

*LifeLong Learning for Energy security,
access and efficiency in African and
Pacific Small Island Developing States*

L³EAP

L³EAP – Results of Work Package 2

Local Report from Fiji

*Assessment of Needs for Lifelong Learning in the Energy Sector
And
Assessment of Needs for Capacity Building of University staff in
partner institutions*

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1 Introduction

The main aim of Project L³EAP is to train energy practitioners in the Small Island Developing States (SIDS) of the African and Pacific regions to carry out their work in the areas of energy security, access and efficiency. This training will be effected through the development of a relevant and effective programme of study that will address the specific training needs of the practitioners.

A secondary aim of the project is to train staff of the Higher Education Institutions (HEIs) of the regions to develop, teach and administer the programme of study through the most appropriate modes.

The project is divided into six work packages. The aims of Work Package 2 (WP2) are to determine the training needs of energy practitioners in the areas of energy access, security and efficiency (EASE), and the capacity building needs of HEI staff that would be involved in the teaching and administration of the courses developed as a result of the above analysis. The needs analysis/baseline study has been carried out in the three regions of the project by the respective partners (HAW Hamburg, University of Mauritius and The University of the South Pacific).

The specific aims of WP2 are

- Training needs of energy practitioners
 - to determine the methodologies for the collection of data on the training needs of energy practitioners, and then to
 - use these methodologies to collect the appropriate data.
- Capacity building needs of HEI staff
 - to determine the method for the analysis of the structural and institutional barriers to the development and teaching of effective lifelong learning (LLL) courses in EASE
 - to conduct a structural and institutional analysis of the barriers
 - to develop a survey for the capacity building needs of the HEI staff
 - to carry out the survey.

This report documents the results of the work carried out in the Pacific region. Data for the report was collected in the Kingdom of Tonga and Fiji.

2 Methodology

2.1 Energy Sector Needs Analysis

The methods used for the training needs analysis of the energy practitioners can be conveniently divided into a main activity and other activities. The main activity consisted of a survey carried out using a questionnaire.

2.1.1 Survey questionnaire

The survey questionnaire consisted of seven questions. Apart from gathering the basic bio-data of the survey participants, its main aim was to gauge the personal knowledge of the participants in specific areas of EASE (Question 3), and to seek their opinion of which topics they thought should be included in a course in EASE (Question 4 and later). A copy of the questionnaire is contained in Annex 3 to this report.

Data was collected through workshops, individual completion of the survey forms and through telephone interviews. The workshops employed in the survey consisted of a specially-organized networking event in Fiji and the opportunistic use of a World Bank-organized workshop in Tonga.

2.1.2 Other activities

Other ways in which useful information came to hand was through newspaper research (including the local Fijian dailies) and informal communication with colleagues. Important information pertaining to the subject of the research was gained through personal communications. In another notable instance, new insights into the needs of prospective energy sector workers was obtained from the outcomes of a workshop on energy that one of the team members participated in.

2.2 University staff Capacity Building

To deliver the programme of courses will require some staff training at the regional universities. There will inevitably be some institutional barriers to surmount before this task can be achieved successfully. Section 2.2.1 below outlines what some of these barriers are in the case of Fiji and the Pacific. Section 2.2.2 briefly describes the staff survey questionnaire, and how the staff survey was carried out.

2.2.1 Analysis of institutional and structural barriers

Universities traditionally offer courses that are highly academic in nature. The offering of courses that are oriented primarily towards lifelong learning (LLL) for people already in the workforce is therefore likely to encounter some barriers to their development and implementation. An analysis of such barriers was carried out using published university administrative literature. These sources included the University of the South Pacific's (USP's) Strategic Plan, literature on its Strategic Total Academic Review (STAR) project, The University Calendar (containing the policies, processes and procedures for the development of new courses and programmes of study), and the faculty and school teaching programmes and course outlines. This investigation immediately revealed the existence of several possible barriers to the current objectives. These are described in section 3.2.1 below.

2.2.2 Staff survey

The staff survey form was divided into four sections. Section A gathered the general bio-data of the respondents. Section B was addressed to academic staff (i.e. those who would be teaching the courses). Section C was directed towards administrative staff (i.e. those who would be developing and administering the modules), while Section D considered all staff, and sought their views on the possible modes of delivery of the proposed programme of study. A copy of the questionnaire is included in Annex 4. The survey was carried out in a manner similar to the energy sector survey.

3 Results

3.1 Results for the Energy Sector

3.1.1 Survey results

Question 1: Basic bio-data

Important energy sectors which responded to the survey were the Fiji Department of Energy, NGOs who are involved in energy projects, as well as those doing community work only. They also included the power production sector CEOs and government electricity and energy management bodies from the Federated States of Micronesia, Tonga, Samoa, Tuvalu and Vanuatu. Others included private sector energy companies, and USP. Full details of responses are contained in Table 1 in Annex 1.

Question 2: What do you understand by the terms energy access, energy security and energy efficiency?

Energy Access:

The answers generally equated energy access to the availability of reliable, affordable energy services for all. Specific terms mentioned often were 'electrical energy', 'modern energy', 'grid' and 'off-grid energy'.

Energy Security:

Energy security was generally associated with secure (safe), sustainable and affordable energy.

Noteworthy responses included

- Ability of a population to maintain electrical/mechanical services independent of all external forces or market influence
- Consistent and affordable supply of energy
- Safe, reliable and sustainable access to energy

Energy efficiency of appliances or building and in process industry:

Most responses expressed the idea of using less energy for the same level of need or purpose or service.

Examples of some typical responses include

- An appliance/building that uses less energy but produces the same result or level of comfort
- Less energy for the same output

See Table 2 in Annex 1 for full list of responses.

Question 3: Your personal knowledge in the following areas (0 = none, 4 = expert)

For convenience the responses to this question were re-grouped into little or no knowledge (0, 1), some knowledge (2) and good knowledge (3, 4) of the areas.

