

24th December 2003.

Ms Edna Tait
Director, UNESCO Office for the Pacific States
PO Box 615, Apia, Samoa.

Dear Edna,

**RE: Activity-Financing Contract no. 03/108 with the Vanuatu Kaljoral Senta
(Vanuatu Cultural Centre):**

The UNESCO-LINKS, Ministry of Education, Environment Unit and Vanuatu Cultural Centre project: "Strengthening indigenous knowledge and traditional resource management through schools: A pilot partnership involving local communities, teachers, resource managers and culture specialists": Brainstorming Workshop (December 2004)

In fulfillment of our obligations under this contract, please find following the following documents which constitute the report of the "brainstorming workshop":

- a) the Plan of Action for bringing indigenous knowledge (IK) into the science curriculum (pp.2-3);
- b) the Plan of Action Time Table for Implementation and Designation of Agencies Responsible (pp.4-5);
- c) the Participants List of the workshop (pg.6);
- d) the Workshop Agenda (pp.7-8);
- e) the Workshop Proceedings (Notes) (pp.9-20);
- f) the Financial Report (pp.21-22).

All original receipts supporting the Financial Statement have already been sent in the mail to you.

Yours sincerely,

Ralph Regenvanu
Director, Vanuatu Cultural Centre.

Plan of Action for bringing indigenous knowledge (IK) into the science curriculum

As part of the *Rethinking Vanuatu Education* initiative, a UNESCO-sponsored brainstorming workshop was held at the Vanuatu Cultural Centre from the 1st until the 4th of December 2003. Participants included representatives from the Ministry of Education (MoE), the Vanuatu Cultural Centre (VKS), the Environment Unit (Env.Unit), Centre National de Recherche Scientifique (CNRS) and the UNESCO project “Local and Indigenous Knowledge Systems in a Global Society” (LINKS), who elaborated the following Plan of Action for bringing indigenous knowledge into the science education curriculum:

Awareness-raising

OBJECTIVE: To gain support for this initiative, particularly among decision makers, parents, communities and teachers, by raising awareness as to its rationale and benefits

ACTIVITIES:

1. Radio programs – for the MoE, VKS, and Env.Unit weekly programs
2. Newspaper articles - written jointly by project partners
3. Information meetings with Malvatumauri, VNCW and other stakeholders
4. Information meetings within the education sector (principal’s meetings, ZCA meetings, private and church schools, etc)
5. Launch national school competition promoting IK
6. LINKS posters on value of IK to be produced in Bislama and distributed through MoE, VKS, and Env.Unit
7. Distribution of *Tree of Opportunity* and *Rethinking Vanuatu Education* report to all schools

Endorsement of project by NEC (National Education Commission)

OBJECTIVE: To gain official MoE and Government support for and endorsement of this initiative

Evaluation of existing programs that include IK (lessons learnt)

OBJECTIVE: To evaluate existing initiatives that already include IK in the school syllabus to learn from their strengths and weaknesses

ACTIVITIES:

1. Identify schools that already use IK in the classroom (including year 1 vernacular classes)
2. Prepare introductory letter and questionnaire and distribute through MoE network to these schools and their communities (separate questionnaires for community members/parents, teachers and students)
3. Analyze feedback from questionnaires
4. Visit selected schools, if needed
5. Evaluate CAPS (Community and Parent Support for Schools) program, assess strengths and weaknesses, begin revision towards developing a teacher training package in facilitating community involvement in education

Encourage student enquiry into IK in their own communities (primary level)

OBJECTIVE: To begin to break down the division between the classroom and community; to foster an interactive relationship between the community and the school; to develop an attitude among students, teachers and community members that encourages transmission of IK both in the classroom and in the home; to encourage involvement of community members as educators

ACTIVITIES:

1. Get approval from NEC for the program:
 - Develop concept paper that includes:
 - Objectives, Background, Rationale
 - Strategy, Methodology
 - Provide examples
2. Produce an introductory pamphlet for teachers - to introduce the concept and its rationale and which includes a list of sample activities and questions
3. Produce an interim instruction manual for this program which provides a methodology, schedule and suggested list of activities and questions for each class level from class 1-8
 - include collective and individual activities, for students to present daily (individual research) and fortnightly or monthly (collective research)
 - emphasis on oral presentations in local language
4. Seek funds for CDC to publish interim instruction leaflet and distribute through MoE system

Collation of existing information / Production of guides

OBJECTIVE: To produce high quality materials to facilitate the use of IK in science class.

