



Climate Change & Development (CCD) Community, of the Pacific Solution Exchange Consolidated Reply

***Query: Climate and Disaster Risk Education. Examples;
Experience***

Compiled by [Jone Vakalalabure](#), Community Facilitator, [Setaita Tavanabola](#), Research Assistant, and [Ruci Yauvoli](#), Intern

Issue Date: 17 September 2013

**From Josua Turaganivalu, United Nations Development Programme,
Multi-Country Office, Suva, Fiji**

Posted 13 August 2013

Dear Members,

I work as an Environment Associate at the United Nations Development Programme (UNDP) Multi-Country Office in Suva, Fiji.

During my recent work mission to Vanuatu, UNDP and other partners deliberated on educating communities on climate change and disaster risk management, one of which is to work within the formal education system in terms of introducing climate change and disaster risk management into the formal school curriculum.

Embedding the issue of climate change and disaster risk management into the education system beginning in the early childhood year of a student will not only help shape and prepare their mindset to the harsh realities that exists around the environment they live in but also help them adapt to these changes. Improving climate learning is important to prepare communities to respond better to current and future challenges posed by climate change and disaster risk in the region.

The Pacific Centre for Environment and Sustainable Development (PACE SD) at the University of the South Pacific has incorporated the study of Climate Change and the sciences into post-graduate study programs and Masters Level. In Vanuatu, many suggested that the impacts of climate change needed to be pursued by integrating all aspects of climate change and disaster risk management across the formal school education system.

This call is timely as the Pacific Forum Islands Leaders in 2005 endorsed the Pacific Islands Framework for Action on Climate Change 2006-2015 (PIFACC) and the Regional Framework for Action on Disaster Risk Management (2005-2015) (RFADRM). Work is being undertaken to integrate these two frameworks.

The introduction of climate change and disaster risk management through the formal education system in the form of awareness activities, knowledge management and mainstreaming resources include capturing lessons learnt from successful climate change projects will stimulate future leaders to petition, create and relate to recent information on climate and use this to work collaboratively together and make informed decisions for the betterment of the Pacific people. Building the capacity of school teachers on climate change issues and disaster risk management and informing them on the latest climate and disaster risk outcomes will also ensure information sustainability and institutional anchoring of the issue.

UNDP, whilst working with diverse stakeholders at country level, endeavors to provide informed advice to Vanuatu's education ministry on climate change and disaster risk management curriculum development going forward.

In view of the above, could Community members:

- Share **good practices and examples** of introducing climate and disaster risk education into the education system that may be of relevance for Vanuatu?
- What were the **lessons learned**, and how were the education system's capacity **issues addressed**?
- Types of **tools and Teaching Aids** that can be used to train students and teachers.

Responses were received, with thanks, from

1. [Ramon G. Mapa](#), People's Initiative for Learning and Community Development, Philippines
2. [Stephanie Hodge](#), United Nations Children's Fund, New York, USA
3. [Ilan Kelman](#), Center for International Climate and Environmental Research - Oslo, Norway
4. [Ula Majewski](#), Pacific Climate Animation Project, Port Vila, Vanuatu
5. [Ethan Allen](#), Pacific Resources for Education and Learning, Honolulu, Hawaii
6. [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji
7. [Melteres James](#), Ministry of Education, Vanuatu
8. [Doris Susau](#), [Makelesi Batimala](#), and [Ruth Kuilamu](#), Live & Learn Environmental Education, Suva, Fiji
9. [Birtha Togahai](#), University of the South Pacific/European Union: Global Climate Change Alliance Project, Niue
10. [Fumiyo Kagawa](#), Sustainability Frontiers, England
11. [Charley Robert](#), Ministry of Education, Vanuatu
12. [Priyatma Singh](#), the University of Fiji, Saweni, Lautoka

Further contributions are welcome!

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Summary of Responses

The query sought members feedback on good practices, examples, lessons learnt and tool kits of introducing climate and disaster risk education into the education system that may be of relevance for Vanuatu. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), Education alone cannot achieve a more sustainable future; however, without education and learning for sustainable development, we will not be able to reach that goal.

In [Phillipines](#), strengthening Disaster Risk Reduction (DRR) education in teaching is a fluid entry point in introducing innovations in strengthening learning outcomes not only in the subject of DRR but other subject areas taught by teachers. Strengthening DRR in schools requires linking and strengthening coordination and partnership of schools to the larger community particularly local government units. This will not only make school's DRR plan relevant for the whole community but will also serve as the plans mechanism for sustainability. Engaging school heads and local education officials is crucial to institutionalize Climate Change (CC) and DRR in education being taught and mainstreamed, and not only being "complied" but also strengthening participatory approaches in teachers learning methodologies and providing another venue to reinforce the value of community cooperation and unity in building resilient communities and schools.