The general state of knowledge in the various areas was divided equally between good and lacking. Half or more of the 27 respondents stated that their knowledge of the areas was good. The highest knowledge was in renewable energy technology (RET) in the SIDS

(vi). The lowest state of knowledge was in the areas of energy management (v) and legislations (viii). The remainder stated that they had either little or some knowledge in the specific fields.

See Figure 1 for a graphical display of the results. Table 3 in Annex 1 records the data in detail.

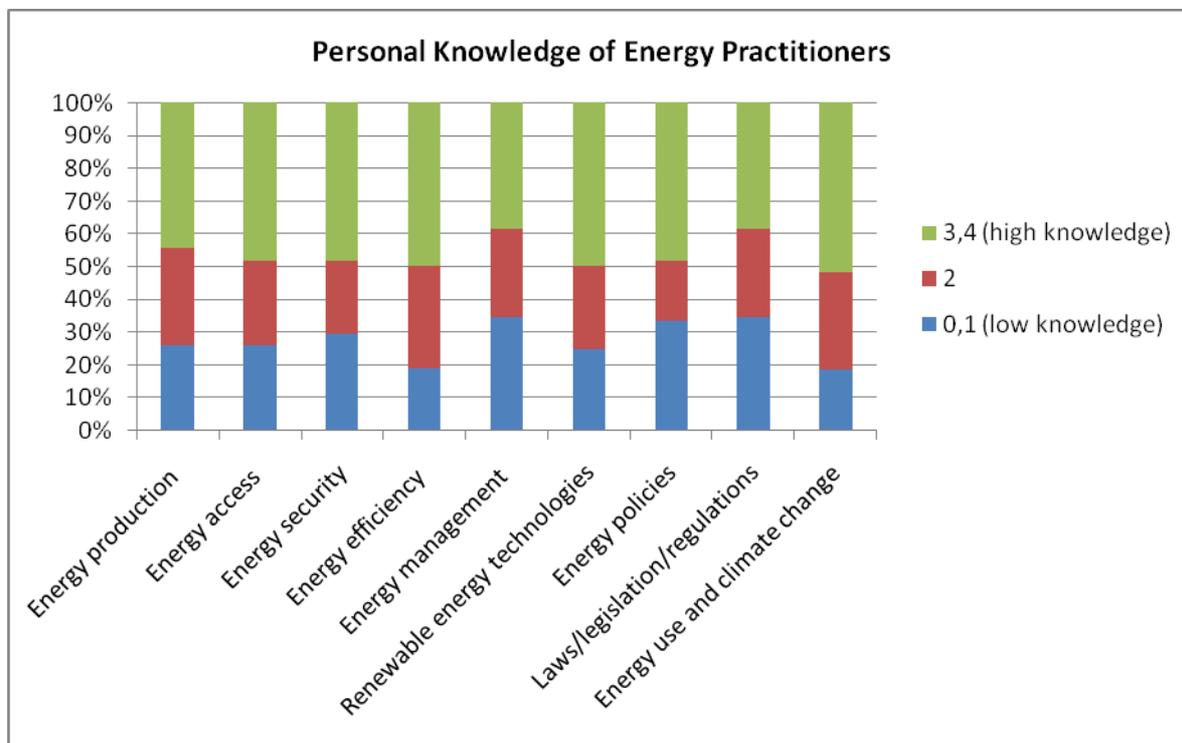


Figure 1: Personal Knowledge of Energy Practitioners

Question 4: On a scale of 0 (not important) to 4 (very important), which of topics listed in the table below would you like to see included in a course on energy access, security and efficiency?

The responses showed an overwhelming majority regarded all topics as important inclusions into the proposed course. The demand was highest for issues of energy access (ii), energy policies (vii), laws/legislations (viii) and relation between renewable energy and climate change (ix). Note that laws/legislations was identified earlier as one of the areas where knowledge was low.

Figure 2 provides a graphical display of the demand for inclusion of the topics in the proposed course. The detailed data is available in Table 4 of Annex 1.

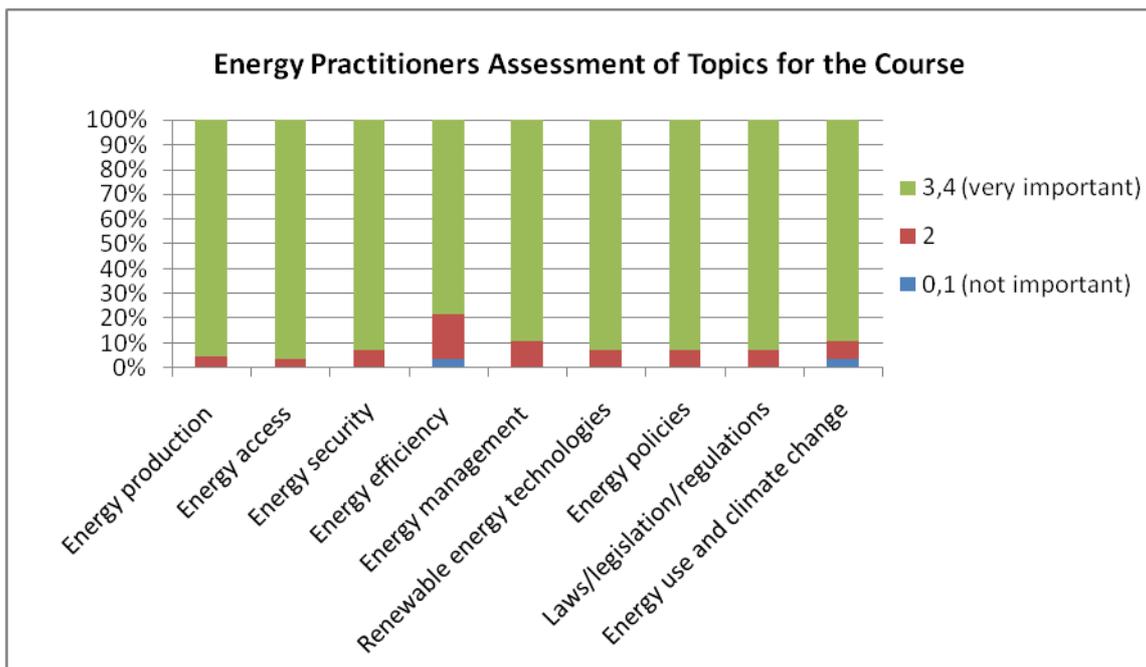


Figure 2: Energy Practitioners Assessment of Topics to be Included in the Proposed Course