ACTIVITIES:

1. Appoint an Advisory Committee comprising all partners to oversee this work
2. LINKS and CNRS to identify people to start developing specific IK examples for curriculum guides and to provide contracts to these researchers
3. A joint project profile to be submitted for funding of one full time researcher (local science education specialist with good knowledge of Vanuatu) for two years based at VKS to coordinate development of examples (modeled on National History Curriculum Project) and production of teacher guides
4. MoE to provide full time local science education specialist to work on development of examples and guides
5. Produce primary guide (detailed examples only for teachers guide)
6. Produce junior secondary guide

Teacher Training

OBJECTIVE: To provide teachers with the skills to be able use the knowledge and expertise of community members (community facilitation skills)

ACTIVITIES:

1. In-service train-the-trainer programs for ZCAs and principals at a provincial level
2. Training to VKS fieldworkers at their annual workshops in Port Vila
3. In-service training for current teachers in both community facilitation and in how to use the interim instruction manual as a part of the educational program
4. Assist communities in identifying resource persons
5. Insert new IK syllabus into VITE diploma and certificate programs
6. Ongoing evaluation of new program
7. Ongoing training in local language for local language primary teachers by the community

Plan of Action for bringing indigenous knowledge (IK) into the science curriculum

Time Table for Implementation and Agencies Responsible (* = Lead agency)

Awareness-raising

Radio program	Begin December 2003 and ongoing	MoE*, VKS*, Env.Unit*
Newspaper articles	Begin December 2003 and ongoing	MoE, VKS*, Env.Unit
Information sessions: VNCW, Malvatumauri and other stakeholders	VNCW General Conference December 2003, ongoing for other stakeholders	MoE, VKS*, Env.Unit
National school competition	Terms 1 and 2, 2004	MoE*, VKS, Env.Unit
Posters	March 2004	LINKS*, MoE, VKS, Env.Unit
<i>Tree of Opportunity</i> and Rethinking Vanuatu Education report	End 2004	MoE

Endorsement of project by NEC (National Education Commission)

Target date: January 2004, MoE

Evaluation of existing programs that include IK (lessons learnt)

Identify schools that already incorporate IK in the classroom (including vernacular year 1 classes)	January 2004	MoE
Prepare introductory letter and questionnaire and distribute	Draft circulated by end Feb. 2004, Distribution in March 2004	MoE, ZCAs, principals (in consultation with VKS, Env.Unit, and LINKS)
Analyze feedback	June/July 2004	MoE*, VKS, Env.Unit, LINKS, CNRS
Visits to selected schools	July/August 2004	MoE*
Develop CAPS evaluation form	Draft circulated by Feb 2004, Finalised by end March 2004	MoE*, VKS, Env.Unit, LINKS
Evaluate CAPS	Evaluation forms circulated from April 2004 with school inspectors, Forms returned by August, Evaluation undertaken by end October 2004	MoE*, VKS, Env.Unit

Encourage student enquiry into IK in their own communities

Develop concept paper for NEC endorsement	Developed by April 2004, NEC endorsement by end of term 1 (May)	VKS*, MoE, Env.Unit, CNRS, LINKS
Develop and distribute introductory pamphlet	By beginning of Term 2 2004 (June)	VKS*, MoE, Env.Unit, CNRS, LINKS
Produce interim instruction manual: classes 1-8	For beginning of Term 2 2004 (June)	VKS*, MoE, Env.Unit, CNRS, LINKS

Collation of existing information / Production of guides

Appoint Advisory Committee	March 2004	VKS*, MoE, Env.Unit, LINKS
LINKS contracts start	April 2004	LINKS*, CNRS, MoE, VKS, Env.Unit
Joint project to DESD	End May 2004	VKS*, MoE, Env.Unit
MoE to dedicate full-time person	June/July 2004	MoE
Production of IK curriculum guides	Primary - end 2005 Secondary - end 2006	MoE*, VKS, Env.Unit, LINKS, CNRS

Teacher Training

****A detailed timetable and order of activities for teacher training will be developed by the Advisory Committee to be established above.**

In-service training for ZCAs, and principals at provincial level		MoE*, VKS, LINKS
Training for fieldworkers at their annual workshop		VKS*, MoE
In-service training for current teachers		MoE*, LINKS
Assist communities in identifying resource persons		Teachers, fieldworkers and communities
Insert new IK syllabus into VITE programs	2006	MoE
Ongoing in-service training of teachers	Ongoing	MoE
Ongoing evaluation of new program	Ongoing	MoE
Ongoing training in local language for local language primary teachers by the community	Ongoing	MoE, communities