The lessons learned from these are: ensuring ownership and leadership by the Ministry of Education and Teacher Training Colleges, aligning to ongoing curriculum review processes this pays respect to education system's capacity 'issues', Curriculum Development Officers (and subcontracted Curriculum Writers) are trained experts on writing appropriate learning outcomes and scoping and sequencing any content. Training them and facilitating national consultations on CC and DRR is key. Avoid, if possible, the setting up of new project steering committees. Rather use existing ones or if not present, help in setting up national ones under existing CC and DRR or Education governance arrangements suitable as an entry point for various partners. Implement education and climate change initiatives in partnerships with Non-Government Organisations (NGO), networks and other CC and DRR initiatives.

Coping with Climate Change in the Pacific Island Region (CCCPIR) is a programme with six components implemented by [German Society for International Cooperation](#) (GIZ) in partnership with the Secretariat of the Pacific Community (SPC) on behalf of the Federal German Ministry for Economic Development and Cooperation (BMZ) in 12 Pacific Island Countries. Its CC Education component aims at increasing the capacities of education ministries, training institutions, schools and teachers to develop and deliver education on climate change adaptation and mitigation. It is being implemented in Fiji, Kiribati, Samoa, Tonga and Vanuatu and is undergoing curriculum reviews.

Samoa has already integrated CC and DRR into the education system and intends to focus on measuring the effectiveness. On lessons learned, linking DRR to CC and the environment provides a more holistic perspective of looking at disaster risk reduction not only in terms of preparedness but of mitigation. Moreover, this kind of perspective facilitates reflection on our behaviours and lifestyles that affect the state of the environment and increase our vulnerabilities to natural disasters.

A dynamic process evolved with a high level of ownership and leadership taken by the Ministries of Education, supported by a range of national government departments, NGO, SPC, the Secretariat of the Pacific Regional Environment Programme, University of the South Pacific and development partners. New competencies on CC and DRR have been incorporated into the Vanuatu National Training Council Qualifications Framework, Kiribati Institute of Technology and

SPC Community Education Training Centre. In Kiribati, Fiji, Samoa, Tonga and Vanuatu education stakeholders are contributing to national efforts to develop, implement and coordinate climate change policies and strategies

Fiji, Samoa and Tonga have established national level working groups on education on CC and DRM; Kiribati has formed the national cross-sectoral Kiribati National Expert Group on CC and DRM with education being a pro-active member in developing the Kiribati Joint Implementation Plan. In Vanuatu coordination is enhanced with existing committees/working groups such as the Education Cluster, the NGO Consortium and the Information and Communications Technology Group under the National Advisory Board.

At the Curriculum Development Unit in [Vanuatu](#), the writers have integrated CC and DRR into the curriculum from Primary to Junior and Senior Secondary school level, and the writing process still continues with the teachers' guide. The subjects which have not fully integrated concepts on CC and DRR will be integrated in the teachers' guide as an activity.

In [Fiji](#) Local knowledge and global understanding are the starting points in developing an ethic in environmental and development education. Local ownership of environmental and development education programs, open participation and equality remain the foundation of our organisation. The Live & Learn Fiji Country Program has established a 10 step implementation process for the formal education program.

Live & Learn is committed to environmental and sustainable development education that is innovative, culturally relevant and grounded in local knowledge. To ensure that projects meet these requirements two key methodologies are used i.e. Rapid Assessment of Perceptions and Most Significant Change techniques.

The Ministry of Education in [Vanuatu](#) has achieved a couple of milestones in integrating Climate Change and Disaster Risk Management into the ongoing curriculum review process under the Vanuatu Education Road Map, supported by a range of partners. The animations from [Vanuatu](#) are exciting new communications tools that can be used to raise awareness of the science and impacts of El Niño and La Niña and encourage Pacific Islanders to take early action in preparing for these extreme events. Utilizing participatory and creative approaches to learning reinforces the quality of learning outcomes and provides avenues for further reflection.

Comparative Experiences

Pacific

Samoa

Integrating Climate Change and Disaster Risk Management, Samoa (from [Hanna Sabass](#), *SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

One of the Climate Change and Disaster Risk Management education initiatives in the Pacific in which teaching materials have been developed and numerous trainings conducted. The Climate Change Tool kit for schools is being implemented and the teachers involved are finding the information compelling for most students.

National Climate Change Education Working Group, Samoa (from [Hanna Sabass](#), *SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

This was endorsed by the Climate Change National Steering Committee including a Terms of Reference. Achievements included a stakeholder mapping carried out to take stock of existing and utilized education and awareness resources on climate change across agencies in Samoa. A

new picture-based climate change toolkit targeting classes 7 & 8 was also presented and trialed in primary schools in 2013.