Further topics that could be included in the course:

A wealth of new ideas were proposed as further topics to be included in the programme. These included:

General areas:

- Capacity building for RE
- Energy planning and forecast
- Energy financing and project proposal writing
- Energy communication
- Energy benchmarking techniques
- Gender dimensions of energy (production and use)

Supply side areas:

- Energy regulation (role of the regulator in tariff-setting etc.)
- Training of utility personnel
- Utilities business models and structures (state-owned utilities and private utilities, privatization of energy services)

Energy Efficiency:

- Energy auditing
- Inclusion of energy efficiency standards in national building codes

The complete list of the further topics is shown in Table 5 in Annex 1.

Question 5: How will you apply the knowledge gained from the proposed course?

Responses to this question were wide-ranging. They varied from improving personal energy use to advising governments, hiring competent staff and in the determination of

energy policy to community development. Table 6 of Annex 1 shows the detailed list of responses.

Question 6: Preferred delivery mode:

The results are displayed in Figure 3. They reveal that most preferred mixed mode delivery, with three times more respondents favoring this mode as compared to either the face to face or purely online modes of delivery. Table 7 of Annex 1 shows the actual data.

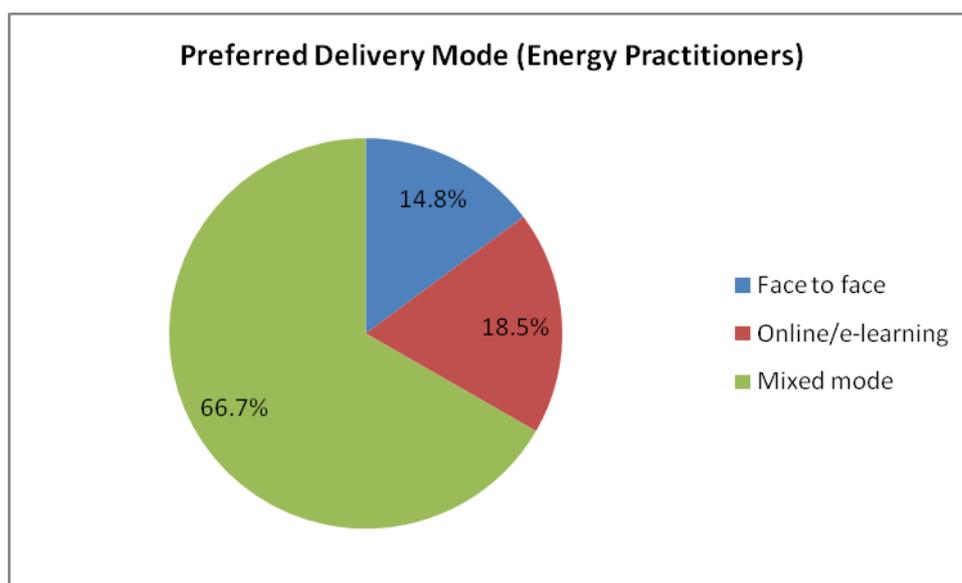


Figure 3: Preferred Delivery Mode of Energy Practitioners

Question 7: Further comments

These additional comments provided fresh insights into other types of areas of interest to be addressed by the course. They included the need for a course in energy modeling, training of utility workers and the inclusion of internship. See Table 8 in Annex 1 for a full list of responses.

3.1.2 Results from other activities

There were three important areas of interest and/or sources of information that were identified for inclusion into the proposed course through activities other than the survey:

- The need for training in energy auditing of buildings and other complexes was identified through personal communications
- The outcome of meetings and workshops on energy sector development in the PICs pointed to the need for training of personnel for energy financing, recruitment and consultancy. More specifically, there was a need for a course on
 - Obtaining finance for projects (writing proposals, making tender bids)
 - The procedures and documentation for the appointment of energy staff (including expressions of interest (EOI), request for proposal (RFP))

- Making successful bids for energy consultancies (filling out the above application forms properly)
- Producing consultancy reports
- The visit to Tonga in September 2014 revealed the existence of an online course on evaluating the energy needs of cities. The interest in this topic emanates from the observation that 51% of world's population currently lives in cities. The online course called *Tool for Rapid Assessment of City Energy (TRACE)* is an easy to use tool for assessing energy needs of cities by bench-marking and identifying energy savings opportunities.

3.2 Results for university staff

3.2.1 Structural and institutional barriers to course development and teaching

At the University of the South Pacific (USP), courses are classified as either credit or non-credit courses. Credit courses are those that form part of the regular academic programmes of study offered by the university. These must adhere to the programme requirements, and are approved by the University Senate. Non-credit courses are short courses that are of the vocational/LLL type, and are currently offered by the Centre for Vocational and Continuing Education (CVCE). Courses at USP are now offered in the face to face, print or online (e-learning) modes.

The highly organized structure of USP's academic administration imposes several barriers to the rapid development of (ostensibly) relevant courses and programmes of study at the institution. Many of these are obvious. But there are two important barriers to the development of courses at USP that need special mention.

As a credit course must form part of a complete academic programme of study, its development is carefully vetted and sanctioned by the university. Its development must also follow a detailed 'curriculum mapping' procedure where the course contents are carefully mapped against the perceived Graduate Attributes of students. This is a meticulous and time-consuming task that is performed only periodically by the university. Because of the complexity of this procedure, proposing new courses for inclusion into the university's academic programme of credit courses is a difficult task.