The UNESCO-LINKS, Ministry of Education, Environment Unit and Vanuatu Cultural Centre project:

"Strengthening indigenous knowledge and traditional resource management through schools: A pilot partnership involving local communities, teachers, resource managers and culture specialists"

*** Brainstorming Workshop: 1st-4th December 2003 ***

Participants list

Ministry of Education:

- 1) John Niroa (Acting Director, Secondary, Technical and Further Education)
- 2) Kalmele Matai (Director, Vanuatu Institute of Education)
- 3) Lewani Iopa (Technology Teacher, Malapoa College)
- 4) Mackin Valia (Principal, Lamén High School)
- 5) Eileen Halakua (Science Teacher, Lycée Antoine de Bougainville)
- 6) Jack Daniels (Science Teacher, Vanuatu Institute of Teacher Education)

Vanuatu Cultural Centre:

- 7) Ralph Regenvanu (Director)
- 8) Francis Hickey (Coordinator, Traditional Marine Tenure Project)
- 9) Richard Leona (Fieldworker, ex-teacher)
- 10) Dennison Siaban (Fieldworker, ex-teacher)
- 11) Sara Lightner (Coordinator, National History Curriculum project)

Environment Unit:

- 12) Russel Nari (Deputy Director)

LINKS (Local and Indigenous Knowledge Systems in a Global Society)

- 13) Douglas Nakashima, Project Leader
- 14) Tim Curtis, Consultant

CNRS (Centre National de Recherche Scientifique)

- 15) Marie Roué, Director of Research

Other:

- 16) Jennifer Nicol, Translator

The UNESCO-LINKS, Ministry of Education, Environment Unit and Vanuatu Cultural Centre project:

"Strengthening indigenous knowledge and traditional resource management through schools: A pilot partnership involving local communities, teachers, resource managers and culture specialists"

*** Brainstorming Workshop: 1st-4th December 2003 ***

Workshop Agenda:

Monday 1/12

8.00-10.00:

Welcome - **Ralph Regenvanu, Director, Vanuatu Cultural Centre**

"Big picture" & workshop objectives : Presentations:

- John Niroa (Ministry of Education - MoE)
- Ralph Regenvanu (Vanuatu Cultural Centre - VKS)
- Russell Nari (Environment Unit)
- Douglas Nakashima / Tim Curtis (LINKS/UNESCO)

10.15-12.00: Setting the Stage I : Presentations:

- *Douglas Nakashima, LINKS:*

"Indigenous Knowledge (IK): Scientific Knowledge – establishing a basis for an equitable dialogue"

- *Francis Hickey, Cultural Centre:*

"Examples of possible IK units for science syllabus"

1-30-3.00: Setting the Stage II : Presentations:

- *Marie Roué (CNRS):*

"Experiences from indigenous school systems in northern Canada: IK and formal education"

- *John Niroa (Ministry of Education):*

"Overview of the existing national science curriculum"

3.15-5.00: Discussion

- Commentaries from Cultural Centre Fieldworkers and Science Teachers (5-10 mins each)
- Brief discussion and adoption of agenda for following days

Tuesday 2/12

8.00-10.00: Discussion of issues raised on the previous day

Including:

- what is and what is not science-related IK?
- how to balance between the many different cultures in Vanuatu?
- how to make science education relevant for those returning to their communities?
- practical / implementation issues (texts? pilot schools? how many? which years? what kind of tools, techniques, etc...?)
- other issues...

10.15-12.00: Split into 2 groups

1) *How to revise the science curriculum to include IK:*

- approach required by Ministry of Education: order of actions, timeframe
- what materials required?
- what teacher training?
- home assignments: how to give credit to IK obtained at home?
- key partners, budget items (what funds are required for)?