Tonga

National Climate Change Education Working Group, Tonga (from [Hanna Sabass](#), SPC/GIZ *Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

As part of its component 6 of the 'Coping with Climate Change in the Pacific Island Region' Programme, national education ministries, vocational training institutions and teacher training institutions are integrating climate change into existing curricula and training programmes to them build up and strengthen their capacities on climate change adaptation and mitigation.

Fiji

National Climate Change Education Working Group, Fiji (from [Hanna Sabass](#), SPC/GIZ *Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

As part of its component 6 of the 'Coping with Climate Change in the Pacific Island Region' Programme, national education ministries, vocational training institutions and teacher training institutions are integrating climate change into existing curricula and training programmes to them build up and strengthen their capacities on climate change adaptation and mitigation.

Kiribati

National Cross-Sectoral National Expert Group, Kiribati (from [Hanna Sabass](#), SPC/GIZ *Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

To implement the recently endorsed Disaster Risk Management Plan and the National Framework for Climate Change and Climate Change Adaptation Framework, Kiribati is developing a Kiribati Joint Implementation Plan (KJIP) by establishing a core group of national experts from various sectors including civil society and community groups.

Vanuatu

Committees/Working Groups, Vanuatu (from [Hanna Sabass](#), SPC/GIZ *Coping with Climate Change in the Pacific Island Region, Suva, Fiji*)

The group coordinates and implements 'Coping with Climate Change in the Pacific Island Region (CCCPIR)' Programme focusing and strengthening climate change education in Vanuatu, to enhance capacities of educators to deliver up to date knowledge and skills on climate change.

Fiji, Vanuatu, Solomon Islands and Papua New Guinea

Collaboration for Effectiveness: Fiji, Vanuatu, Solomon Islands and PNG (from [Doris Susau](#), [Makelesi Batimala](#), and [Ruth Kuilamu](#), *Live & Learn Environmental Education, Suva, Fiji*)

Live & Learn is an Environmental Education Non-Government Organisation aiming to reduce poverty and foster greater understanding and action towards a sustainable future through Education, Community Mobilisation and Supportive Partnership. The regional partnership is to provide a framework for cooperation and collaboration between countries.

Related Resources

Recommended Documentation

DRR and CC Education Project Brief (from [Ramon G. Mapa](#), *People's Initiative for Learning and Community Development, Philippines*)

Project Brief; by Executive Director Mapa R. G, People's Initiative for Learning and Community Development, Philippines;

Available at www.solutionexchange-un.net/repository/pc/ccd/DRRProject_Info_PILCD.pdf (PDF; Size: 474KB)

The Brief covers two of PILCD's major education projects i.e. Disaster Risk Reduction Education Program and Mainstreaming Disaster Risk Reduction Education and Management in Schools.

From [Stephanie Hodge](#), United Nations Children's Fund, New York, USA

Climate Change and Environmental Education

Module; by Iltus S; United Nations Children's Fund;

Available at www.unicef.org/publications/files/CFS_Climate_E_web.pdf (PDF; Size: 1.06MB)

The module provides in-depth information on how Climate Change and Environmental Education can be integrated into the design, implementation and practice of child-friendly schools.

Climate Change Adaptation and Disaster Risk Reduction in the Education Sector

Manual; by Goodman D., Dankelman I., Mannathoko C., and Hodge S; United Nations Children's Fund Division of Communication; New York 10017 USA; November 2012;

Available at www.unicef.org/cfs/files/UNICEF-ClimateChange-ResourceManual-lores-c.pdf (PDF; Size: 3.88MB)

UNICEF has developed this resource manual to assist governments and education practitioners in scaling up and mainstreaming climate change adaptation and disaster risk reduction in the education sector

Youth in action on climate change: inspirations from around the world

Book; by United Nations Joint Framework Initiative on Children, Youth and Climate Change; Bonn, Germany; Printed by Imprimerie Centrale, Luxembourg; May 2013;

Available at

www.unicef.org/education/files/Publication_Youth_in_Action_on_Climate_Change_Inspirations_from_Around_the_World_English.pdf (PDF; Size: 36.1MB)

This book highlights concrete activities young people are leading around the world; a tool and a source of inspiration for designing and carrying out climate change projects, initiatives and campaigns.

Climate Change and Children

Book; by United Nations Children's Fund; New York 10017, USA; December 2007;

Available at www.unicef.org/publications/files/Climate_Change_and_Children.pdf (PDF; Size: 983KB)

This is a summary of comments and letters from children and young people from all over the world, collected from UNICEF Voices of Youth

Child-Friendly Education: Transforming the lives of children affected by CC

Book; United Nations Children's Fund; New York 10017, USA; June 2012;

Available at www.unicef.org/education/files/UNICEF-ClimateChange-E-panelformat1.pdf (PDF; Size: 1.39MB)

Child-friendly education is a means by which children and adolescents can develop the capacity and skills needed to withstand projected climate shocks and natural disasters.