A credit course also faces the restriction that it can only be developed if the appropriate permissions are available. Currently, there is a moratorium on the development of new courses at USP, which means no credit courses can be developed.

The second important barrier relates to staff workload requirements, and includes how much acknowledgement is given to the staff by the University for teaching LLL courses. Each staff member is supposed to teach 3 fully-credited courses per year. Any non-credit courses such as the LLL-type courses of interest here are not included in this tally. Staff is thus ordinarily discouraged from developing and teaching such courses. The development/teaching of LLL courses at USP must normally be carried out by the CVCE, which hires specialist staff for the teaching/administration of such courses.

3.2.2 Staff capacity building survey results

Section A and B

Question 1 and 2: Basic bio-data

Respondents for the staff questionnaire came from two of the three universities in Fiji: The University of the South Pacific (USP) and The Fiji National University (FNU). Of the total of 14 respondents, one was an administrative staff while the others were academic staff, 9 of who were teaching renewable energy courses. The complete list of respondents according to their categories is given in Table 9 in Annex 2.

Question 3: Your personal knowledge in the following areas (0 = none, 4 = expert)

The results are displayed in Figure 4 below. As seen from this figure, 50% or more of the respondents had good knowledge of energy production, energy efficiency, renewable energy and energy use and climate change. Areas where knowledge was lacking was energy policy and energy laws/legislations. The complete data is presented in Table 10 in Annex 2.

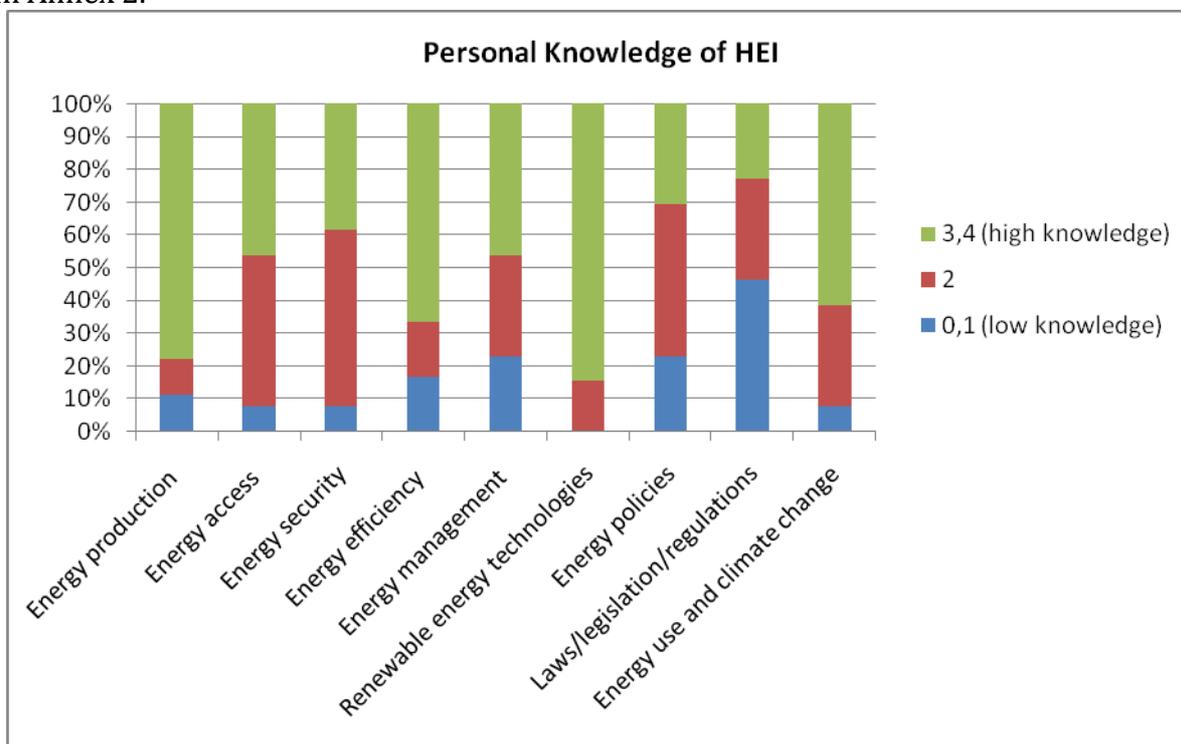


Figure 4: Personal Knowledge of HEI Staff

Question 4: Would you be interested in benefitting from training in the following areas:

As shown in Figure 5 below, almost all respondents showed interest in being trained in all areas listed in question 4. The complete dataset is presented in Table 11 in Annex 2.

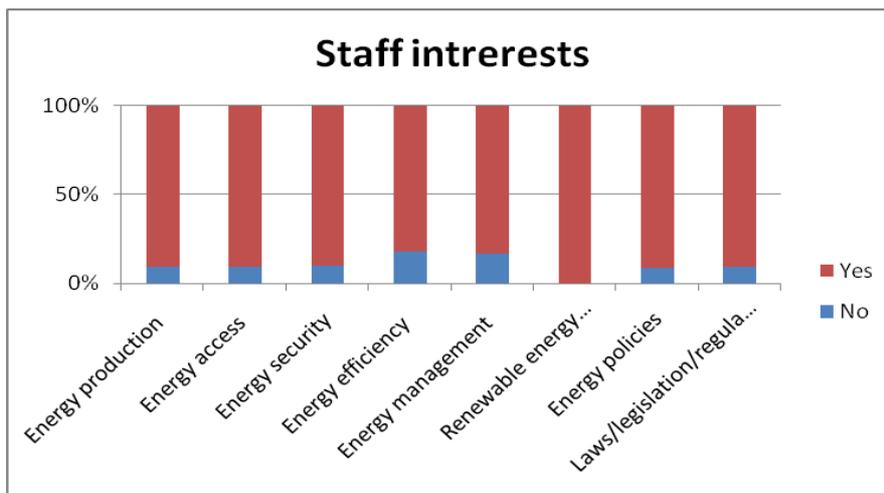


Figure 5: Staff Interest in Being Trained in Various Areas of EASE

Section C (Administrators only)

As there was only one respondent to this section, the results cannot be deemed to have any statistical significance. The respondent was involved in both developing and managing professional development (i.e. LLL) courses. He had good knowledge of various areas of curriculum development and module administration. He was interested in obtaining further training in all areas of curriculum development and administration except their logistics.