2) *What should the content be and what resources are available?:*

- themes & topics for units: good case studies & examples to use, sources for these
- what written scientific material is available about Vanuatu - what materials we have and where gaps are (where more research is needed)?
- how to use communities and community resource people

1.30-3.00: Groups report back on morning session and discuss

3.15-5.00: Conclusions of the day's discussions

- agreement on key issues
- ideas on a preliminary action plan

Wednesday 3/12:

8.00-10.00: Development of action plan

- establishment of schedule (timeline)
- development of estimated budget for project

10.15-12.00: Morning session continued

1.30-3.00: Further discussion and refining of Action Plan

3.15-5.00: Adoption of Action Plan

Thursday 4/12:

9.00-11.00: Closing ceremony, presentation of action plan and media release

The UNESCO-LINKS, Ministry of Education, Environment Unit and Vanuatu Cultural Centre project: "Strengthening indigenous knowledge and traditional resource management through schools: A pilot partnership involving local communities, teachers, resource managers and culture specialists": Brainstorming Workshop: 1st-4th December 2003

Workshop Proceedings (Notes):

Monday 1/12

“Big picture” and workshop objectives: Presentations:

- John Niroa (Ministry of Education - MoE):

- MOE realises that it cannot do everything, therefore it encourages partnerships with other organisations to assist it in its work.
- This means that work will be spread out among different organisations and sectors of society - education needs to be everyone's business.
- The Vanuatu Cultural Centre (VKS) has taken up the challenge to push the MoE along in this direction.
- The national curriculum needs to be up-to-date as well as meaningful. More cooperation and working together is needed to ensure that what happens in school reflects what students actually face in real life.
- What we are currently teaching ignores what we have grown up with; it ignores the reality of our lives.
- In the last few years there has been a move in Pacific countries to re-assess the results of the educational system - the system currently pushes out a lot of children and leaves them with no alternatives.
- Children are made into something by the educational system that does not allow them to go back to their communities.
- The University of the South Pacific (USP) Regional Education Colloquium in 2001 - *Rethinking Pacific Education (The Tree of Opportunity)* - brought together senior educators from throughout the Pacific region, who resolved that the education system should be rooted in our cultural heritage first. With this grounding, it can then stretch out to absorb other sources.
- At the national *Rethinking Vanuatu Education* conference, people spoke out and expressed their views about the importance of including language, culture, and traditions in the school curriculum.
- Indigenous knowledge (IK) involving science is another part of the jigsaw that we are fitting into the puzzle.
- IK is something that belongs to us – we are the experts – and therefore locals (*manples*) must take the initiative in pushing this current project ahead. It is very important that this project is developed by *manples* because we are the experts and it is for our own benefit. Other organisations can assist us but they cannot do it for us.
- We are rich in IK in Vanuatu. We should consider what it is that helps us to meet our needs today. We need to make sure that we do not disregard anything, throw

anything away, without thinking about it. We can not ignore what we have. If we ignore it, we ignore it at our own peril.

- We should not be ashamed of what we have, because we are very rich.
- There is also now a strong move to put history, philosophy, etc. into the science curriculum to make it more human.
- Putting IK into science class is part of being more challenging and thoughtful in the classroom. We need to find ways to continue to make IK a part of our lives, and we need to do this before it is too late and this IK is lost.

- Ralph Regenvanu (Vanuatu Cultural Centre – VKS):

- The *Rethinking Vanuatu Education* conference last year was a time when many people expressed dissatisfaction with the education system.
- For the VKS, the education system is one of the main obstacles to the maintenance of custom and culture and community life in Vanuatu.
- IK remains the foundation of the life of the great majority of ni-Vanuatu - living on their own land, gardening and using it to produce food and materials, living with and in close relationship to kin, speaking their language. The majority of ni-Vanuatu live in rural areas, but even those in town follow many of their customs. The video on urban youth "Kilim Taem" produced by the VKS recorded many young people expressing a keen desire to learn more of their own customs and culture.
- If we do not deal with custom knowledge in the classroom we are ignoring a huge part of life here.
- The majority of Vanuatu is so embedded in custom and culture that our children can not be told that it is not important.
- The mandate of the VKS is to maintain and promote our cultural heritage. This is a huge job and we do not have enough energy and resources to tackle everything, so the VKS has concentrated a lot on education as a primary obstacle that can be turned into a primary tool.
- Negative views about Vanuatu's culture are reinforced in the educational system because nothing from our culture is included in the syllabus.

- Russell Nari (Environment Unit - Env.Unit):

- The big issue we have to address is the way we want our children grow up.
- The big challenge is how to link what we have (IK) with that of and from the outside - in this case, integrating IK into the school system.
- This challenge – how to make the two ends meet – requires a framework to be developed.
- To give recognition to what we have will provide the foundation of what we need.

- Douglas Nakashima (LINKS/UNESCO):

- We need to transmit IK, not just recognize and identify it.
- The issue of culturally-appropriate education is one that is very important in all our discussions with indigenous communities all over the world.
- Bringing IK into the classroom is the object of projects in Nicaragua, Chile and Russia – they have the same concerns as we have in Vanuatu.