Disaster Risk Reduction in School Curricula: Case Studies from Thirty Countries

Book; by Selby D. and Kagawa F; Published by the United Nations Children Fund, Geneva, Switzerland, and United Nations Educational, Scientific and Cultural Organization, Paris, France; July 2012;

Available at www.unicef.org/education/files/DRRinCurricula-Mapping30countriesFINAL.pdf (PDF; Size: 2.42MB)

This report is a mapping of countries that have included elements of disaster risk reduction into their education system, capturing national experiences whilst noting key challenges

The benefits of a child-centered approach to eliminate change adaptation

Paper; by Venton C. C; United Nations Children Fund, London, United Kingdom, and Plan International, Surrey, United Kingdom; May 2011

Available at www.unicef.org.uk/Documents/Publications/ClimateChange_child_centred2011.pdf (PDF; Size: 1410KB)

The aim of this paper is to present a scoping study that highlights some of the evidence in an economic argument for a child-centred approach to adaptation.

Climate Change and Children: A Human Security Challenge

Paper; United Nations Children's Fund, Florence, Italy; November 2008;

Available at www.unicef-irc.org/publications/pdf/climate_change.pdf (PDF; Size: 543KB)

This paper seeks to substantiate the need for frameworks and protocols that will recognize, protect and empower children and young people in light of the effects of climate change.

Climate change impacts on children in the Pacific: A focus on Kiribati and Vanuatu

Report; by Burton D., Mustelin J. and Urich P; United Nations Children's Fund; 2011;

Available at www.unicef.org/environment/files/Final_Advocacy_Paper_Pacific_17_Sept.pdf (PDF; Size: 1.28MB)

In looking at potential impacts of climate change on children in Kiribati and Vanuatu, this report examines four primary elements: temperature, precipitation, sea level rise, and climate change policies

Recently Asked Question on Climate Change and Disaster Risk Education

Brief; by Hodge S., United Nations Children's Fund, New York, USA;

Available at www.solutionexchange-un.net/repository/pc/ccd/UNICEF-SeminarQs.pdf (PDF; Size: 453 KB)

The brief comprises of 10 recent questions asked to the United Nations Children's Fund relevant to climate change and disaster risk education

From [Ilan Kelman](#), Center for International Climate and Environmental Research – Oslo, Norway

Let Our Children Teach Us

Book; by Wisner B., United Nations Office for Disaster Risk Reduction; Published by Books for Change, Bangalore, India; July 2006;

Available at www.unisdr.org/files/609_10030.pdf (PDF; Size: 2730KB)

This review provides background and basis for two innovative new initiatives on disaster risk reduction and schools: "Disaster Risk Reduction through Schools" and "Disaster Risk Reduction Begins at School"

Disaster Advances: Placing Climate Change within Disaster Risk Reduction

Book; by Kelman I. and Gaillard J. C, Center for International Climate and Environmental Research – Oslo, Norway; Tel: +47 22 85 87 50; Fax: +47 22 85 87 51; Email: post@cicero.oslo.no;

Available at www.ilankelman.org/articles1/daeditorial2008.pdf (PDF; Size: 815KB)

The article connects climate change and disaster risk reduction so that it's taught and learned together rather than separating them as different sectors

Universities and Climate Change

Book; Senior Professor, Leal Filho's, Walter (Editor), Hamburg University of Applied Sciences, Hamburg, Germany; Email: walter.leal@haw-hamburg.de; 2010;

Free preview at www.springer.com/economics/environmental/book/978-3-642-10750-4;

This publication is for those fostering a holistic awareness among students and staff about the meaning of and the need for a proper emphasis on climate change at universities.

From [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji

Climate Change and Disaster Risk Management in the Vanuatu Curriculum Review

Poster; by Melteres J, Curriculum Unit, Ministry of Education, and Bartlett C, Sabass H, SPC/GIZ Coping with Climate Change in the Pacific Island Region;

Available at: www.solutionexchange-

un.net/repository/pc/ccd/EducationCCandDRMPofter_Vanuatu2013.pdf (PDF; Size: 924KB)

To strengthen foundations and basic concepts of climate change and disaster risk management across different subjects from Kindergarten to Year 13.