Question 5: Are you involved in developing and managing continuous professional development courses?

The response of the solitary respondent to this question was in the affirmative. His response is also noted in Table 12 in Annex 2.

Question 6: What is your personal knowledge/experience in the following areas of Lifelong Learning courses (LLL) (0 = none, 4 = expert level). Please tick in the appropriate column.

The only one qualifying respondent to this question stated that his personal knowledge was at level 3. His response is noted in Table 13 in Annex 2.

Question 7: Would you be interested in benefitting from training in any of the following areas of lifelong learning courses:

The response of the qualifying staff member was in the affirmative for all but the last area (required logistics). His response is note in Table 14 in Annex 2.

Section D (All staff)

Question 8: Which type of delivery mode would you prefer for the capacity building course for staff - F2F, online/e-learning, mixed mode?

As Figure 6 reveals, the large majority (56%) of the staff preferred course delivery in the mixed mode. The rest of the preferences were divided equally between the face-to-face and on-line modes. Table 15 in Annex 2 shows the actual distribution of preferences.

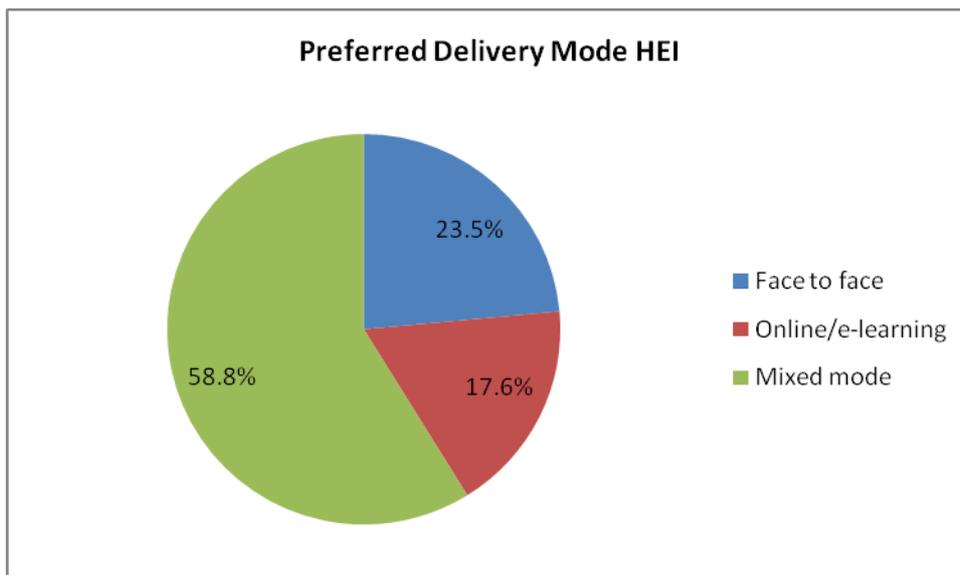


Figure 6: Staff Preference for the Delivery Mode for the Proposed Course

4 Conclusions and Recommendations

- There is a demand for a course in energy access, security and efficiency (EASE) for energy practitioners in the Pacific SIDs.
- Expressions of interest in additional topics for consideration reveal that is course may need to be expanded in its scope.
- Because of special interest shown in specific topics, there may be a need to have a programme of courses including more than a single module.
- The preferred mode of delivery for such a course (or programme of study) is mixed mode, including both on-line and face-to-face learning.
- The staff survey revealed that while many who are currently involved in the teaching of renewable energy in two of Fiji’s universities were fairly well acquainted with many of the topics being investigated, there was strong support for staff capacity building to facilitate the teaching of a course in EASE.

Annex 1

Data for Energy Sector (Energy Practitioners) Survey

Table 1: Organizations/Professions of Energy Sector Practitioners

Organization/profession	number	Sub-total	Total
DoE			
Energy analyst	3	3	
IUCN (NGO)			
Energy advisor	1		
Project management	1		
Energy Programme assistant	1		
Energy programme officer	1	4	
Live and Learn (NGO)			
Project coordinator/field trainer (community and schools)	3		
Project officer	1	4	
CCF (NGO)			
Community training facilitator	3		
Youth liaison officer	1	4	
Tonga			
YSPC - AGM	1		
Energy commission chairman	1		
Electricity commission CEO	1		
Chuuk Public Utility CEO	1		
Tonga Power Ltd Strategic developer	1		
Vanuatu Utility Regulatory Authority Principal Finance Specialist	1		
Tuvalu Electricity Commission General Manager	1		
Ministry of Finance Energy Samoa ACEO	1	8	
Others			
Fiji Manufacturing association Administrator	1		
CBS Power Solutions Managing Director	1		
USP Senior Technician	1		
USP Project Coordinator RE	1		
Bure Electronics Sales Manager	1		
Electrical solutions Fiji Ltd Electrical technician	1	6	
			29

Table 2: Energy Practitioners' Understanding of Energy Access (A), Security (S) and Efficiency (E)