Setting the Stage I and II: Presentations:

- **Douglas Nakashima** "Indigenous Knowledge : Scientific Knowledge – establishing a basis for an equitable dialogue"

[Powerpoint presentation]

- **Francis Hickey** "Examples of possible IK units for science syllabus"

[Powerpoint presentation]

- Mention of former VKS projects "Kastom fasen blong lukatoem solwora", canoe poster and video – posters for young people to understand the value of these things.
- Example of a traditional fishing net from Tanna - uses ethnobotanical knowledge to select materials to construct, provides a relationship between people of different areas (made by a man in the bush), ties different types of knowledge together (related to plants, tides, seasons, etc).

- **Marie Roué** "Experiences from indigenous school systems in northern Canada: IK and formal education"

[Powerpoint presentation]

- History of school-community education in Nunavik (an Inuit community)

- **John Niroa** "Overview of the existing national science curriculum"

- The existing curriculum is a foreign one - it is left over from the colonial curriculum (small adjustments, but mostly the same).
- There is no consideration of IK.
- The course meets two basic requirements for students: 1) providing a general basis of scientific knowledge and skills, 2) providing an appropriate base and the ability to follow on to further studies after year 10.
- The syllabus is a mixture of all different science areas (physics, chemistry, biology, etc)
- A lot of information is included that is locally relevant (earthquakes, volcanoes, etc).
- A lot of the same examples/topics are used in different years, but in subsequent years more difficult concepts relating to these topics are used.
- Year 7 and 8 involve active learning using work cards and textbooks. Year 9 and 10 are more flexible - teachers have access to specific resource books.
- Science teachers have a high turnover rate – therefore, there are teacher guides for every level.
- Years 7-10 are mostly local *manples* teachers.
- Examinations are 30% practical and 70% written exam.
- Consistency has been maintained in exam results, probably because of the set structure of the course and the teacher supports (esp. the teacher guide)
- The teacher guide is central to the course.
- Kids are not afraid of science in Vanuatu; the problem is that in higher levels, there are not enough materials and equipment (well-equipped labs).
- Only 6 of the schools going up to year 12 offer science courses, and only 2 of these go up to year 13.
- Number of hours per week has increased to four hours.

- Importance of relevancy and linkage of information provided with life outside the classroom.
- What about beginning the project in the primary level, to start when the kids are still on their home islands?

Discussion Session: Commentaries from Cultural Centre Fieldworkers and Science Teachers (Points raised):

Richard Leona

- Needs to be made very clear so that we know what areas and kinds of science we are talking about
- Examples could include wind directions, signs of impending hurricane (weather taxonomy)

Eileen Halakua

- Herbal medicine should be included
- Should start with the primary level

Mackin Valia

- We are restricted by the syllabus that is in current use
- Relevance of the current curriculum?
- Recommends integration of science and technology subjects
- Possible topics – weather; navigation; nutrition and health; food production, preparation and preservation; environment conservation; biodiversity (flora and fauna); aquaculture; agricultural systems; waste management and pollution; resource management

Dennison Siaban

- Stresses importance of starting at primary school level

Leiwani Iopa

- Importance of the link between the traditional and formal education systems
- Difficulty with the lack of interaction between children and parents concerning IK

Kalmele Matai

- Curriculum review is currently in process
- Need to train teachers to handle the new syllabus
- Lack of resources is one of the major downfalls
- Importance of good preparation of materials
- Need consistent policy direction

Jack Daniels

- Issue of practice and knowledge - practice is required to attain knowledge
- Purpose of the acquisition of knowledge
- Need to make science more meaningful
- Ties between school and real life – learning things, then going home at Christmas holidays to research and utilise what has been learned. There is currently a separation between classroom and community
- IK is passed in the context of the community (immersion, practice)
- Need to incorporate IK into the curriculum that supports what is used in the classroom
- Need resources in IK