Climate Change and DRM Education in Vanuatu

Presentation; by Obed R, Education Services Director, Vanuatu's Ministry of Education; 2013;

Available at www.solutionexchange-

un.net/repository/pc/ccd/Vanuatu_Education_Obed_2013_07.pdf (PDF; 757KB)

The presentation was delivered at the first meeting of the Pacific Platform for Disaster Risk Management and Pacific Climate Change Roundtable 2013 held in Nadi, Fiji

Education, Disaster Risk Management and Climate Change: Key Messages

Brief; by Vanuatu's Ministry of Education; 2013;

Available at www.solutionexchange-

un.net/repository/pc/ccd/SideEvent3KeyHighLevelMessages_2013_07_10.pdf (PDF; Size: 412KB)

Covers key points discussed at the Side Event at the first joint meeting of the Pacific Platform for Disaster Risk Management & Pacific Climate Change Roundtable 2013

Regional Framework on Education on Climate Change and Disaster Risk Management

Paper; by Secretariat of the Pacific Community, Secretariat of the Pacific Regional Environment Programme, University of the South Pacific, United Nations Educational, Scientific and Cultural Organisation, Pacific Resources for Education and Learning, and United Nations Children Fund; Available at

www.forumsec.org/resources/uploads/attachments/documents/2012FEEdMM.10_Paper1.pdf (PDF; Size: 267KB)

The paper is a collaboration of various development partners in areas of Climate Change and Disaster Risk Management in the Pacific, to integrate the two issues into the Pacific Education Frameworks.

From [Fumiyo Kagawa](#), *Sustainability Frontiers*, England

Disaster Risk Reduction Education in Vanuatu: A Baseline Study for Save the Children Australia

Book; by Kagawa F and Selby D, Save the Children Australia, Port Vila, Vanuatu; 2012;

Available at www.savethechildren.org.au/images/content/where-we-work/vanuatu/Vanuatu_DRR_Curriculum_Baseline_2012.pdf (PDF; Size: 1.11MB)

It reviews strengths, needs and gaps in current curriculum provision and delivery of disaster risk reduction in Vanuatu primary schools; it examines existing knowledge and practice and identifies key issues.

Disaster Risk Reduction Education in Vanuatu: Pilot Curriculum Materials, Teachers' Guide and Evaluation Instruments

Book; by Kagawa F and Selby D, Save the Children Australia, Port Vila, Vanuatu; May 2012;

Available at www.savethechildren.org.au/images/content/where-we-work/vanuatu/Vanuatu_DRR_Curriculum_Activities_11May_2012.pdf (PDF; Size: 3.48MB)

Recognizing the need to build a 'culture of safety' in the face of hazards, Save the Children launched a program to develop quality Disaster Risk Reduction curriculum materials for schools

Climate Change in the Classroom: UNESCO Course for Secondary Teachers on Climate Change Education for Sustainable Development

Book; by Kagawa F and Selby D, UNESCO, Paris; 2013

Available at unesdoc.unesco.org/images/0021/002197/219752e.pdf (PDF; Size: 34.4MB)

This course is designed to enable teachers at the secondary level from diverse subject areas to introduce climate change education for sustainable development (CCESD) across the curriculum.

Education and Climate Change: Living and Learning in Interesting Times

Book; By Kagawa F and Selby S (Eds), Routledge Research in Education Series, New York; 2010;

Preview at www.routledge.com/books/details/9780415805858

In this volume, contributors review and reflect upon social learning from and within their fields of educational expertise in response to the concerns over climate change.

Towards a Learning Culture of Safety and Resilience: Technical Guidance on DRR in School Curricula. Pilot Version

Book; By Selby D and Kagawa F, United Nations Educational, Scientific and Cultural Organization, Paris/United Nations Children's Fund, Geneva; 2013;

Available at unesdoc.unesco.org/images/0021/002194/219412e.pdf (PDF; Size: 2.31MB)

This document offers international technical guidance for integrating disaster risk reduction into school curricula drawing on noteworthy practice in countries from around the world, described through case studies.

World as Lasting Storm: Educating for Disaster Risk Reduction, Green Teacher, Issue 100

Article; by Selby D and Kagawa F; Green Teacher, Canada; Summer 2013;

Available at greenteacher.com/contents100

The article overviews the global emergence of disaster risk reduction education, its scope and curricular reach; it lays out five essential dimensions offering potential for positive and proactive learner engagement.

Ready for the Storm: Education for Disaster Risk Reduction and Climate Change Adaptation and Mitigation, Journal of Education for Sustainable Development, Vol.6, No.2;

Article; by Kagawa F and Selby D; September 2012;

View Abstract at jsd.sagepub.com/content/6/2/207.abstract

Three dimensions of climate change education, understanding and attentiveness, mitigation and adaptation, are identified and explored as corresponding to key elements in disaster risk reduction education.

Climate Change Learning: Unleashing Blessed Unrest as the Heating Happens, Green Teacher, Issue 94

Article: by Kagawa F and Selby D; Fall 2011;

Web: www.greenteacher.com/contents94.html

A discussion of various degrees of climate change denial, even within environmental education, and activities for grades 5-12 which help children understand the severity of the climate change problems.