Meanings of the terms	Number with similar answers
A: Energy to people	
S: secure energy supplies	
E: Level of energy consumption by electrical appliance	
A: measure of access to electricity and modern fuel and energy	
S: measure of levels of sustainability within the supply chain	2
E: measure of the energy usage to the work output or space occupied	
A: provision of a reliable, safe and affordable energy supply	
S: sustainable energy supply, development of RE sources	
E: consumer uses energy and provide comfort to building occupant	
A: Making energy services available to all people	
S: all people have access to reliable and affordable energy services	
E: An appliance/building that uses less energy but produces the same result or level of comfort	
A: Ability of a population to receive necessary electricity through either centralized grid or independent de-centralized generation	
S: Ability of a population to maintain electrical/mechanical services independent of all external forces or market influence	
E: The rate of consumption at which a powered device draws electrical load relative to it functional output	
A: easily available and affordable energy	
S: consistent and affordable supply of energy	
E: Use of least amount of energy for a particular purpose	
A: the ease of access to energy system by people	
S: energy is available 24/7 365	
E: using less energy for more value	
A: Having an access to modern energy services	
S: association between modern energy security whilst having available natural resources	
E: less energy for the same output	
A: The ability to have access to energy generating sources	
S: ??	
E:??	
A: having access to electricity and other energy sources	
S: availability of resources to cater for demand	
E: using less energy but with the same output	
A: having a way to utilize energy	
S: having back-up plan for energy usage	
E: Use less energy to produce the same output	
A: Ability to access energy	

S: sustainability of energy	
E: reducing the amount of energy required to produce service	
A: access to energy services like cooking, lighting, communications	
S: availability of energy and the states relation to this sources	
E: control and minimize the use of energy but get the same service	
A: accessibility of energy to an individual	
S: ability to have secure energy and not discriminated against	
E: Turning off appliances and lights, aircon when it is not in use	
A: Access to electricity and modern appliances/equipment	
S: meeting energy needs in terms of resources available	
E: reducing the energy consumption	
A: accessibility to energy sources	
S: I'm secure with energy	
E:	
A: Access to grid by consumers	
S: safe, reliable supply to consumers	
E:	
A: Ability/opportunity to utilize energy	
S: safe, reliable and sustainable access to energy	
E: how much useful/measurable work that can be generated given an amount of energy put in	
A: access to grid-connected electricity and off-grid modern systems	
S: independence (diesel imports)	
E: reduced consumption of energy efficient buildings	
A: the number of households connected to the grid	
S: continuous energy supply	
E: less energy to consumers	
A: sourcing from	
S: sustainability, consumption	
E: economizing energy	
A: for all	
S: fuel cost	
E:	
A: the degree of availability of energy sources, services, utilities	
S: the long-term availability and affordability	
E: using the least amount of energy possible	
A: Providing access for cooking, light etc	
S: managing energy systems	
E: managing energy	
A: accessing energy source to general public	
S: one way to save energy	
E: Fiji is better, solar .. sunshine good for the panels ...	
A: ability for ones peoples need to access energy	

S: is it financially secure to have energy E: energy efficient lamps....	
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Table 3: Energy Practitioners Knowledge of Various Areas of Energy Use

	0	1	0,1	2	3	4	3,4
i) Issues of Energy production in small island developing states (SIDS)	3	4	7	8	6	6	12
ii) Issues of energy access in the SIDS	3	4	7	7	8	5	13
iii) Issues of energy security in the SIDS	3	5	8	6	8	5	13
iv) Energy efficiency (in e.g appliances, buildings, transportation)	3	2	5	8	10	3	13
v) Energy management (e.g. energy audit, energy management systems)	4	5	9	7	7	3	10
vi) Renewable energy technologies in SIDS	4	3	7	7	6	8	14
vii) Energy policies in SIDS	6	3	9	5	8	5	13
viii) Laws/legislation/regulations relating to energy in SIDS	6	3	9	7	6	4	10
ix) Relation between energy use and climate change	0	5	5	8	8	6	14

Table 4: Energy Practitioners Assessment of Topics to be Included in the Course

	0	1	0,1	2	3	4	3,4
i) Issues of energy production in SIDS	0	0	0	1	3	18	21
ii) Issues of energy access in the SIDS	0	0	0	1	4	23	27
iii) Issues of energy security in the SIDS	0	0	0	2	5	20	25
iv) Energy efficiency (e.g appliances, buildings, transportation)	0	1	1	5	5	17	22
v) Energy management (energy audit, energy management system)	0	0	0	3	7	18	25
vi) Renewable energy technologies in SIDS	0	0	0	2	7	18	25
vii) Energy policies in SIDS	0	0	0	2	4	22	26
viii) Laws/legislation/regulations relating to the energy in SIDS	0	0	0	2	3	22	25
ix) Relation between energy use and climate change	0	1	1	2	4	21	25

(Note: The total number of responses for question 4 was 28, as one person did not respond)

Table 5: Further Course Topics

	Topic	Number who quoted this
	Course must be practical	2
*	Partnership programs and capacity building in the energy sector	
*	Energy financing	2
	Other types of access – e.g. incorp EE in National Building Code , and Grid connected PV systems	

	Relationship between energy and biodiversity	
	Non-electricity solutions to energy conservation	
	Transport and logistic component of conservation	
*	Gender dimensions in energy and gender mainstreaming	
	Appropriate (energy) technology	
	Environmental impacts of energy other than climate change	
*	Energy planning and forecast	
	Renewable energy	
*	Proposal writing courses for energy projects	
	How climate change affects energy use and production of energy	
	Benchmarking techniques	
*	Economic (tariff) regulation of energy sector	2
*	Utilities business models and structures (state owned enterprises/government departments, privatization of energy services)	
	Technical capacity building	
	Technical application of RE and EE	
	Construction of digesters and its uses thereof – advantages derived from such usages	
	Online training for renewable energy	
	Energy communication	
	A course that brings all stakeholders together	
*	Energy financing (answer to another Q)	
*	Energy auditing (answer obtained during informal communication)	

