



**PACE-Net: Pacific Europe network for Science and Technology**  
**Project no. : 244510**

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**Deliverable 2.2**

**Suva Meeting: November 30<sup>th</sup> – December 3<sup>rd</sup> 2010**  
**Suva – Fiji**

**Work Package 2: Deliverable Report 2.2**

**Prepared by: Fanny Pascual (PACE-Net project manager)**

**Date : 07.12.2010**



**Website: <http://www.pacenet.eu/>**

### Participants:

- Ian GAUCI BORDA – IGB (*MCST*)
- Emma MacDonald - EM (*MoRST*)
- Lohi MATAINAHO – LM (*UPNG*)
- Sheik Izzal AZID – SIA (*USP*)
- Anjeela JOKHAN - AJ (*USP*)
- Olivier AUGUIN –OA (*SPC*)
- Shilpa KUMAR-ROINE – SKR (*SPC*)
- Fanny PASCUAL – FP (*IRD –European project manager*)

### Video conference Participants (1<sup>st</sup>- 2<sup>nd</sup> Dec):

- Hans STAEHLE - HS (*IB of BMBF*)
- Claude PAYRI – CP (*IRD – Coordinator*)
- Carol GLYNN – CG (*CGC*)

*Impossible to contact Katherine DANIELL (ANU) and Paola MATERIA (APRE) due to technical problem of connection.*

### SUMMARY

1/ Preliminary Results WP1 & 2

2/ Task 4.5: multipliers' training

3/ KS, External Advisory Board and WP 6

4/ WP 5

5/ Others remarks

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2/ WP2 Preliminary results

3/ Survey for governmental bodies

4/ Detailed list of PACE-Net Key Stakeholders

5/ Presentation of a USP Renewable energy project

6/ Cost report template

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### 1. Preliminary Results

#### 1.1 Presentation WP1 (USP) & WP2 (SPC) preliminary results.

Presentation of 3 PowerPoint documents (WP 1 and WP2) (*See appendix 1 a - b and 2*)

Survey is composed of **3 questionnaires**:

- **Questionnaire 1** for research organisations in OCTs, ACPs (1<sup>st</sup> October except PNG/Hawaii)
- **Questionnaire 2** for Australian and NZ research organisations (1<sup>st</sup> November 2010)
- **Questionnaire 3** for political/governmental bodies (draft in progress, dissemination after the meeting)

Questionnaire n°1: **23.53%** questionnaires filled out by research organisations/institutions contacted by USP, SPC and IRD (NZ and Australia have launched it on 1<sup>st</sup> November)

**Suggestion to increase this rate** (encourage organisations already contacted to fill out the questionnaires): USP, SPC and IRD will concentrate their effort only on biggest and most relevant organisations. **Before the 10<sup>th</sup> December** 2010 a 2-page note will be prepared by USP and SPC with most relevant figures of the mapping and of Key Stakeholders registration. This note will be sent to all organisations **before 15<sup>th</sup> December 2010** in order to:

- To thank those who have filled out the 2 questionnaires (**Questionnaires 1 & 2**)
- To encourage those who haven't done it
- To inform and motivate those who haven't already been contacted:

SKR, SIA for ACPs, FP for OCTs, EM and KD respectively for NZ and Australia will remain the contact point for the organisations contacted for the survey, if WP leaders 1 & 2 need more information.

**UPNG will start the survey** in Papua New Guinea and Hawaii just after the meeting in Suva.

OA notices that the questionnaire doesn't mention **existing networks**, mostly informal networks such as associations or connections between individual researchers (e.g. PACINET about taxonomy in the Pacific, PAPF Net launched by SPC).

SIA suggests putting **questionnaires on the website**, as it has been done for KS application form. FP replies that experience of the Era-Net NETBIOME demonstrates that it has not been successful.

SKR explains **problems of definition** of terms such as “research”. Some organisations consider applied studies or simple surveys as research projects.

A list of contacts will be established from the information collected during the survey in order to help WP 3, 4 and WP 5 organise events/network.

FP remarks problems of definition of themes: we use a European classification in the questionnaire, but strategic documents analysed in D.2.1 use different terms (e.g. environment, climate change and biodiversity in D 2.1 but “environment” comprises climate change and biodiversity in the questionnaire).

### 1.2 Suggestions for the organisation of the 1<sup>st</sup> Platform and Thematic Workshops

Given the survey results and deliverables 2.1 and 2.2, the partners who attended the meeting in Suva suggested:

- **For the 1<sup>st</sup> Platform:** June 2011 in Australia (depending on ANU’s approval) or in New Zealand. Suggestion validated by partners through videoconference.
- **For the thematic Workshops:** IRD would like to identify 2 themes for 2011. Health and Environment are proposed as the 2 first priorities for the region (D. 2.1) and as themes supported by Pacific research teams. [AJ suggests also Renewable Energy and ICT. She adds that collecting data for climate change or biodiversity for example is a priority for future research. OA proposes that themes supported must develop Pacific expertise as an international competence/reference] Combining Thematic workshops with the 1<sup>st</sup> platform will reinforce the network and allow partners to participate in all events (if experts are available). No comment on the Methodology of these thematic Workshops, that had been sent before the meeting.

### 1.3 Survey for Governmental bodies

Draft validated by partners on the 2<sup>nd</sup> Dec 2010. *See appendix 3* (to be sent soon)

Deadline for all surveys: **mid-March 2011**

### 2. Task 4.5: Multipliers' training

Carole Glynn (from CGC) presents this task on videoconference on 2<sup>nd</sup> December to partners involved in the training (USP, UPNG, SPC and IRD which are the multipliers for OCTs').

Two sessions of 5 days will be organised for multipliers (persons who will be special contact points for the region on behalf of the EC). First step will be to identify these persons according to the concentration of research/S&T in the region: one person from UPNG (Boe Lahui-Ako, Deputy Dean of Research), one from USP (Dr. Jito Vanualailai, Associate Dean in Research and Graduate Affairs in Faculty of Science Technology and Environment in USP), one from French Polynesia, one from NC, one from SPC (Olivier Auguin). Australia and NZ already have their NCPs.

1. The first session will be held in Noumea from March 28, to April 1. 2011 and will focus on FP7 programmes/instruments during 4 days, plus 1 day facing an audience of researchers.
2. The second session will deal with administrative and financial aspects of FP7 during 5 days between **Sept-Oct-Nov 2011** (date and location will be chosen during the first session). Persons involved in the 1<sup>st</sup> training are encouraged to follow this session as well.

Location: the first session shall take place in Noumea to decrease travel costs (2 or 3 persons still in Noumea) and to invite the European delegation based in NC. Presentations in front of an audience of researchers will be then organised in different places, depending on events (platforms, conferences, etc.)

All multipliers must confirm their availability for the first session **before December 10, 2010**. CGC will fund travel costs for one multiplier of USP, UPNG. IRD will pay for SPC, New Caledonia and French Polynesia. CG asks APRE, MCST and ANU (FEAST) to help her supporting multipliers after the training.

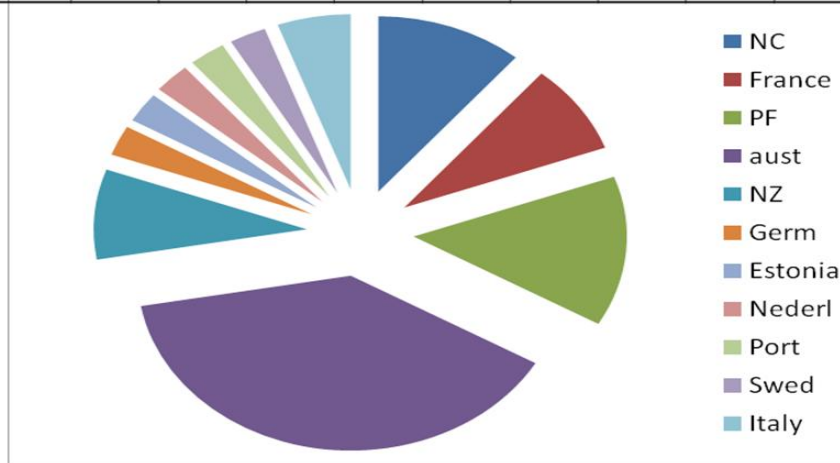
### 3. KS, External Advisory Board and WP6

#### 3.1 KS

Since 1<sup>st</sup> October 2010, the application form for KS has been inserted to the website. **No ACP countries** have applied yet. *See appendix 4* "detailed list of KS".

## KS countries

	NC	France	PF	aust	NZ	Germ	Estonia	Nederl	Port	Swed	Italy
total	20	3	16	14	3	1	1	1	1	1	2
KS	4	3	5	14	3	1	1	1	1	1	2



## KS GROUP

OCT	Aust	NZ	ACP	Europe
9	14	3	0	10



Presentation of Renewable energy project at USP ([See appendix 5](#))

OA suggested linking this project with TEP Vertes project, the aim of which is to equip isolated areas in the OCTs with independent electricity production systems.