Education for Sustainable Contraction as Appropriate Response to Global Heating, Journal for Activist Science and Technology Education, Vol.3, No.1

Article; by David Selby, Mount St Vincent University, Halifax, Nova Scotia;

Available at www.wepaste.org/Resources/JASTE3-1a_Selby.pdf (PDF; Size: 235KB)

Includes titles 'The Heating is Happening', 'Denial and Cognitive Dissonance in the Field of Education for Sustainable Development', and 'Education for Sustainable Contraction: Nailing Nine Propositions to the Door of the Academy'

Runaway Climate Change as Challenge to the 'Closing Circle' of Education for Sustainable Development, Journal of Education for Sustainable Development, Vol.4, No.1

Article; by Selby D, Mount St. Vincent University, Halifax, Nova Scotia, Canada, and Kagawa F, Centre for Sustainable Futures, University of Plymouth, United Kingdom; March 2010;

View Abstract at jsd.sagepub.com/content/4/1/37.abstract

Runaway climate change is imminent but there is widespread climate change denial, including within mainstream Education for Sustainable Development. A transformative educational agenda in response to climate change is discussed here.

Recommended Contacts and Experts

From [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji

Mr. Christopher Bartlett, Secretariat of the Pacific Community/GIZ Pacific German Regional Coping with Climate Change in the Pacific Island Region, Vanuatu

Email: christopher.bartlett@giz.de; Tel: +678 29594;

Christopher is the Climate Change Technical Advisor to the SPC-GIZ Coping with Climate Change in the Pacific Islands Region Project

Ms. Hanna Sabass, Secretariat of the Pacific Community/GIZ Pacific German Regional Coping with Climate Change in the Pacific Island Region, Vanuatu

Email: hanna.sabass@giz.de; Tel: +679 3305 983;

Hanna is the Climate Change and Education Adviser to the SPC-GIZ Coping with Climate Change in the Pacific Islands Region Project

From [Fumiyo Kagawa](#), *Sustainability Frontiers*, England

Mr. David Selby, Sustainability Frontiers, England/Canada

Email: dselby@sustainabilityfrontiers.org;

David Selby is director of Sustainability Frontiers, an international alliance of global and sustainability educators. He is also an adjunct professor at Mount St. Vincent University, Halifax, Nova Scotia, Canada

Ms. Fumiyo Kagawa, Sustainability Frontiers, England

Email: fkagawa@sustainabilityfrontiers.org;

Fumiyo Kagawa is Research Director of Sustainability Frontiers. She was Research Team Coordinator, before that, Research Assistant at the Centre for Sustainable Futures at the University of Plymouth, United Kingdom

Recommended Organizations and Programmes

From [Ramon G. Mapa](#), *People's Initiative for Learning and Community Development*, Philippines

People's Initiative for Learning and Community Development, Philippines

162 BPI Compound, Friendly Homes Subdivision, Guisad, 2600 Baguio City, Philippines; Tel: +63974-3005038; Fax: +63974-3005038; Email: info@pilcd.org; Web: www.pilcd.org;

A main role for the organisation is mainstreaming climate change education and disaster risk reduction in education and schools management in the formal and non-formal schools.

Climate Change and Disaster Risk Reduction Program, Philippines

162 BPI Compound, Friendly Homes Subdivision, Guisad, 2600 Baguio City, Philippines; Tel: +63974-3005038; Fax: +63974-3005038; Email: info@pilcd.org; Web: pilcd.org/index.php?option=com_content&view=article&id=56&Itemid=62;

It aims to develop people's capacity to prepare and respond to emerging emergencies and disasters brought by changing weather and climate patterns and subsequently reduce their vulnerabilities and increase their adaptive capacity.

Mainstreaming DRR in Education and Management in Schools Project, Philippines

162 BPI Compound, Friendly Homes Subdivision, Guisad, 2600 Baguio City, Philippines; Tel: +63974-3005038; Fax: +63974-3005038; Email: info@pilcd.org; Web: pilcd.org/index.php?option=com_content&view=article&id=106:mainstreaming-drr-in-education-and-schools-management&catid=1:latest-news

The project aims to mainstream Disaster Risk Reduction Education in school curricula and strengthen Disaster Risk Reduction management in public schools in Benguet province.

Disaster Risk Reduction Functional Literacy Project, Philippines

162 BPI Compound, Friendly Homes Subdivision, Guisad, 2600 Baguio City, Philippines; Tel: +63974-3005038; Fax: +63974-3005038; Email: info@pilcd.org; Web: pilcd.org/index.php?option=com_content&view=article&id=95:disaster-risk-reduction-based-functional-literacy-project&catid=1:latest-news

It started in April 2013 and during the first four months of the project, the bulk of implementation focused on two project components: community-based learning and learning materials development.