Table 6: How Energy Practitioners Would Apply the Gained Knowledge

	Response	Number of similar response
	To everyday duties and work	
*	To provide timely and accurate advice to government	
*	To develop and strengthen the energy security scenario of Fiji	
*	Knowledge will be applied to our workplace to expedite the adoption of RE sources and EE technologies	
	Use it to improve personal energy usage.	
*	Advise countries on appropriate policies and strategies for achieving energy for sustainability	
	Seeing USP students involved in this coursework – confident in their competence to handle immediate electrification and conservation concerns and understand opportunities for change	
	Hands-on application	
	Develop more topics and area of discussion on energy consumption	
*	We work with communities and communities must have access to information such as this. It would greatly enhance their ability to develop themselves and become energy secure etc.	4

	Apply knowledge to community development. Conduct awareness and education workshops and training on the above topics, helping communities understand ...	
*	Energy saving strategies	
*	Start by practicing such knowledge in office and at home, and to improve energy performance at our business	3
*	Transfer knowledge to others	2
	Practical examples and case studies in countries. Ideally they should result in projects that make a difference to people in the SIDS.	
*	Hire competent and skilled professional to work with the URA.	
	To better assist students.	
*	To provide technical support	
	I will have access to education and training and this will support me to address energy concerns to rural communities	
	Allow me to become better at what I do	

Table 7: Preference of Delivery Mode for the Proposed Course by Energy Practitioners

Type of course	Number of preference
Face to face	4
Online/e-learning	5
Mixed mode	18

Table 8: Further Comments by Energy Practitioners

Comment	Number of similar responses
Energy modeling needs attention – soft-based paper studies need upgrading	
Hands-on training must accompany theory to fully understand the concepts	
The sustainability of energy services in rural and particularly services provided through renewable energy needs to be addressed	
Selection of teachers and development of teaching contents will be key in the recognition of the curriculum. URA is more than willing to contribute and assist USP in the path of developing the curriculum. The curriculum should integrate an internship component with students spending at least two months in working situation within utilities, suppliers of equipment or services, government services or regulating institutions	
Thankful that this has come up with this idea	

Annex 2

Data for University Staff Survey

Table 9: Categories of Respondents

Staff category/organization	number	Sub-total
CVCE Admin – USP	1	1
Academic in RE - USP	4	
TA in RE – USP	2	
Academic in RE _FNU	3	9
Academic and TA without RE - USP	4	4

Table 10: Staff Personal Knowledge in Various Areas of EASE

	0	1	2	3	4
i) Issues of energy production in small island developing states (SIDS)	0	1	1	4	3
ii) Issues of energy access in the SIDS	0	1	6	3	3
iii) Issues of energy security in the SIDS	0	1	7	2	3
iv) Energy efficiency (in e.g appliances, buildings, transportation)	0	2	2	4	4
v) Energy management (e.g. energy audit, energy management systems)	0	3	4	2	4
vi) Renewable energy technologies in SIDS	0	0	2	6	5
vii) Energy policies in SIDS	0	3	6	3	1
viii) Laws/legislation/regulations relating to energy in SIDS	1	5	4	2	1
ix) Relation between energy use and climate change	0	1	4	5	3

Table 11: Staff Interest in Being Trained in Various Areas of EASE

	No	Yes	If yes, please specify details (eg topics, level of training)
i) Issues of energy production in the SIDS	1	10	
ii) Issues of energy access in the SIDS	1	10	
iii) Issues of energy security in the SIDS	1	9	
iv) Energy efficiency (e.g appliances, buildings, transportation)	2	9	
v) Energy management (energy audit, energy management systems)	2	10	
vi) Renewable energy technologies in SIDS	0	11	
vii) Energy policies in SIDS	1	11	
viii) Laws/legislations/regulations relating to the energy in SIDS	1	10	

Table 12: Staff Involvement in Developing and Managing Professional Development Courses

Category	Response	Total
Developing PD courses	yes	1
	no	0
Managing PD courses	yes	1
	no	0

Table 13: Staff Level of Knowledge in Areas of Lifelong Learning

	0	1	2	3	4
i) Curriculum development in LLL				1	
ii) Module development in LLL				1	
iii) E-Learning (online) in LLL				1	
iv) Advertisement/marketing of courses in LLL				1	
v) Costing/financial aspects of the courses for LLL				1	
vi) Required logistics for LLL (e.g arranging for venue, projector, handout, etc)				1	

Table 14: Staff Members Desire to Benefit from Topics to be Included in the Proposed Lifelong Learning Course

	No	Yes	If yes, please specify details (eg topics, level of training)
i) Curriculum development		1	
ii) Module development		1	
iii) E-learning (online)		1	
iv) Advertisement/marketing of courses		1	
v) Costing/financial aspects of the courses		1	
vi) Required logistics (e.g venue, projector, handout, etc)	1		

Table 15: Preference of Delivery Mode for the Proposed Course by Staff

Mode	Total
Face to face	4
Online/e-learning	3
Mixed mode	10

Annex 3

Energy Sector Survey on Energy Security, Access and Efficiency in SIDS

What this questionnaire is about:

Project L³EAP is developing a learning programme to inform and up-skill people involved in the energy sector of Small Island Developing States (SIDS) in aspects of energy security, access and efficiency as they impact on the lives of communities in these developing countries.

The courses will address issues relating to energy access, security and the efficient and environmentally friendly use of energy (including renewable energy) in the SIDS. They will be designed to meet the training needs of individuals (like yourself) working in various sections of the energy sector of SIDS. The purpose of this questionnaire is to find out what these training needs are.

Your assistance in this survey is highly appreciated.

1.1 Name of your organization:

1.2 Type of Organization:

1.3 How do you best describe your profession?

1.4 What is your position in your organization:

1.5 What are your main energy-related duties in your organization:

2. What do you understand by the terms *energy access*, *energy security*, *energy efficiency*?

Energy access

Energy security

Energy Efficiency (of an appliance or building)

Energy Efficiency (in process industry)

3. What is your personal knowledge in the following areas (0 = none, 4 = expert level). Please tick in the appropriate column.