Meetings with potential KS:

- Atul K. Raturi (USP – Engineering and Physics)
- William Camargo (USP – aquaculture)
- Johnson Seeto (USP – Marine Studies)
- Mohit Prasad (USP – associate Dean)
- Inoke Ratukalou (SPC – director land resources division)

## Pacific Europe network for Science and Technology

- Fekitamoeloa K. 'Utoikamanu (SPC – Deputy director-general Suva regional office)
- Surendra Prasat (USP – Chemistry)
- Gurmeet Singh (USP – Marketing and international business)
- Rafiuddin Ahmed (USP – thermo fluids and Energy Eng.)
- Gilianne Brodie (USP – Taxonomy/contact for PACINET network)

### Visit to the EC delegation in Fiji (Suva)

Cristina Casella (3rd secretary regional integration, natural resources and environment) and Rosalba Tuseo (3rd secretary social sectors) want to be involved in the project and agreed on relaying information on PACE-Net in the region.

### 1.2 External Advisory Board (EAB)

Two advisors from Europe, 1 from ACPs, 1 from OCTs and 1 from Aust/NZ have been proposed as EABs. Advisors names and a brief description of their position are required **before 1<sup>st</sup> February 2011** and ballot will be closed on **15<sup>th</sup> February 2011** in order to send them deliverables from WP1 and WP2.

The following suggested names have been discussed during the meeting.

2 Europe	Pacifique (1 OCT – 1 ACP)	1 Aust-NZ
Sabatucci (DG dev EC) <b>APRE</b>	Mennesson (IAC - NC) <b>IRD</b>	NZaid or AusAid <b>IB?</b>
Froissard (DG research EC) <b>IRD</b>	Muraru Ial (ACP-USP) <b>USP</b>	CSIRO (aust) <b>IB and ANU?</b>

### 1.3 WP 6

- Amendment (DoW and ANU's inclusion) in process sent to EC respectively on 5<sup>th</sup> October 2010 and 25<sup>th</sup> November 2010
- ToR validated on the 31<sup>st</sup> of October 2010 by the Consortium
- Cost Reports: on the 2<sup>nd</sup> December 2010 MCST, SPC and IB of BMBF have filled out and sent their cost report for the 1<sup>st</sup> Period (May to October included) **See appendix 6. No payment can be done for the 2<sup>nd</sup> period before receiving a completed cost report.**

### 4. WP5

#### **Two points have been discussed: the Flyers and the e-Newsletter**

**FLYERS:** APRE has proposed two types of flyers (for KS and for a 'wider public'). APRE is convinced of the necessity of having a general flyer which would present the project various services to the public: info days, thematic workshops, Newsletter, trainings. "We do need an institutional flyer that is presenting the aim of the project to a wider public and not only to KSP. Otherwise, all the NON KS stakeholders will feel the project is not for them". However, after discussion, partners proposed to keep only the flyer dedicated to KS as they are the only PACE-Net target group.

**THE E-NEWSLETTERS:** the draft is approved by partners but must be flexible to communicate the most relevant information, at the right moment (e.g. flexibility on date of publication, number of pages, categories). Every partner will propose article or information relevant for the audience (sent to the consortium in order to avoid two articles on same topic).

The e-newsletter is flexible but our idea is that every partner has responsibility to specific topic because each partner has a specific competence in the project and can write a specific article in his sector.

We have identified 8 topics. Each item will have a maximum of 100 words (to convey short and direct information to the reader; for further information it is better to use hyperlinks).

The Pace-Net e-newsletter will be uploaded in the pace-net website. APRE web-master will provide contact to IRD for the on-line publication.

The first e-newsletter will comprise general information (*see appendix 7* "updated note on the project") and preliminary results of mapping (see the 2-page-note in process). To be published and sent on January 20, APRE will receive these documents before January 10, 2011.

APRE needs a list of all relevant contacts for e-newsletter dissemination. Every partner must send their list before January 10n 2011 to Emanuela DANE (emanuela.dane@apre.it) or to the European Project Manager. The list will indicate the name of the person, name of the organisation or position and email address.

**We may want to include in this list, the contact list built for WP 1 and 2. We will send you and Excel file that you will have to fill in.**

OA suggests publishing a general article on PACE-Net in scientific journals dedicated to the Pacific (if any).

Website will be completed and finished **by the end of December 2010.**

Remark: Same size for all partners' logos, map with the Pacific in the middle of the Webpage.




**5. Other remarks**


CG mentions a workshop organised by FRENZ on water (fresh sustainable water allocation) with 10 European researchers (OCTs can apply) and 10 NZ researchers. This will be held in NZ from 13<sup>th</sup> to 18<sup>th</sup> March 2011. Before the 15<sup>th</sup> December 2010, researchers working on this topic can apply; they will be selected in mid-January 2011.

Meeting closed on 3<sup>rd</sup> November 2010

## Appendix 1a: WP1 preliminary results



Pacific Europe NETWORK for Science and Technology

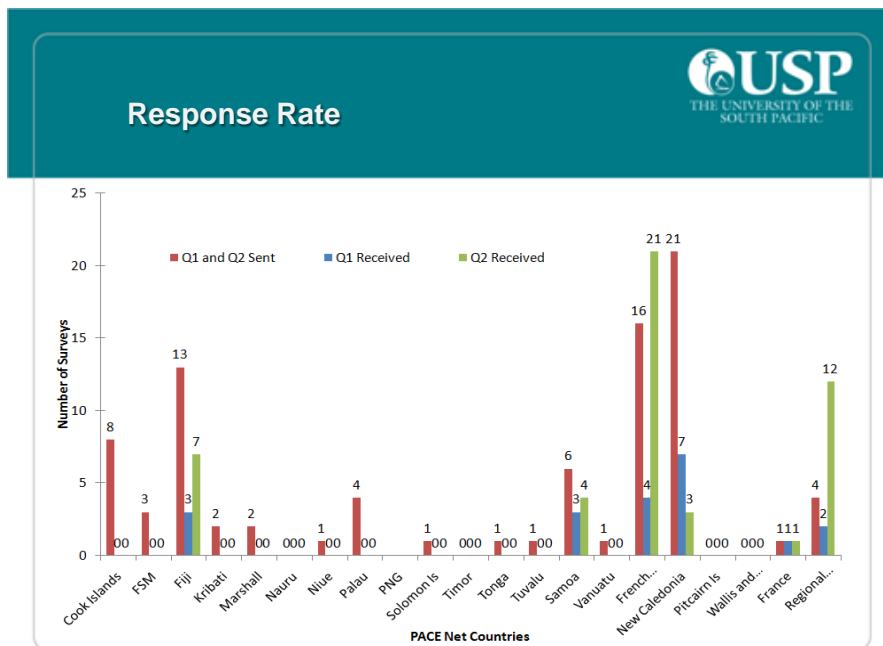


THE UNIVERSITY OF THE SOUTH PACIFIC

### Feedback and Analysis

### Observation Conclusion and Recommendation

Dr. Anjeela Jokhan  
Ms. Kerry Mara  
Mr. Sheikh Izzal Azid



## Response Rate continued



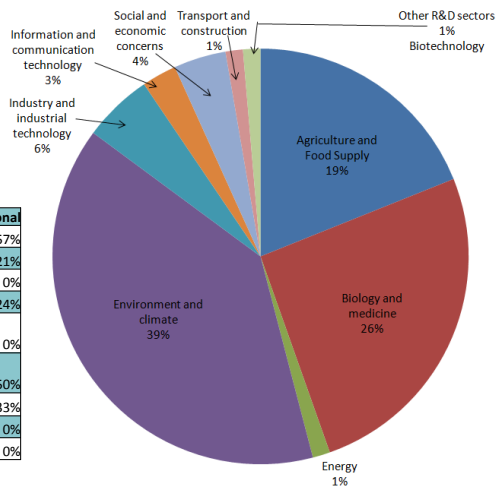
Survey	Questionnaire Sent	Questionnaire 1 Received	Questionnaire 2 Received
ACP	43	6	11
OCT	38	12	25
Regional	4	2	12
Total	85	20	48

**Percentage of Organization Participated:**  
**23.53%**  
*(from questionnaire 1 received)*

## Research and Development Sectors



R&D Sector	ACP	OCT	Regional
Agriculture and Food Supply	29%	14%	57%
Biology and medicine	11%	68%	21%
Energy	100%	0%	0%
Environment and climate	10%	66%	24%
Industry and industrial technology	25%	75%	0%
Information and communication technology	50%	0%	50%
Social and economic concerns	33%	33%	33%
Transport and construction	100%	0%	0%
Other R&D sectors	0%	100%	0%



## Funding of Research Projects in Pacific



	Fiji	%	Samoa	%	French Polynesia	%	New Caledonia	%	France	%	Regional Organization	%
Federal Government					11	52%	1	33%			1	8%
National Government	3	43%	3	75%	16	76%	3	100%	1	100%	2	17%
State Government					6	29%	1	33%				
Provincial Government												
Local Government					1	25%	2	10%				
Regional Organization	1	14%			2	29%	1	33%	1	100%	7	58%
Enterprises					3	14%	2	67%				
Associations					1	5%						
Foundations					1	5%	1	33%			1	8%
IGO's											3	25%
NGO's												
Bilateral Donors				2	50%						12	100%
Multilateral Donors				2	50%				1	100%	3	25%
Others	2	29%										

- Most of the funding in the Pacific comes from the National Governments.
- Second most funding comes from foreign donors.
- Third most funding is from regional organizations.