Additional Comments

- Being careful with the use of IK – which knowledge NOT to include
- Where should we start? How should it work? Financial and human resources?
- Need agreement of what will be included
- Resources - just as easy to use natural resources, rather than bunsen burners, etc.
- Need to make explanations/examples of a way of thinking about some types of IK
- If we start in primary, the resources are all there to be used - local community and environment, elders, etc.
- Importance of presenting information in the vernacular
- To what extent do we want to include this information? Making sure that we do not send a confusing message
- Traditional teaching methods - importance of using traditional pedagogical methods so that they are utilised by the teachers
- Elders will be more able to work at a primary level – MoE objective is for management of primary schools by the community itself, so it should not be as much of a problem
- How to mobilize all communities and homes
- IK not recognized within the current system - this mentality has been around for too long
- One day a week as cultural awareness day - instruction in the home
- Practice and knowledge – reinforcing kastom practices with scientific knowledge

Tuesday 2/12

Discussion of issues raised on the previous day

** Discussion mostly focussed on primary level:*

- Years 1-6 or 8 are community-based schools, therefore possible for students to utilise culturally-specific IK
- Three subjects in primary: language (English or French), mathematics, environmental studies
- Environmental studies can be almost entirely IK-based
 - is in local vernacular language until end of primary
 - already includes agriculture, health, marine biology
- A difficulty is teachers teaching in the vernacular - need trained teachers from the particular community who know and can use their own language
- More community involvement needed
- Needs to be emphasis on the child/parent partnership in the educational system
- Emphasis must be on student-centered learning/knowledge
- More emphasis/focus on teacher training needed
- Teachers need to be trained in methods to work with the community to ensure positive interactions between community members and school - i.e. trained to generate community participation
- Community and Parent Support for Schools (CAPS) is an existing program that can be assessed and strengthened
- List of community resource people needed

- MoE policy to include element of school-based assessment in primary school will suit primary level IK teaching
- Current revision of curriculum for years 7 and 8 presents great opportunity to implement IK
- Resources: a student text is not required, but there is a need for a teachers' guide which can suggest approaches to facilitate transmission of IK both inside the classroom and in the community
- Need to facilitate *oral* presentation and assessment - not just writing
- Some form of assessment of IK learned in the home/community, teaching by elders, needs to be recognised in the formal system
- Pilot schools- principle is good, to start small, learn from mistakes and gradually expand

2 groups discussions:

1) How to revise the science curriculum to include IK:

- Different levels - community, primary, junior secondary, senior secondary. What are the responsibilities for the different groups?
- Awareness - what are we doing? Everyone needs to be aware of what is happening
- Awareness - for those people who are involved - teachers, leaders in the community (more specific- not just "what are we doing?")
- Community level - mobilisation of areas surrounding the primary schools
- Guides for the communities, primary level, and secondary level
- Guide should specify all of the different areas of learning and include activities to assist the teachers
- Teacher training - facilitated by teachers college
- Make use of the current system (Zone Curriculum Advisors, etc) to assist
- Project coordinator - to gather information from other places - perhaps utilize teachers?
- NEC – National Education Commission: awareness and approval is necessary
- Entire curriculum revision for secondary level is planned
- Importance of maintaining high quality work on IK so that IK resources are comparable to Western science resources

2) What should the content be and what resources are available?:

- There should be a significant emphasis in teachers college on how to liaise with the communities
- Content is in the community; it is the work of the teachers to organise access to this content
- Secondary level use of IK: compare and contrast examples of IK from island to island, with student's own culture/knowledge (from primary level), and with western science
- Nation-wide awareness campaign
- The basis of IK contact is one's own garden
- Garden-making should be assessable in the end-of-primary exam – therefore, a core unit - but difficulty in urban areas, unless access to gardening space

- Possible topics: Names of botanical plants, food preparation/preservation, resource management, tabus and restrictions
- Supplying optional topics for different types of communities (eg. solwota and bush communities deal with different ecosystems)
- Issue of resistance by elders to “giving” IK information - how to overcome?

List of potential IK topics for science syllabus:

Gardens...

Seasons - winds, weather features, environmental cues

Names - plants, animals

Naming

Identifying

Classifying

Stories, songs and dances about different plants and animals

The garden cycle

Activities (gender tasks)

Resource management

Resource conservation

Food from the bush

Non-food materials and essentials – building, medicines, fertilizers, pesticides etc.