Disaster Risk Education Program, Philippines

162 BPI Compound, Friendly Homes Subdivision, Guisad, 2600 Baguio City, Philippines; Tel: +63974-3005038; Fax: +63974-3005038; Email: info@pilcd.org; Web:

pilcd.org/index.php?option=com_content&view=article&id=90:drr-education&catid=1:latest-news

The experience from 2009 Pepeng typhoon in Benguet revealed a high level of exposure and vulnerability of communities bringing about PILCD's education and training on disaster risk reduction.

United Nations Children's Fund, New York (from [Stephanie Hodge](#), United Nations Children's Fund, New York, USA)

UNICEF House, 3 United Nations Plaza, 44th Street between 1st and 2nd Avenues, New York; Tel: +1-212-326.7000; Fax: 887.7465 (Primary) / 887.7454 (Secondary); Web: www.unicef.org;
UNICEF promotes girls' education, ensuring they complete primary education as a minimum because it benefits all children, both girls and boys.

From [Ilan Kelman](#), Center for International Climate and Environmental Research – Oslo, Norway

United Nations Office for Disaster Risk Reduction, Switzerland

United Nations Office for Disaster Risk Reduction, Geneva, Switzerland; Tel: +41 229178907-8; Fax: +41 229178964; Email: isdr@un.org; Web: www.unisdr.org;

Among the organisation's list of advocacy work is Education and Disaster risk reduction sees it as an interactive process of mutual learning between people and institutions

Spare Time University, Colorado

Spare Time University, Colorado 80309-0450, USA; Tel: 303.492.5957; Fax: 303.492.6388; Email: info@sparetimeuniversity.com; Web: sparetimeuniversity.com;

The university provides an accessible pathway to educate and empower the general public using a range of new technologies and share knowledge especially those related to weather, climate and water.

From [Ula Majewski](#), Pacific Climate Animation Project, Port Vila, Vanuatu

Red Cross/Red Crescent Climate Centre, Netherlands

Headquarters: The Netherlands; Tel: +31 70 44 55 886; Fax: +31 70 44 55 712; Web: www.climatecentre.org;

The Climate Centre supports the Red Cross and Red Crescent Movement and its partners in reducing the impacts of climate change and extreme weather events on vulnerable people.

Pacific-Australia Climate Change Science and Adaptation Planning Project, Australia

Tel: +61 9239 4400; Email: paccsap@cawcr.gov.au; Web: www.pacificclimatechangescience.org;

It sees that Australian Government work closely with governments and regional organisations throughout the Pacific. This helps ensure the program meets the priority needs of partner countries in the Pacific.

Australian Bureau of Meteorology, Melbourne

Head Office: Melbourne VIC 3001; Tel: (03) 9669 4000; Fax: (03) 9669 4699; Web: www.bom.gov.au;

The Bureau of Meteorology is Australia's national weather, climate and water agency; the Bureau provides one of the most fundamental and widely used services of government.

Commonwealth Scientific and Industrial Research Organisation

CSIRO, Clayton South VIC 3169, Australia; Tel: +61 3 9545 2176; Fax: +61 3 9545 2175; Email: Enquiries@csiro.au; Web: www.csiro.au;

The Commonwealth Scientific and Industrial Research Organisation is Australia's national science agency and one of the largest and most diverse research agencies in the world.

Vanuatu Meteorology and Geo-hazards Department, Vanuatu

Vanuatu Meteorology and Geo-Hazards Department, Port Vila, Vanuatu; Tel: +678 24686; Fax: +678 22310; Email: admin@meteo.gov.vu; Web: www.meteo.gov.vu;

The Department observes and understands Vanuatu's weather and climate and provides meteorological and related services in support of Vanuatu's national needs and international obligation.

SPC-GIZ Climate Change Program, Fiji

SPC/GIZ-Pacific German Regional, Coping with Climate Change in the Pacific Island Region, House 10, Forum Secretariat Complex, Suva, Fiji; Tel: +679 3305 983; Fax: +679 3315 446; Email: wulf.killmann@giz.de; Web:

www.spc.int/lrd/index.php?option=com_content&view=article&id=478&Itemid=44;

The program aims to strengthen the capacities of Pacific Island member countries and territories and regional organisations to cope with the impacts of climate change.

Ethan Allen, Pacific Resources for Education and Learning, Honolulu, Hawaii

Water for Life Project, Hawaii

Pacific Resources for Education and Learning, Honolulu, Hawaii; Email: allene@prel.org; Skype: ethana2013; Web: prelw4l.wordpress.com;

With support from the National Science Foundation, the Water for Life project is improving access to high quality drinking water for residents of Chuuk, Yap, Palau, and the Marshall Islands

Pacific Resources for Education and Learning, Hawaii

900 Fort Street Mall, Suite 1300, Honolulu, USA; Tel: 808-441-1300; Fax: 808-441-1385; Email: info@prel.org; Web: www.prel.org;

PREL serves the educational community with programs, services, and products developed to promote educational excellence working through school systems, from classroom to administration, and collaborate with governments, communities, and businesses.