## Top Five External Donors in the Pacific Region



Position	Donors	Number research groups funded
1st	AUSAID	11
2nd	NZAID	5
3rd	EU	3
4th	USAID	2
4th	UN	2
4th	TAIWAN	2
5th	KOREA	1
5th	JAPAN	1
5th	ROC	1
5th	France	1
5th	Turkey	1
5th	IUCN	1
5th	FED	1
5th	CPER	1
5th	ARC	1
5th	FAO	1
5th	Funds Pacific	1
5th	Global Fund	1

## Top Seven Reasons Given by researchers for cooperation with Donors



1. To get funding for your research.
2. Access to new S&T knowledge.
3. Enlarge network for further research.
4. Increase in scientific publications.
5. Diffusion of best practices (e.g. technique, knowledge).
6. Increase the reputation of your organization.
7. Access to research infrastructures of partners.

## 7<sup>th</sup> Framework Programme



### 1. Do you know the FP7 programme for research and technological development?

- ✓ Yes - 30%
- ✓ No – 55%
- ✓ Have not Answered – 15%

Very few (approx 4%) institutes in the ACP country know about 7<sup>th</sup> Framework Programme. Even very few (approx 4%) regional institution research group know about this funding instrument. However a number of (approx 22%) Institutes in the French Polynesia know about 7<sup>th</sup> Framework Programme.

### 2. Have you or your organization already participated in the FP 7 for research and technological development? (Answer only if you have answered “yes” to the question above) .

- ✓ Yes - 5% (2 groups only one from Fiji and one from French Polynesia)
- ✓ No – 95%



3. Please indicate how you were involved in the proposal?  
(Answer only if you have answered "yes" to the question above)

- ✓ Previous contacts with EU researchers – 1 research group.
- ✓ Participation in an international network – 1 research group (from the two groups who sent the proposal)

4. Was the proposal successful? (Answer only if you have answered "yes" to the question above)

- ✓ Only one research group. (This is from Sustainable Development and Livelihoods Research Group at USP)



5. Please identify the difficulties you faced in being involved in the FP 7 for research and technological development. (Answer only if you have answered "yes" to the first question)

- ✓ Poor information on FP 7
- ✓ Poor knowledge on rules to receive funding
- ✓ Difficulties in finding information
- ✓ Poor knowledge on submission rules
- ✓ No contacts with EU research institutions
- ✓ Difficulties in writing research projects



## Feedback and Analysis Observation, Conclusion and Recommendation

### Observation, Conclusion and Recommendation



1. 23.53% of the organizations based in the Pacific participated in the survey.

2. Most of these participants are the ones visited by research officers. Very few of them responded to email and phone calls. It would have been better if the research officer had visited all countries to help the institutes fill out the form.

3. Also some institutions have submitted the part 1 of questionnaire but only few of their research group submitted part 2.

4. Very little time was given to the institutions to fill out the form. This is another reason of poor response from Institutions.



4. Some institutions complained that the form is too lengthy and ask for their research information which they do not want to give which is part g of questionnaire 2.
5. The survey shows that the National Governments of the PICTs are major player in research. Therefore we need to do the third survey on ministries and government.
6. The survey also shows that there is a clear need for 7<sup>th</sup> Framework Programme training or workshop for the Pacific Research Institutes.
7. EU is third in top funding list and can become the top donor for research if FP7 can be accessed by the Pacific island researchers.
9. Two major reasons for cooperation with donors are to get funding and excess to new S&T knowledge.



## Appendix 1b

SECRETARIAT OF THE PACIFIC COMMUNITY  
SECRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE



**General description & Methodology of the PACE-Net Survey**

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SECRETARIAT OF THE PACIFIC COMMUNITY  
SECRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE

General information on the survey

**Purpose:** situational analysis of S&T research in the Pacific area

**Informs:** various tasks of WP1, 2, 3 and 4

**Timing:** to complete within first 10 months

**Status and agenda:** 3 questionnaires

**Methodology:** (i) definition; (ii) formulation of questions; (iii) pilot tests; (iv) distribution and follow-up; (v) Feedback and analysis (presented by USP); (vi) Conclusions/recommendation (presented by USP)

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### Status and agenda

- 3 questionnaires in the PACE-Net survey:
  - 1 targeting the **Pacific islands organisations** undertaking S&T research
  - 1 targeting the **New Zealand and Australian organisations** undertaking S&T research in and with the region
  - 1 targeting the Pacific island ministries
- **Pacific island-based organisations involved in S&T research (# 1)**
  - Almost finished – September to November
- Australian and New Zealand organisations involved in S&T research with and for the Pacific islands (# 2)
  - Currently underway – November to January/February (**to discuss**)
- Pacific island governmental institutions (# 3)
  - To be launched - February – March 2011 (**to discuss**)

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### PACE-Net questionnaire # 1 and 2

“PACE-Net Questionnaire on Science and Technology Research, Cooperation and Strategies of Organisations in the Pacific involved in Research”

“PACE-Net Questionnaire on Science and Technology Research, Cooperation and Strategies of Australian and New Zealand Organisations involved in Research in the Pacific”

- Targeted research institutions, universities and other academic institutions, regional organisations and private companies in the Pacific islands
- Targeted administration and research teams of each organisations within each organisation
  - 2 parts
  - 2 doc attachments

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SECRETARIAT OF THE PACIFIC COMMUNITY  
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(i) Definition

- **Science and technology** – [www.cordis.europa.eu](http://www.cordis.europa.eu) (FP 7)

Research & Development Sectors	
Agriculture & food supply	Industry & industrial technology
Biology & medicine	Information & Communication Technology
Energy	Social & Economic Concerns
Environment & climate	Transport & Construction

- **Research** – problematic for development organisations like SPC that is not a research organisation:  
*Any applied and basic study involving natural and social sciences that is performed methodically and with scientific rigour to gather and analyse a body of information or data in order to prove a hypothesis or answer a specific question in order to extract new meaning or developing unique solutions*

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SECRETARIAT OF THE PACIFIC COMMUNITY  
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(ii) Formulation of questions

- Examples of questionnaires consulted:
  - Inco-Net SEA-EU-NET
  - Online NET-BIOME– ERANET survey
- Introduction, instructions, definitions and abbreviations

**Part I for the Corporate, Administration and/or Finance**

- Questions pertaining to the identification of:
  - organisations undertaking research activities, the representative and contact person (Task 1.1, WP 3 and 4)
  - role of the organisation in research (Task 1.2)
  - major research donors and beneficiary of the organisation (WP 3 and 4)
  - research capacity of the organisations per R&D sector (funding, staff, student, publications) to identify needs and future funding opportunities (Task 2.3)

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### Part 2 for Research teams

- Question pertaining to the identification of:
  - research teams and researchers and their expertise (WP1 and 4)
  - reasons for cooperation
  - identification of research projects to identify research issues within the broad S&T sector (Task 1.3.1 and WP 4)
  - funding of these projects to analyse capacity within the research issues and eventual gaps (Task 2.3)
  - resume of research project – inventory (Task 1.3.2)
- Final draft sent to the partners for comments (27/08/2010 – 02/09/2010)
  - familiarity with FP7, opinion of research to ameliorate cooperation (WP 4) - APRE
  - The questionnaires were semi-protected – BRGM
  - Questions targeting the political bodies that it was agreed would be placed in the third questionnaire - BRGM
- Translated to French for the OCTs organisations (IRD)

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### iii) Pilot test

- 6 pilot tests (30/08/2010 – 03/09/2010) - 2 from USP, 2 from IRD, 2 from SPC


### (iv) Distribution and follow-up of questionnaire # 1

- Questionnaires were pre-filled from information obtained from annual reports and other reports
  - USP, IRD and SPC
- Via email
  - ACPs (except PNG) – USP:  
*Sent 20-26 September, 2010; Deadline 18 October, 2010*
  - OCTs – IRD  
*Sent 11 – 15 October, 2010; Deadline 31 October, 2010*
  - CROP agencies – SPC  
*Sent 20-26 September, 2010; Deadline 18 October, 2010*
  - PNG & Hawaii – UPNG (to discuss)
  - Questionnaire # 2
    - Sent to NZ and Australia towards the end of October (to discuss)

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## Pacific Europe network for Science and Technology


SECRETARIAT OF THE PACIFIC COMMUNITY  
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USP	IRD			SPC
USP (FJ)	CCT (NC)	IFREMER (NC)	IRD (PF)	SPC (FJ, NC)
FNU (FJ)	CNRS (NC)	Musée NC (NC)	IFREMER (PF)	SOPAC (FJ)
Uni Fiji (FJ)	IAC (NC)	Institut Pasteur (NC)	CRIOBE (PF)	FFA (SI)
SRIF (Samoa)	CNRT (NC)	Géophysical (NC)	ILM (PF)	SPREP (Samoa)
CMI (MI)	IRD (NC)	Bluecham(NC)	UPF (PF)	
NAC (MI)	UNC (NC)	GOPS (NC)	Météo France (PF)	
COM (MI)	Météo France (NC)	ADEME (NC)	Tetiaroa Society (PF)	
PICRC (Palau)	IANCP(NC)	AFD (NC)	Government (PF)	
NUS (Samoa)	DIMENQ (NC)	ISEE (NC)	IRSN (PF)	
SROS (FJ)	Biocenose (NC)	CREDO (Fr)	CEA- LDG Pamatai (PF)	

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SECRETARIAT OF THE PACIFIC COMMUNITY  
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(v) Follow-up

- mid-October onwards
- Via email – USP, IRD and SPC
- Telephone – USP, IRD and SPC
- Meeting the respondents in person – USP, IRD and SPC
  - All respondents within USP, SPC and IRD
  - Travels to and within Fiji (*Uni Fiji, FNU, Ministry of Primary Industry, SRIF, Douglas Pharmaceutical, SPC, SOPAC and Public Departments*) and to Samoa (*NUS, SPREP, Department of Energy, USP agriculture division and SROS*)
  - Where possible fill-up on the spot



**Feedback and analysis: USP**

**Conclusions/recommendation: USP**

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## Appendix 2: WP2 preliminary results

SECRETARIAT OF THE PACIFIC COMMUNITY  
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### D 2.1 Analysis of connections between S&T research and existing development goals in the Pacific region and lessons learned

David Gowty (Planning Adviser, SEPPF)  
Shilpa Kumar-Roiné (PACE-Net Research Officer, SEPPF)  
Olivier Auguin (Planning Adviser, SEPPF)

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SECRETARIAT OF THE PACIFIC COMMUNITY  
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#### Task 2.1

**Purpose:** identify existing linkages between development goals and scientific research in the Pacific region

**Lead participant:** SPC

**Timing:** Months 1-4

**Inform:** Task 2.2 identify science focal areas for Inco-NET and WP 4

**Methodology:** (i) definition and identification; (ii) desktop review and compilation of data; (iii) analysis; (iv) dissemination and discussions with Partners; and (v) finalisation

**Conclusion:** 15 science focal area to discuss in this meeting and develop recommendations for an increased inclusion of S&T in development cooperation programmes

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SECRETARIAT OF THE PACIFIC COMMUNITY  
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(i) Definition and identification

- **development agendas:**
  - current and historical international, regional and national documents (e.x. Pacific Plan, MDGs, Cotonou Agreement, etc);
  - bilateral and multilateral funding agencies (e.x. AusAID, NZAID, EU, UN, etc);
  - regional and national Pacific development programmes and strategies (e.x. SPC, SOPAC, USP, UPNG, IRD, etc); and
  - Other development initiatives in the Pacific that were not classified above (e.x. ICRI, IFRECOR, CRISP, ICCAI, etc).

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SECRETARIAT OF THE PACIFIC COMMUNITY  
 SÉCRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE

- 57 development agendas and programmes were analysed

Agendas	Academic & Research Institutions		Regional Development Agencies	Initiatives	Bilateral Donor	Multilateral Donor
MDGs	USP	IRD	FFA	CRISP	AusAID	UNDP
Mauritius Strategy	UPNG	IPNC	FSM	IFRECOR	ACIAR	UNICEF
Cotonou Agreement	NARI	IAC	PIDP	ICRI	USA	WHO
Pacific Plan	PNG-IMR	IFREMER	SOPAC	Pacific Fund	NZAID	UNFPA
PIF Leader's communiqués	UNC	ILM	SPBEA	GEF	France	UNIFEM
PINDP	UFP	CRIOBE	SPREP	CNRT	JICA	UNAIDS
		Gump Station	SPC	ZoNéCO	Others	UNESCO
				Te mana o te moana		ADB
				GOPS		EU
				ICCAI		

4/10


SECRETARIAT OF THE PACIFIC COMMUNITY  
 SÉCRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE



- **Science and Technology:**
  - Used the thematic areas of FP7 ([www.cordis.europa.eu](http://www.cordis.europa.eu)) as a starting point:

Top-level themes	Thematic breakdown
<i>Agriculture &amp; food supply</i>	Veterinary & animal sciences, agriculture, food, agricultural biotechnology, resources of the sea including fisheries
<i>Biology &amp; medicine</i>	Medicine, health, biotechnology, life sciences, healthcare delivery/services, medical biotechnology
<i>Energy</i>	Nuclear fission, nuclear fusion, fossil fuels, renewable sources of energy, energy storage, energy, transport, energy saving, biofuels, hydrogen & fuel cells, clean coal technologies
<i>Environment &amp; climate</i>	Meteorology, environmental protection, radiation protection, waste management, radioactive waste, sustainable development, earth sciences, climate change & carbon cycle research, water resource management
<i>Industry &amp; industrial technology</i>	Industrial manufacture, materials technology, nanotechnology & nanosciences, industrial biotech
<i>Information &amp; Communication Technology</i>	Electronics, microelectronics, information processing, information systems, telecommunications, automation, robotics, ICT applications, network technologies
<i>Social &amp; Economic Concerns</i>	Social aspects, education, training, information, media, economic aspects, regional development, employment issues, safety ,security
<i>Transport &amp; Construction</i>	Construction technology, transport, aerospace technology, space & satellite research, other technology

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(ii) Desktop review and compilation of data

- Internet search
- Annual reports and reports – USP, IPNC, UPNG, IFREMER, SPC,SOPAC, etc.
- Email/fax requests for S&T research projects funded by the donor agencies for the period 2008-2010 – AusAID, NZAID and UN agencies
- Face to face meetings – ACIAR, CRISP

6/10



SECRETARIAT OF THE PACIFIC COMMUNITY  
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- For each of the agendas and programmes studied:
  - S&T topics; and
  - Cross-cutting issues were noted

S&T topics		Cross-cutting issues	
Water management	Environment	Labour mobility	Human Security
Energy	Disaster Management	Education	Sustainable Development
Climate Change	Water & Sanitation	Human resource	Poverty Alleviation
Food Security	Mineral Resources	Private sector	Tourism
Fisheries & Aquaculture	Culture, Social and Human Sciences	Governance & Policy	Disabilities
ICT	Biodiversity	Economic Development	Gender Equality
Agriculture & Forestry	Technology and Innovation	Trade	
Health	Indigenous Knowledge Systems		
Transport	Media Studies		
Infrastructure	Marine Studies		

7/10

SECRETARIAT OF THE PACIFIC COMMUNITY  
 SÉCRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE



(iii) Analysis

- Each time an agenda or a programme mentioned a S&T topic, it was tallied (see Table 1,2,3,4,6, and 7 in the report)
- A total was done at the end for all the 57 agendas and programmes
- Conclusions:
  - From the 57 development agendas and programmes analysed 15 priority S&T topics were identify:

(1) Health	(6) Energy	(11) Transport
(2) Fisheries and aquaculture	(7) culture, social and human sciences	(12) Water and Sanitation
(3) Biodiversity	(8) ICT	(13) Food security
(4) Environment	(9) Agriculture and forestry	(14) Waster management
(5) Climate change	(10) Disaster management	(15) Mineral resource

- SPC has also attempted to propose some recommendations

8/10



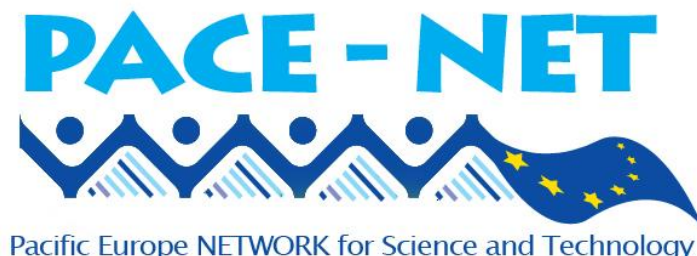
(v) Dissemination and Discussion

- The draft of D2.1 was sent to all Partners on the 22/11/2010
- SPC intends to bring more analysis and information to the report:
  - Add a map of the Pacific region and indicate in which countries the priority S&T topics occur
  - To facilitate the WP 3 and 4 in the setting up of the PACE-Net network SPC would like to add in the annex what are the physical barriers that limit the major research organisations of the Pacific Island (internet connection, direct air routes, videoconference facilities, direct airline routes to Europe) to participate to such networks
- Invite the Partners for their comments and inputs and if possible to start discussion on Task 2.2 identify science focal areas for Inco-Net.

9/10

## Appendix 3: Survey for governmental bodies

### PACE-Net Questionnaire on Science and Technology Research, Cooperation and Strategies of Governmental Institutions in the Pacific



#### Introduction

The PACE-Net project on Science and Technology (S&T) research, cooperation and strategies aims at strengthening regional and international cooperation in S&T research for development between the Pacific Island Countries of the Asian Caribbean Pacific<sup>1</sup> group, the Pacific Overseas Countries and Territories<sup>2</sup>, Australia, New Zealand and the European Union (EU) member countries. The PACE-Net also seeks to incorporate S&T issues in development policies of the Pacific island in order enhance the effectiveness of these policies.

To inform the above activities and to build an efficient network, it is necessary to appraise the situation of science and technology research in the Pacific from all aspects, including the role that the governmental institutions may play in science and technology research of the Pacific island region.

Your answers to this questionnaire will:

- permit to identify the best approach to enhance the network.
- assist in articulating recommendations of greater inclusion of priority research programmes in regional and national policies *via* Pacific Island Forums Leaders' endorsement; and
- identify the strategic areas of future collaboration and cooperation in research in the Pacific under the auspices of the EU's funding instrument of the 7<sup>th</sup> Framework Programme (FP 7) for research and technological development.

For more information on the PACE-Net project, please consult the website: [www.pacenet.eu](http://www.pacenet.eu).

Your institution is kindly requested to fill in the questions provided below. The questionnaire pertains to information on your policy, your collaboration and cooperation activities and your code of ethics for S&T research activities.

For your reference, terminology definition (research, collaboration and cooperation, etc.) and a glossary of broad science and technology research themes have been provided below.

<sup>1</sup> Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Samoa and Vanuatu.

<sup>2</sup> French Polynesia, New Caledonia, Pitcairn Islands, Wallis and Futuna

## Pacific Europe network for Science and Technology

In order to allow for a prompt analysis of your data, please return the completed questionnaire no later than **15<sup>th</sup> March, 2011**.

Further information or inquiries; please do not hesitate to contact:

- Fanny Pascual, PACE-Net European Project Manager at Institut de recherche pour le Développement (IRD) on email [fanny.pascual@ird.fr](mailto:fanny.pascual@ird.fr) or telephone (687) 26 07 97
- Izzal Azid, PACE-Net Research Officer at University of South Pacific on email [azid\\_s@usp.ac.fiji](mailto:azid_s@usp.ac.fiji) or telephone (679) 32 32859
- Shilpa Kumar-Roiné, PACE-Net Research Officer at Secretariat of the Pacific Community on email [shilpakr@spc.int](mailto:shilpakr@spc.int) or telephone (687) 26 20 00

### **Definitions and glossary**

**Collaboration:** researchers or research organisations with complementary skills, who share resources and responsibilities to jointly plan, implement and evaluate research work to achieve common goals

**Cooperation:** individuals or organisations that associate to facilitate research by providing funds, equipment purchasing, etc.

**Research:** any applied and basic study involving natural and social sciences that is performed methodically and with scientific rigour to gather and analyse a body of information or data in order to prove a hypothesis or answer a specific question in order to extract new meaning or develop unique solutions.

**Agriculture and food supply** includes veterinary and animal sciences; agriculture; food production and food security; agricultural biotechnology and resources of the land and sea

**Biology and medicine** includes medicine; health, including public health and sanitation; biotechnology; life sciences; healthcare delivery/services; medical biotechnology

**Energy** includes nuclear fission; nuclear fusion; fossil fuels; renewable sources of energy; energy storage; energy transport; energy saving; biofuels; hydrogen and fuel cells; other energy topics; clean coal technologies

**Environment and climate** includes meteorology; environmental protection; radiation protection; waste management; radioactive waste; sustainable development; earth sciences; climate change and carbon cycle research; water resource management; biodiversity; disaster management, sanitation

**Industry and industrial technology** includes industrial manufacturing; materials technology; nanotechnology and nanoscience; industrial biotechnology; mineral and metal mining; sea bed resources

**Information and communication technology** includes electronics and microelectronics; information processing, information systems; telecommunications; automation; robotics; ICT application; network technologies

**Social and economic concerns** includes social aspects; education and training; information and media; economic aspects; regional development; employment issues; safety; security; governance; private sector; poverty alleviation; gender equality; culture

**Transport and construction** includes construction technology; transport; aerospace technology; space and satellite research; other technology not included elsewhere

## Pacific Europe network for Science and Technology

1. Please provide your contact information (please fill in the space provide):

Country:	
Name of the ministry:	
Name of contact person:	
Position (job title):	
Address:	
Email:	
Tel. No:	
Fax No :	
Website (if available):	

2. Does your ministry have a science and technology policy? (please tick in the appropriate box):

<input type="checkbox"/> YES (please go to questions 2.1 and 2.2 below)	<input type="checkbox"/> NO (please go to question 2.3 below)
---	---

2.1. If yes, has your ministry's science and technology policy identified RS&T priority areas? Please indicate below what are the priority areas.

<input type="checkbox"/> <u>Agriculture, fisheries and food supply</u> <input type="checkbox"/> <u>Biology and medicine (health)</u> <input type="checkbox"/> <u>Energy</u> <input type="checkbox"/> <u>Environment and climate</u> <input type="checkbox"/> <u>Industry and industrial technology</u>	<input type="checkbox"/> <u>Information and communication technology</u> <input type="checkbox"/> <u>Social and economic concerns</u> <input type="checkbox"/> <u>Transport and construction</u> <input type="checkbox"/> <u>Others (specify): _____</u>
--	---

2.2. Is your ministry's science & technology policy publically available?

<input type="checkbox"/> YES (please supply link):	<input type="checkbox"/> NO
--	-----------------------------

2.1. If your ministry's science and technology policy has not identified priority areas, are there key RS&T areas of interest to your ministry?

<input type="checkbox"/> <u>Agriculture, fisheries and food supply</u> <input type="checkbox"/> <u>Biology and medicine (health)</u> <input type="checkbox"/> <u>Energy</u> <input type="checkbox"/> <u>Environment and climate</u> <input type="checkbox"/> <u>Industry and industrial technology</u>	<input type="checkbox"/> <u>Information and communication technology</u> <input type="checkbox"/> <u>Social and economic concerns</u> <input type="checkbox"/> <u>Transport and construction</u> <input type="checkbox"/> <u>Others (specify): _____</u>
--	---

3. Are there any existing codes of ethics for your science & technology research activities? (please tick in the appropriate box):

## Pacific Europe network for Science and Technology

<input type="checkbox"/> YES If yes, can you precise which one? And can you provide a link/document to the code?	<input type="checkbox"/> NO
---	-----------------------------

4. Does your ministry fund any science & technology research activities?

<input type="checkbox"/> YES If yes, can you provide your budget for the following years (please specify the currency): 2008:                      2009:                      2010:	<input type="checkbox"/> NO
---	-----------------------------

5. Does your ministry receive funding from any external agencies to conduct your S&T research activities?

<input type="checkbox"/> YES If yes, please supply the names:	<input type="checkbox"/> NO
--	-----------------------------

6. Does your ministry have any science & technology research collaborations?

<input type="checkbox"/> YES (please go to question 6.1)	<input type="checkbox"/> NO
--	-----------------------------

6.1. If yes, please state with which organisations and countries your ministry collaborates with for research activities (5 major organisations in descending order of importance):

21. <b><u>Organisation</u></b>	22. <b><u>Country</u></b>
23. <b><u>1.</u></b> _____	24. _____
25. <b><u>2.</u></b> _____	26. _____
27. <b><u>3.</u></b> _____	28. _____
29. <b><u>4.</u></b> _____	30. _____
31. <b><u>5.</u></b> _____	32. _____

We thank you for the time taken to reply to this questionnaire.

Please send your completed questionnaire no later than March 15, 2011 to either:

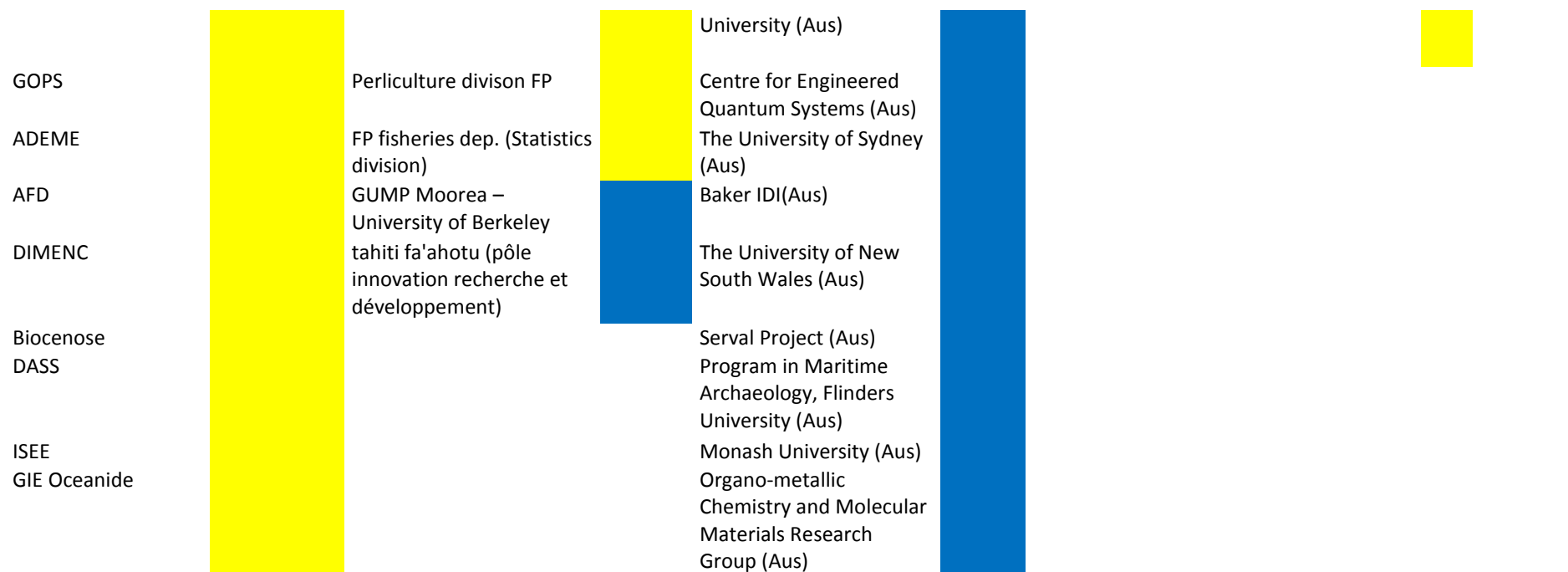
- Fanny Pascual, PACE-Net European Project Manager at Institut de recherche pour le Développement (IRD) on email [fanny.pascual@ird.fr](mailto:fanny.pascual@ird.fr) or telephone (687) 26 07 97
- Izzal Azid, PACE-Net Research Officer at University of South Pacific on email [azid\\_s@usp.ac.fiji](mailto:azid_s@usp.ac.fiji) or telephone (679) 32 32859
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## Pacific Europe network for Science and Technology