	0	1	2	3	4
ii) Issues of Energy production in small island developing states (SIDS)					
i) Issues of energy access in the SIDS					
ii) Issues of energy security in the SIDS					
iii) Energy efficiency (in e.g appliances, buildings, transportation)					
iv) Energy Management (e.g. Energy Audit, Energy Management Systems)					
v) Renewable Energy Technologies in SIDS					
vi) Energy Policies in SIDS					
vii) Laws/Legislation/Regulations relating to energy in SIDS					
viii) Relation between energy use and climate change					

Any further comments you wish to make (including comments about the above table):

4. On a scale of 0 (not important) to 4 (very important), which of topics listed in the table below would you like to see included in a course on energy access, security and efficiency? Please tick in the appropriate column.

	0	1	2	3	4
ii) Issues of energy production in SIDS					
i) Issues of energy access in the SIDS					
ii) Issues of energy security in the SIDS					
iii) Energy efficiency (e.g appliances, buildings, transportation)					
iv) Energy Management (Energy Audit, Energy Management System)					
v) Renewable Energy Technologies in SIDS					
vi) Energy Policies in SIDS					
vii) Laws/Legislation/Regulations relating to the energy in SIDS					
viii) Relation between energy use and climate change					

List any further topics you would like to see included in the course, and make any other comments that you wish to make.

5. How do you wish to apply the knowledge gained from the courses that will be developed from this survey?

6. Which type of course delivery mode would you prefer

Face to face Online/e-learning mixed mode

7. Are there any other comments you wish to make?

Thank you for your help!

Annex 4

University Staff Capacity Building Survey in Energy Security, Access and Efficiency in SIDS

What this survey questionnaire is about:

Project L³EAP is developing a learning programme to train and up-skill people involved in the energy sector of Small Island Developing States (SIDS) in aspects of energy security, access and efficiency as they impact on the lives of communities in these developing countries.

The programme of courses will be developed, taught and administered by university staff (such as yourself) by universities in the African and Pacific SIDS. The purpose of this questionnaire is to find out what you need to know to enable you to perform these tasks successfully.

The results of this survey will be used to prepare a series of seminars/workshops to prepare and up-skill university staff to develop, deliver and administer these courses. You will be invited to attend these training sessions.

Your assistance in developing this staff capacity-building survey is highly appreciated.

Section A. General Information

1.6 Name of your institution:

1.7 Your department and position:

Section B - For Academic Staff (To be filled only by academic staff of the university who will develop and deliver the courses. Others please proceed to section C)

3. Are you doing research or teaching in areas relating to energy access, energy security or energy efficiency?

Energy access No Yes

Any comment: _____

Energy security No Yes

Any comment: _____

Energy Efficiency No Yes

Any comment: _____

4. What is your personal knowledge in the following areas (0 = none, 4 = expert level). Please tick in the appropriate column.

	0	1	2	3	4
i) Issues of energy production in the SIDS					
ii) Issues of energy access in the SIDS					
iii) Issues of energy security in the SIDS					
iv) Energy efficiency (e.g appliances, buildings, transportation)					
v) Energy Management (e.g. Energy Audit, Energy Management Systems)					
vi) Renewable Energy Technologies in SIDS					
vii) Energy Policies in SIDS					
viii) Laws/Legislation/Regulations relating to energy in SIDS					
ix) Relation between energy use and climate change					

Any further comments you wish to make (including comments about the above table):

4. Would you be interested in benefitting from training in the following areas:

	No	Yes	If yes, please specify details (eg topics, level of training)
ix) Issues of Energy production in the SIDS			
x) Issues of energy access in the SIDS			
xi) Issues of energy security in the SIDS			
xii) Energy efficiency (e.g appliances, buildings, transportation)			
xiii) Energy Management (Energy Audit, Energy Management Systems)			
xiv) Renewable Energy Technologies in SIDS			
xv) Energy Policies in SIDS			
xvi) Laws/Legislations/Regulations relating to the energy in SIDS			

Add any other energy areas in which you would like to have training:

Section C. For Administrators/Course developers (If not applicable to you, please proceed to section D)

5. Are you involved in the following:

Developing Continuous Professional Development courses (i.e. Lifelong Learning Courses or Continuing Education Courses)

No _____ Yes _____

Managing Continuous Professional Development courses (Lifelong Learning courses or Continuing Education Courses)

No _____ Yes _____

6. What is your personal knowledge/experience in the following areas of Lifelong Learning courses (LLL) (0 = none, 4 = expert level). Please tick in the appropriate column.

	0	1	2	3	4
i) Curriculum development in LLL					
ii) Module development in LLL					
iii) E-Learning (online) in LLL					
iv) Advertisement/marketing of courses in LLL					
v) Costing/financial aspects of the courses for LLL					
vi) Required logistics for LLL (e.g arranging for venue, projector, handout, etc)					

Any further comments you wish to make (including comments about the above table):

7. Would you be interested in benefitting from training in any of the following areas of lifelong learning courses:

	No	Yes	If yes, please specify details (eg topics, level of training)
i) Curriculum development			
ii) Module development			
iii) E-Learning (online)			
iv) Advertisement/marketing of courses			
v) Costing/financial aspects of the courses			
vi) Required logistics (e.g venue, projector, handout, etc)			

Section D. For all staff

List any further topics you would like to have capacity building in, and make any further recommendations:

8. Which type of delivery mode would you prefer for the capacity building course for staff

Face to face Online/E-learning mixed mode

9. Are there any other comments you wish to make?

Thank you for your help!

About the L³EAP project:

Lifelong learning for Energy Security, Access and Efficiency in the African and Pacific Small Island Developing States (L³EAP) is a three-year project that concentrates on tailor-made learning offers on sustainable energy. The purpose of the project is to increase the capacity of universities in African, Caribbean and Pacific Group of States (ACP) Small Island Developing States (SIDS) for the delivery of high-quality lifelong learning courses on the topics of energy access, security and efficiency.

www.project-l3eap.eu

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