Ocean resources

Bush–Solwota relation

Nakamal – relationship to housing

Specific environments/different ecosystems

Transportation

Disaster preparedness and management

Food preparation/preservation

Nutrition and health

Navigation

People’s observations of change

Traditional monitoring techniques

Traditional boundary markers

Traditional resource mapping (identifying niche environments) (in time and space)

Wednesday 3/12

Development of Action Plan

(these notes are transcribed from the pin-up sheets presented by the groups)

FOCUS levels for activities:

1. Community
2. Primary (focus on Environmental Studies subject, in vernacular)
3. Junior secondary
4. Senior secondary (teacher’s guides will be useful at this level as well)

PRIORITY needs:

1. Teacher's guide
2. Community guide
3. Teacher training

SHORT TERM Goals:

1. Incorporate topics into existing syllabus
2. Awareness (ongoing)
3. Research with elders
4. Identify schools already using IK and community resources and assess lessons learnt (Tanna Kastom School, Lamenu Bay High School, North Pentecost, 12 first-year-vernacular schools)
5. Collate existing resources/materials
6. Production of guides - compile concrete examples and activities; facilitate and assist building school-community interactions
7. Make home-enquiry required for all students
8. NEC approval
9. Teacher training - includes eventually revising curriculum at Teachers College to include focus on working with the community

ORDER OF PRIORITY (time-wise) for achieving SHORT TERM Goals:

1. Awareness
2. NEC approval
3. Identify schools
4. Home enquiry
5. Collate existing resources
- 4/5 Research with elders
6. Incorporate topics into existing syllabus
7. Production of guides
8. Teacher training

ACTIVITIES under each heading:

1. Awareness

- VKS, MoE, Env. Unit radio programs - can be done immediately by each organisation with no additional resources required
- Prepare paper for NEC
- Develop Bislama concept paper for awareness purposes –
 - distribute to VNCW, chiefs, NGOs, etc
 - distribute to Government Depts and through their networks
 - special session with Malvatumauri
- Continue to use good opportunities to raise awareness
- School competition (poster or essay)
- Use MoE network to target teachers
- LINKS Bislama poster
- Special ZCA/principals meeting on this initiative (include inspectors)

- *Tree of Knowledge* - get copies to distribute to schools/teachers - also *Rethinking Vanuatu Education*
- 2. NEC Approval (Kalmele and John)**
 - Get political support
 - Kalmele/John- see Minister
 - Put Action Plan into appropriate format
 - Present to NEC
- 3. Identify schools - lessons learnt**
 - MoE to identify schools
 - Send questionnaires (open-ended questions, successes and difficulties) - detailed info to be provided - community responses also sought
 - Can be follow-up visits to good case studies
 - Report on lessons learnt (John Niroa)
 - Evaluate CAPS program and lessons learnt (esp. SANMA)
- 4. Home enquiry by students/research with elders**
 - Concept paper (VKS) to go to NEC
 - NEC approval
 - Then list of questions/topics to all teachers/schools
 - Provenance info. (VKS)
 - Class 5 and up
 - Fieldworkers as resource people
 - Info collected to be forwarded to ZCA, then upwards
 - Oral presentations included (not information collection, but developing attitude/process)
- 5. Collate existing information (resources/materials)**
 - CBEMP (Capacity Building for Environmental Management in the Pacific)
 - NBSAP (National Biodiversity Strategy and Action Plan)
 - VKS archives
 - UNESCO compilation of bibliography
 - CNRS
 - IRD (formerly Orstom)
- 6. Incorporate topics into existing syllabus (Secondary level)**
 - Year 7: "Observing living things"
Naming/identification/classification of flora and fauna (marine and terrestrial)
 - Year 8: "Ecology"
Resource mapping/habitat
Season/garden cycles
Ethnobotany/zoology
Different ecosystems
Disaster preparedness
Navigation
Monitoring changes
 - Year 9: "Earth Science"
 - Year 10: "Biosphere"
Resource management and conservation

- Year 7-10: "Technology"
Nutrition
Food preparation/preservation
Crafts
 - Year 11-12: interrelationships, systems of spiritual values
 - Social Science and Agriculture also to be targeted
- 7. Production of Guides – concrete IK examples**
- First task – examples of all topics
 - Short term - make a resource book and teachers guide, and include AV materials
- 8. Teacher Training**

TIMETABLE and AGENCIES RESPONSIBLE:

1. Awareness

Target	Activities	Time	Who
Radio program	Plan together	End of Dec	VKS, MoE, EUnit
Newspapers	Articles	As appropriate	MoE, VKS, EUnit
Prepare paper for NEC		December	Ralph, etc.
Sessions with Malvatumauri/VNCW	Visit to talk with these	December/January	Ralph, John, Russell
School competition	Essays, posters	Term 1 and 2	VKS, EUnit
Posters	Materials collection, translation	March	LINKS and Tim
<i>Tree of Opportunity and Rethinking Vanuatu Education</i> report	Purchase enough copies for secondary schools	End of 2004	MoE