### Appendix 4: Detailed list of Key stakeholders

New Caledonia	KS	French polynesia	KS	Aust - NZ	KS	Europe	KS
CCT		IRD		university of Auckland (NZ)		Karlsruhe Institute for Technology, Centre for Disaster Management and Risk Reduction Technologies (Germany)	
CNRS	no more in NC	IFREMER		AUT university (NZ)		Jogeva Plant Breeding Institute (Estonia)	
IAC		CRIOBE		Centre for International Health, University of Otago (NZ)		T.I.B. Development (Netherlands)	
CNRT		ILM		ANU (Aus)		INESC Porto (Portugal)	
UNC		UPF		Australian Defence Science and Technology Organisation (Aus)		CIRCLE, Lund university (Sweden)	
Météo France		Météo France		Oxford Systematics (Aus)		Università di Palermo (Italy)	
Institut d'archéologie		Tetiaroa Society		Victoria Police (Aus)		Instituto Nazionale di Geofisica e Vulcanologia - Sezione di Pisa (Italy)	
IFREMER		Government of French Polynesia		Department of Archaeology and Natural History (Aus)		University of Oxford (UK)	
Musée NC		IRSN		CQ University - Institute for Resource Industries and Sustainability (Aus)		CREDO	
Institut Pasteur		CEA- LDG Pamatai		BioDetectors Pty Ltd & Quintain Consulting Pty Ltd (Aus)		CIRIMAT University Paul Sabatier	
Geophysical		AAMP PF		University of Adelaide, Faculty of Health Sciences (Aus)		Agro-Sup Dijon, Université de Bourgogne (France)	
BlueCham		Service équipement PF		Department of Chemistry, La Trobe		INRA	

## Pacific Europe network for Science and Technology



**TOTAL**

<b>NC</b>	<b>4</b>	<b>FP</b>	<b>5</b>	<b>AUS-NZ</b>	<b>20</b>	<b>Europe</b>	<b>11</b>	<b>40</b>
<b>%</b>	<b>10,0%</b>		<b>12,5%</b>		<b>50,0%</b>		<b>27,5%</b>	<b>100,0%</b>



## Appendix 5: Renewable energy project at USP

Authors: Gardiner, Derek, Roy, Sukanta, Djurovic, Momir, De Alwis, Ajith, Yoshino, Hiroshi, Raturi, Atul, Ravindran, M, Dasappa, S, Kumar, Arun, Hasan, Mohd Nordin

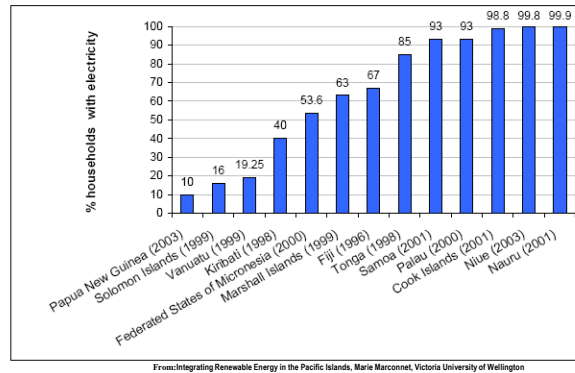
### Powerpoint presentation by Atul Raturi (USP)

*(Some of the photos have been removed to lighten the document)*

## Litghting Up the Pacific sustainably

There are 1.4 billion people without access to electricity (IEA, 2009).

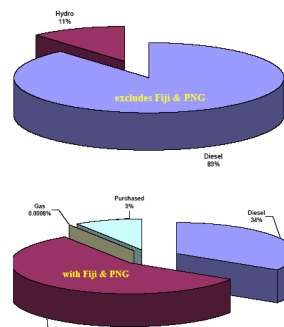
### Access to Electricity (PICs)



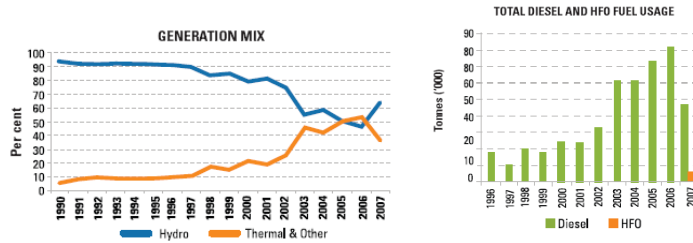
### Fuel for Electricity Generation

Cook Islands	All Diesel
FSM	All Diesel
Kiribati	All Diesel
Marshall Islands	All Diesel
Niue	All Diesel
Palau	All Diesel
Tuvalu	All Diesel
Tokelau	All Diesel
Tonga	All Diesel
Vanuatu	93% Diesel

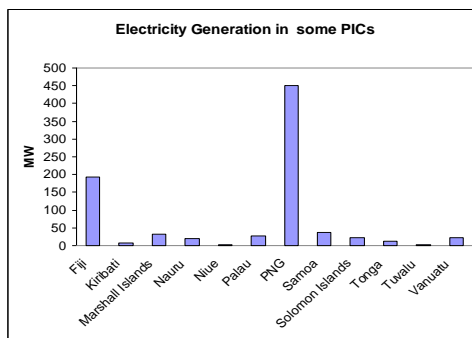
**PNG** 35% Hydro, 39% oil, 25% Natural gas



## Fiji Electricity Authority (FEA) Electricity generation mix

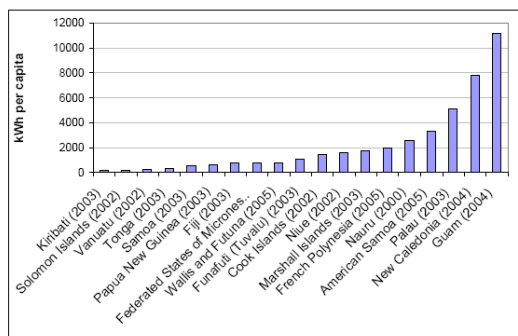


## Electricity Generation



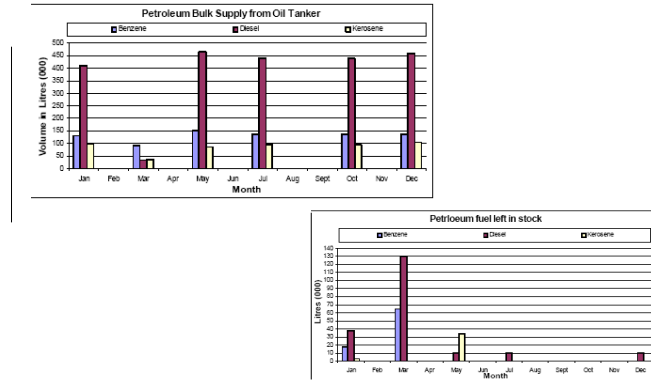
Total Capacity ~ 1,100 MW

## Electricity per Capita

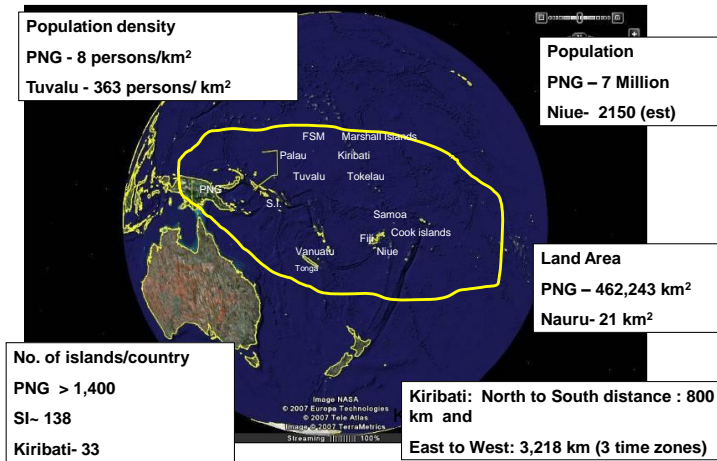


From: Integrating Renewable Energy in the Pacific Islands, Maria Marconnet, Victoria University of Wellington

## Petroleum Supply (Tuvalu-2005)



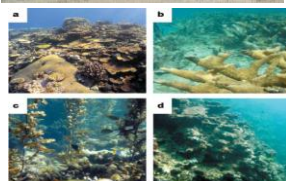
## Pacific Island Countries (PICs)



## Climate Change & Fiji Islands



Fiji climate change could result in a 100 per cent increase in cyclone damage, an increase in dengue fever cases of between 20 and 30 per cent and a decline in crop yields of up to 15 per cent.  
**Not If But When : World Bank Report(2006)**



Coral Bleaching and a decrease in coral cover  
 Reefs : 50% reduction

## Carteret Islands, PNG



By 2015: All 6 (7 now!!) Islands will be submerged. 2000 people displaced

The sea has dissected the Huen Island into two.



Photo: Times

Similar stories in Kiribati, Tuvalu and others

## Mount Jaya , New Guinea Island



Photo:www.rbgekew.org.uk

Temperature increase on the Island ~ 0.3 Degrees every decade ; Among the fastest in the world

Glaciers have receded more then 300 meters in the last 30 years

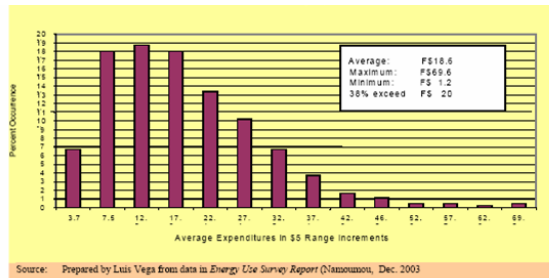
Flora and fauna: waiting to be discovered ( if survive !!)

## Lighting Sources in PICs

Country	Year	Elec	Wick lamp	Pressure lamp	Other	Comments
Fiji	1996	62	29	8	1	
Marshall Islands	1999	63	— 31 kerosene —	5	15	'Other' is solar PV
	rural	13	— 78 kerosene —			
Palau	2000	~100	0	0	0	
PNG	1996/97	76	18	4	-	
	Moresby	12	57	4	28	'Other' is mostly open fire.
	national					
Samoa	2001	93	- 7 kero or benzine -		0	
Tonga	1996	79	36	4	7	'Other' includes solar 3% & genset 2%
Vanuatu	1999	19	— 74 kerosene —	6		'Other' is mostly wood & coconut waste;
	rural	7	— 85 kerosene —	7		Households are 77% rural & 23% urban

PIREP Regional Report 2004

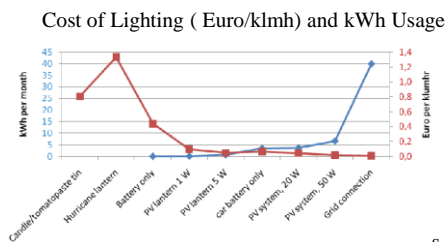
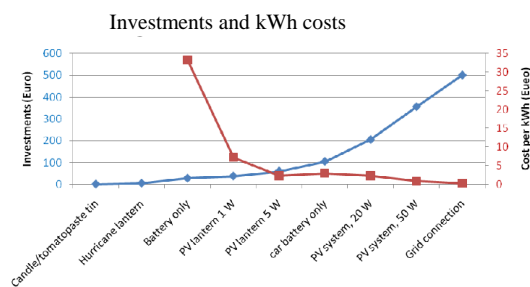
Monthly spending on lighting fuel & batteries in un-electrified Fiji households(2003)



Its not poverty but the "Energy poverty "that makes them use poor quality lighting!!

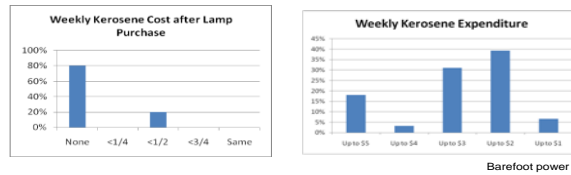
## Fuel Based Lighting Banish the Kerosene lamp

- A kerosene wick lantern produces~ 1 lux (lumen/m<sup>2</sup>) at 1 m distance. (recommended levels- 300-500 lux for common tasks).
- Annual light output of a kerosene lamp = light produced by a 100 W incandescent lamp in 10 hours : **Highly inefficient.**
- Cost of lighting (\$/lumen hour): 325 times of a bulb and 1625 times that of a CFL ( In Africa- similar numbers for PICs).
- About 90% of the people in PNG use kerosene for lighting.
- 35 Million Liters/ year, ~ 98 M kg of CO<sub>2</sub> equivalent.
- Replacing half of kerosene lamps in PNG can generate ~50,000 CERs annually (Carbon trading potential).



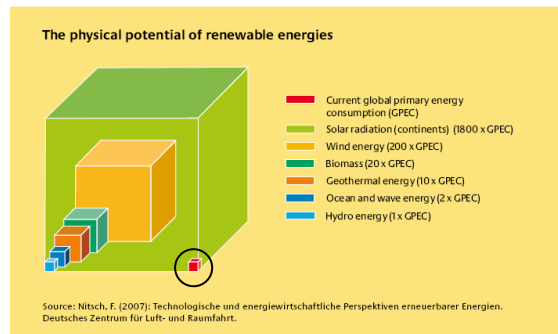
Source ; EnDev

## Kerosene costs reduction



After buying a 1W LED light for 20 \$ ( Vanuatu)

## Renewable Energy is the Answer



## Solar Home Systems in Fiji

- Department of Energy (FDOE) operated.
- Supply, Installation and Maintenance works are undertaken by private companies.
- Currently installed in Bua, Cakaudrove and Macuata Provinces in Vanua Levu and smaller islands.
- Consumers pay FJ\$50.00 up-front.
- Once installed – Monthly tariff of FJ\$14.00.
- Money is sent back to the FDOE to be kept in respective villages' trust account for maintenance purposes.
- Approximately 1200 households installed with SHS
- Approximately 30 villages and settlements

## Solar Electrification ( Kiribati)

- Solar Electricity development since 1980's
- About 2,200 SHS ( ~100 W<sub>p</sub>) and 200 public utility installations (150-600 W<sub>p</sub>)
- Kiribati Solar Energy Company : Rural utility – Manager and owner of solar equipment
- Monthly fee A\$ 9 ( not enough to sustain the operations)

## Fully Renewable Tuvalu



- e8 Solar power project
- 40 kW Grid Connected PV system
- 410,000 USD
- 56MWh annual generation
- Saved 17,000 L of diesel (14 months)
- Tuvalu plans to be 100% RE electrified by 2020.

## REP-5



- EDF 9 Initiative (2006-2009): 12.38 Million Euros
- Provides funding for RE projects in 5 PICs
  - FSM
  - Nauru
  - Niue
  - Palau
  - RMI

## FSM



2 Mini grid systems  
5 Grid connected systems

<http://eu-fsm-solar.blogspot.com/>

## Nauru



Grid connected PV system- Nauru College-40kW<sub>p</sub>,  
Cost: 300,000 Euros

[www.rep5.eu](http://www.rep5.eu)

## Niue



Grid connected 20kW<sub>p</sub> PV system ,350,000 Euros

[www.rep5.eu](http://www.rep5.eu)



## Palau



Grid-connected PV system for the Capitol complex –100kW<sub>p</sub>, Cost: 1,040,000 Euros

[www.rep5.eu](http://www.rep5.eu)

## Marshall Islands



420 Solar Home Systems- 200W<sub>p</sub> each  
Cost: 1.35 Million Euros

[www.rep5.eu](http://www.rep5.eu)

## Butoni Wind Farm (Fiji)



37 turbines: 10 MW

Commissioned  
October 2007

Photos: Anikta Raturi

## Biofuels

CNO, Ethanol and Biodiesel



CNO usage in PNG

Two Pilot projects in Fiji ( DOE) (2000-2001) : Dual fuel systems

- 80 kVA generator in Vanuabalavu, Lau
- 45 kVA generator in Welagi, Taveuni

Concept works

Supply chain and management issues

Interest in all PICs

## USP RE Projects

### KOICA – USP Renewable Energy Project

•2 Million USD

•3 components

1. **Capacity Building** : GA Scholarships
2. **A 54 kW Grid-Connected PV System**  
(48 kW + 6kW)
3. **Renewable Energy Resource**  
**Monitoring & Data Centre**

## Grid Tied PV System



USP Lower Campus

PV site

## Standalone PV System



- Funded by US Pacific Environment Small Grants (FJD 42,000)
- 1.2 kW PV system testing under real-world conditions
- Monitoring and evaluation : M.Sc. project

## A Wind-solar hybrid system



- 1.02 kW Wind-Solar Hybrid System for street lighting
- Funded by the French Embassy
- M.Sc. Project

## Two projects being funded by the French Embassy

- A 1.5 kW solar PV system
- Strategies for replacing kerosene lamps by Solar LED/CFL lights- Testing of available lights and Microfinancing
- Total : Approx. FJD 100,000

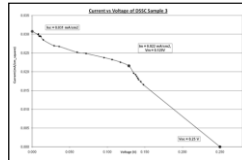
## Plant Dyes based Solar Cells

All our traditional sources of energy ( except wind energy and hydropower are the result of Photosynthesis.

Dye Sensitized Solar cells mimic Photosynthesis process.

Organic dyes are used in place of Silicon to absorb sunlight.

Various plant dyes are being tested: M.Sc. Project



In PNG- Berries



In Fiji – Hibiscus flowers

## Biofuel Projects

- Coconut Oil/Diesel Hybrid Fuels: M.Sc. Project
- Cassava based Ethanol – M.Sc project

## Ocean Power

M.Sc.projects in

- Tidal power assessment
- Wave energy assessment
- Ocean Thermal Energy Conversion (OTEC)



## Wind Power

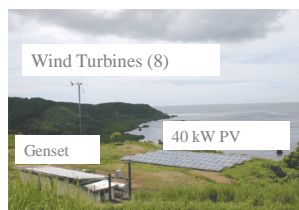
### M.Sc. Projects

- Assessment of Wind Energy potential
- Design and testing of airfoils and blades.



### Nabowalu Hybrid System :

#### Then and Now



720 kWh/day , 60% from RET.

**Commissioned in 1998**

#### TODAY



Trained Manpower  
Needed

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### Appendix 6: Cost report template

Personnel costs	Amount	Profile of the staff member (function, statute (permanent/temporary additional), duties, etc)		Hourly or Monthly rate	Time spent (Person or hours/Month)	WP N°	
	0,00			0,00	0,00		
	0,00			0,00	0,00		
	0,00			0,00	0,00		
	0,00			0,00	0,00		
	0,00			0,00	0,00		
<b>Total Personnel (1)</b>	<b>0,00</b>						
Travel/Subsistence	Amount (excl VAT)	Dates of travel	Origin / Destination	Name of staff travelling	VERY PRECISE purpose of the travel and link with the project	WP N°	
	0,00						
	0,00						
	0,00						
	0,00						
	0,00						
	0,00						
<b>Total Travel/Subsistence (2)</b>	<b>0,00</b>						
Equipment costs <small>(any lack of depreciation must be based on a legal document to submit by the organisation proving the possibility not to apply depreciation)</small>	Amount (excl VAT) <b>DEPRECIATED</b>	Nature of the equipment (precise description)	Full price (excl VAT) of the equipment	Depreciation system applied (rate, periodicity, ...)	% use for the project	Purpose of the equipment and link with the project	WP N°
	0,00						
	0,00						
<b>Total Equipment (3)</b>	<b>0,00</b>						
Consumables/supplies <small>(consumables usually relate to the purchase, fabrication, repair or use of any materials, goods or equipment and software which: are not placed in the inventory of durable equipment of the contractor)</small>	Amount (excl VAT)	Category of consumables	Nature of the consumables subcategory (precise description)	Purpose of these consumables and link with the project		WP N°	
	0,00						
	0,00						
	0,00						
	0,00						

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<b>Total Consumables (4)</b>	<b>0,00</b>				
<b>Subcontracting</b> (agreement on business conditions with one or more beneficiaries, in order to carry out part of the work of the project without direct supervision of the beneficiary and without relationship of subordination)	Amount (excl VAT)	Date of agreement EC (technical annex or specific agreement)	Nature of the tasks subcontracted (precise description)	Link with the project and need of this subcontract	WP N°
	0,00				
	0,00				
	0,00				
<b>Total Subcontracting (5)</b>	<b>0,00</b>				
<b>Other direct costs</b> (any other costs not covered by other FP7 categories of costs - before claiming such costs please check the nature of the cost in regard to FP7 financial rules)	Amount (excl VAT)	Nature of the cost (precise description)		Link with the project	WP N°
	0,00				
	0,00				
	0,00				
	0,00				
<b>Total Other costs (6)</b>	<b>0,00</b>				
	<b>0,00</b>	<b>Total Direct costs (1 + 2 + 3 + 4 + 5 + 6)</b> <b>(equal to direct costs declared in the original form C)</b>			
<b>Indirect costs/Overheads</b> (For reminder indirect costs must be in line with ICM negotiated (real, simplified, standard flat rate, transitional flat rate). This is not limited to 7% this being the EC reimbursement rate)	Amount	For ICM 'real indirect costs' and 'simplified method'; precise method of calculation For ICM 'flat standard rate' and 'transitional flat rate', simply indicate 20 %		For ICM 'real indirect costs' and 'simplified method', please indicate nature of costs covered	
<b>Adjustment(s)</b> (correction of costs declared in previous period(s))	Amount (excl VAT)	Nature of the cost (precise description (based on details requested for the relevant category of costs))		Detail of the calculation of the adjusted amount (for each component of the adjustment) - if necessary use free format to show the calculation	WP N°
	0,00				
	0,00				
	0,00				
	0,00				
<b>Total Adjustment</b>	<b>0,00</b>				
<b>General total of costs declared in original form C</b>	<b>0,00 €</b>				

## Appendix 7: Updated note on the project

### PACE-Net (INCO-Net)

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**Duration of the project: May 2010 – April 2013**

<http://www.pacenet.eu/>

Since May 1<sup>st</sup> 2010 (official starting date), PACE-Net is the 10th INCO-Net project (acronym for « *International CO-operation- Networking* ») financed by the European program *Capacity* (7th Framework Program).

INCO-Nets projects deal with bi-regional dialogue between EU and 10 regions: Western Balkans, Mediterranean countries, Eastern Europe and Central Asia, Asia, Latin America, Central America, Sub-Saharan Africa, Caribbean countries and Pacific region. These dialogues aim at promoting participation in FP7 and long-term regional integration. They would support cooperation, collaboration, sharing good practices and information as development method in research.

PACE-Net is the INCO-Net project dedicated to Pacific area.

### Objectives of the Project:

- To reinforce existing dialogues and Networks and promote regional integration for these networks.
- To identify S&T international cooperation activities and programs towards the Pacific region.
- To strengthen the coordination of S&T cooperation and the complementarities with activities and programs carried out by other Community instruments.

### Actions set up:

PACE-Net actions for the next three years:

- State of the art of Pacific S&T research (*via* questionnaires)
- Thematic workshops to identify priorities in Pacific region
- 3 bi-regional dialogue platforms (EU-Pacific) based on results from state of the art and thematic workshops. These meetings will reinforce dialogue and network between the 2 regions, particularly on identified priorities
- Info days and training on FP7 and implementation of National Contact Points in the Pacific (NCPs)
- Communication and information on the project and its results.

### Partnership:

#### 10 partners in PACE-Net consortium:

Institut de Recherche pour le Développement (IRD) - *France* - [www.ird.fr](http://www.ird.fr)

Agenzia per la Promozione della Ricerca Europea (APRE) - *Italy* - [www.apre.it](http://www.apre.it)

International Bureau of the Federal Ministry of Education and Research (PT-DLR) - *Germany* - [www.pt-dlr.de/pt](http://www.pt-dlr.de/pt)

Malta Council for Science and Technology (MCST) - *Malta* - [www.mcst.gov.mt](http://www.mcst.gov.mt)

Australian National University (ANU) - *Australia* – [www.anu.edu.au](http://www.anu.edu.au)

Ministry of Research, Science and Technology (MoRST) – *New Zealand* - [www.morst.govt.nz](http://www.morst.govt.nz)

University of South Pacific (USP) - *Fiji* - [www.usp.ac.fj](http://www.usp.ac.fj)

Secretariat of the Pacific Community (SPC) – *New Caledonia* - [www.spc.int](http://www.spc.int)



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University of Papua New Guinea (UPNG) - *Papua New Guinea* - [www.upng.ac.pg](http://www.upng.ac.pg)  
Euro Research Support Limited (CGC) - *New Zealand* - [www.frenz.org.nz](http://www.frenz.org.nz)

### IRD in PACE-Net

Because of its presence and action in the Pacific area, the IRD coordinate PACE-Net project *via* its Centre based in Noumea (New Caledonia).

IRD is involved in the 6 Work Packages (WP) but acts as leader for 2 of them. WP6 focuses on the (administrative and financial) management of the project and on the organization of the Kick-off meeting (held in Noumea, in June 2010). WP4 about “*EU-Pacific S&T cooperation platforms: capacity building and partnership*” aims at organising 5 thematic/transversal workshops (two per year) and info days on FP7 for institutions and key stakeholders.

### News

- **July 2010:** Minutes of the Kick off meeting; set up basis of the Project and are the starting point for PACE-Net activities.
- **28<sup>th</sup> September – 5<sup>th</sup> October 2010:** visit to Directorate General of EC in Brussels to identify EC priorities, procedure and work program.
- **15<sup>th</sup> October 2010:** PACE-Net website is on line since, with the key stakeholders’ application campaign.  
**APPLY NOW!** <http://www.pacenet.eu/>
- **30<sup>th</sup> November – 3<sup>rd</sup> December 2010:** Consortium committee meeting in Suva on the state of the art in the region. USP, UPNG and SPC (partners involved in WPs dedicated to the state of the art) have produced a questionnaire for organisations interested in Pacific S&T research. The survey will start in September and a preliminary report will be written in November 2010.
- **Mid-March 2011:** closing date for the survey.
- **28<sup>th</sup> March – 1<sup>st</sup> April 2011:** FP7 training session for multipliers in New Caledonia (identification of NCPs)
- **1<sup>st</sup> semester 2011:** first thematic workshop organized in the Pacific
- **June 2011:** major meeting will combine the 1<sup>st</sup> bi-regional dialogue platform, second thematic workshop and FP7 info days in the Pacific.

### Contacts

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