Pacific Climate Education Partnership

Web: pcep.wested.org;

PCEP educates students and citizens across the Pacific about the urgency of climate change impacts in ways that exemplify modern science and honor indigenous cultures and environmental knowledge

From [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji

WanSmolBag, Vanuatu

Port Vila, Vanuatu; Tel: +678 27119 / 27464; Fax: +678 25592; Email: kontaktem@wansmolbag.org; Web: www.wansmolbag.org;

Wan Smolbag Theatre is a non-government organisation funded by international donors and runs programmes in Education, Environment, Governance, Health and Youth issues.

Save the Children's Fund, Vanuatu

Main Office: East Melbourne, VIC 3002, Australia; Tel: 1800 76 00 11; Fax: +61 3 9938 2099; Web: www.savethechildren.org.au/where-we-work/pacific-islands/vanuatu.html;

Save the Children Vanuatu work in areas of health, community education and training, community development, water supply resource development, pre-school education and direct promotion of children's rights.

Live and Learn Environmental Education, Vanuatu

Erakor House, Port Vila, Vanuatu; Tel: +678 27448; Fax: +678 27455; Email:

vanuatu@livelearn.org; Web: www.livelearn.org;

Live & Learn works with communities to design, implement and learn from community-based development projects that are specific to each community and cover a number of thematic program areas.

Pacific Centre for Environment and Sustainable Environment, Fiji

PACE-SD, University of the South Pacific, Suva, Fiji; Tel: +679 3232897; Web: pace.usp.ac.fj;

PACE-SD leads the way in development of a research culture that serves the region by involving communities and stakeholders by building on successful track record of international research and aid funding.

Global Campaign for Climate Action

Web: gc-ca.org/gcca-home-english; Email: gcca@tcktcktck.org;

Serves to mobilize civil society, galvanize public support to ensure safe climate future for people and nature, promote low-carbon transition and accelerate adaptation efforts in communities affected by climate change

Fiji Ministry of Education

Ministry of Education, Marela House, Suva, Fiji; Tel: +679 3306077; Fax: +679 3305953; Web:

www.education.gov.fj;

Provides a holistic and empowering education system that enables all children to appreciate fully their inheritance and potential contributing to peaceful and sustainable national development

Nature Fiji

14 Hamilton-Beattie Street, Suva, Fiji; Tel: +679 310 0598; Email: support@naturefiji.org; Web:

www.naturefiji.org;

They enhance biodiversity and habitat conservation, endangered species protection and sustainable use of natural resources through promotion of collaborative conservation action, awareness raising, education, research and biodiversity information exchange.

Recommended Communities and Networks

United Nations Educational, Scientific and Cultural Organisation (UNESCO) Inter-agency Committee on the Decade on Education for Sustainable Development (from

Stephanie Hodge, United Nations Children's Fund, New York, USA)

Web: [www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-](http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/partners/un-agencies)

www.unesco.org; UNESCO Headquarters Offices: 7, place de Fontenoy 75352 Paris 07 SP France; 1, rue Miollis 75732 Paris Cedex 15 France; Tel: +33 (0)1 45 68 10 00; Web: www.unesco.org;

It's a forum of UN agencies for open-ended collaboration promoting the role of ESD and its implications for all forms of international initiatives such as the Millennium Development Goals.

Coalition for Global School Safety and Disaster Prevention Education (from [Ilan Kelman](#), Center for International Climate and Environmental Research – Oslo, Norway)

Web: cogssdpe.ning.com; Coalition for Global School Safety and Disaster Prevention Education;

It is a network membership that makes available and accessible knowledge and education applied to disaster prevention everywhere, and helps every school a safe school.

Recommended Portals and Information Bases

From [Stephanie Hodge](#), United Nations Children's Fund, New York, USA

Publications on Climate Change and Children, UNICEF, New York

Web: www.unicef.org/environment/index_60352.html; UNICEF House, 3 United Nations Plaza, 44th Street between 1st and 2nd Avenues, New York; Tel: +1-212-326.7000; Fax: 887.7465 (Primary) / 887.7454 (Secondary);

An information base that features publications on Education and Climate Change from 2009 to 2013, Impacts on Children from 2008 to 2011, and Humanitarian Situations 2011

Education for Sustainable Development in the Post-Decade on Education for Sustainable Development Educational Agenda, United Nations University, Japan

Web: www.ias.unu.edu/sub_page.aspx?catID=8&ddlID=2650; United Nations University, