The Continual Improvement Triad has monitoring and evaluation, needs assessment and feedback as its three defining corners. Continual improvements refers to the setting up of a corrective and preventive action, as well as a learning environment that makes use of lessons learnt and involves all members of the community. The key operational component of continual improvement is monitoring and evaluation put in place that checks the progress of a programme or a project. An efficient needs assessment systems also enable setting up of targets and goals against which progress can be measured and monitored. Feedback from community members helps in increasing efficiency and effectiveness. The roles played by external advisors in reviewing courses and the following up of their recommendation by USP, the staff reviews process and the new enhancement approach all contributes to Quality Management.

The successful implementation of a new educational trend will require responsible, accountable leadership and expertise in both systematic educational change and sustainable development. We must develop realistic strategies to quickly create knowledgeable and capable leadership. Both inservice and preservice training is necessary to human resource development for ESD

Lifestyles

The Lifestyles Triad has behaviour, ethics and value as its three defining corners. Sustainable lifestyles are at the core of an innovative community- as goal and as a process.

Building sustainable lifestyles depends externally on the smooth implementation of the six triads discussed above, but intrinsically linked to the behaviour patterns, ethics and value systems adopted by individual members of the community. Ultimately, the success of a local environmental management plan or programme will depend on the lifestyle choices adopted by the community- and the value they place on the environmental resources they consume.

To make a better choice, education is the key to these life styles. One can imagine the type of lifestyle wanted to live without good education and on the other hand a better lifestyle in terms of consumption of resources would result.

Conclusion

The University of the South Pacific has embraced the concept of sustainable development. By aligning itself with SIDS in the Johannesburg meeting it was to ensure that SIDS were recognised and included in the global discussions on sustainable developments. This commitment is further reflected in its policy documents. Further, the establishment of the Pacific Centre for Environment and Sustainable Developments is an indication of the commitment of USP to the ideals and principle of sustainable development. Sustainable developments have been identified as a key priority area. Similarly the programme on Land Use Planning has embraced the concept of planning for sustainable education; in contents, delivery, the knowledge and skills base, and the challenges. Reorienting of curriculum have enable students to focus on sustainable issues in planning education as a result of the recommendation of the External Advisor. Issues of sustainability pertaining to Small Island Developing States in the Pacific are taken into account and are discussed with students in lectures, tutorial, field trips and exercises, at the four o clock forum and TV Close Up Programme. The seven Triad of Sustainability poses particular challenges to SIDS because of their resources, economy, vulnerability and isolation. Education Institutions such as USP and LMD have responded well to the challenge through the delivery, contents incorporating sustainable issues in its curriculum, including knowledge and skill base.

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**Appendix 1:
Summary of Courses offered by Land Management and Development
Department in Semester 1 & 2 2005 and Students Cohort**

Sem 1	Courses	No. Students	Sem 2	Courses	No. Students
GM 101*	Introduction to Geomatics	77	GM 102	Gematics 1	11
LP 101*	Principles and Problems of Land Tenure	95	GM103	Survey Computation 1	11
RE101*	Real Estate Principles	94	LP 204	Planning and Environmental Law	42
LP 201	Town & Country Planning	37	RE205	Real Estate Finance and Investment Analysis	37
RE 204	Real Estate Law	25	RE208	Real Estate Management & Agency	34
LP 303	Land Economics	21	RE 307	Estate Valuation 11	12
RE 302	Real Estate Valuation 1	17	LP 309	Property Development	36
LP 300	Planning Research Project	-	LP 300	Planning Research Project	17
RE 300	Real Estate Research Project	-	RE 300	Real Estate Research Project	-
RE 401	Urban Land Economics	-	RE 402	Real Investment and Property Analysis	-
Re 403	Law Relating to Land Management	-	Re 404	Real Property Management	-
DG 400	Research Methods	1	DG 400	Research Methods	-
LM 600	Masters(SRE)	-	LM 600	Masters (SRE)	-
LM 700	MA Land Management	3	LM 700	MA Land Management	3
LM 800	PhD Land Management	1	LM 800	PhD Land Management	1

Source: LMD Brochure, 2005

*WebCT/VBC Courses

GM 102 & GM 103 first offering 2005