3. Identify Schools- Lessons Learnt

Targets	Activities	Time	Who	Cost
Identify schools		Dec	MoE	
	Prepare questionnaire and letter – what they did, what worked and what didn't	Jan	MoE, ZCAs, principal	Get input from students, parents, PEO, etc.
	Look at feedback	March	MoE, VKS, EUnit	
	Visit to selected schools, if needed	By May		
	Report (progress)	June	John Niroa	

Evaluate CAPS (Tafea, Shefa)	Evaluation of activity	End of term 1	ZCAs, fieldworkers	Out of this develop package for teacher training for long term
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4. Home Enquiry by Students

1. VKS to develop concept paper (Input of MoE and Env.Unit)
 - Needs to include
 - Objectives (background info: read, initiative) global context
 - Strategy
 - Methodology (LINKS can provide)
 - Provide examples
- 1.5 Develop activities/questionnaire
 - Sara, Francis, Ralph, Russell, John N., primary teachers
 - Target primary, then extract and create more complex examples for secondary students (school holidays)
 - collective and individual activities
 - in vernacular
 - produce small pamphlet (to explain reason why doing this, then, activities and specific questions)
 - each day: five-minute presentation
 - bimonthly: collective activity and presentation (eg. vocabulary comparison)
 - each year: different set of questions/activities (eg. show and tell)
 - one question per day/week, etc?
 - what about urban students?
2. For primary - for Jan.
For secondary - for November
3. Seek funds for publishing guides - CDC can do (find out costs)
 - distribute through educational system
 - two steps:
 1. one-page info guide - by the end of January
 2. full set - by May holidays
 3. secondary - by October in schools

5. Collate existing info

7. Production of guides: concrete examples

- John will identify a counterpart for next year
- model on National History Curriculum Project
- seek funding for a person (scientist with good knowledge of Vanuatu) for two years, based at VKS
- Advisory Committee (MoE/CDC, VKS, Env.Unit)
- joint project profile
- LINKS can provide contracts to start developing specific examples - people to work with the counterpart (by March)

8. Teacher Training

Target	Activities	Time	Who
Current teachers	-in-service -strengthen existing support systems	After ZCA (2 weeks x 2 phases)	ZCAs
Fieldworkers ZCA Advisors Principals	In-service in zones/provinces	After teachers guides (2 weeks x 2 phases)	
Community	-awareness coordinating -help identify resource persons	After the program is presented to teachers (2 weeks x 2 phases)	Teachers
VITE diploma/certificate -new teachers -in-service	-part of program -in-service coordination (upgrading)	2006	VITE
	Evaluation	Annually for the first 3-5 years	Semi-independent team (incl. team)
Teachers	Training of vernacular		

The UNESCO-LINKS, Ministry of Education, Environment Unit and Vanuatu Cultural Centre project:

"Strengthening indigenous knowledge and traditional resource management through schools: A pilot partnership involving local communities, teachers, resource managers and culture specialists"

*** Brainstorming Workshop: 1st-4th December 2003 ***

FINANCIAL REPORT:

Funds recieved from UNESCO on 26/11/03: 453,280 vatu

Expenditure incurred to date:

<u>Item</u>	<u>Amount (Vatu)</u>
1) Air tickets for outer-island-based participants (Richard Leona, Dennison Siaban, Mackin Valia)	62,940
2) Per diems for 2 outer-island-based participants @ 10,000 (Richard Leona, Dennison Siaban)	20,000
3) Per diems for 1 outer-island-based participant @ 7,000 (Mackin Valia)	7,000
4) Other transport costs, outer-island-based participants	27,000
5) Bus fares, 8 Port Vila-based participants @ 1000	8,000
6) Stationery	22,246
7) Equipment (replacement of photocopy machine drum)	29,910
8) Venue hire: 3.5 days @ 10,000	35,000
9) Telephone and fax costs	9,800
10) Morning and afternoon teas and lunches (3 days)	65,000
11) Organisation of meeting (Vanuatu Cultural Centre)	100,000
Total	386,896

Additional Expenditure Items to be paid upon receiving balance of funds from UNESCO:

- | | |
|---|---------|
| 12) Translation fees
(invoice enclosed) | 135,000 |
| 13) Production of meeting report and action plan | |
| 14) Distribution of report and action plan to all participants and other stakeholders | |
| 15) Miscellaneous unanticipated expenses | |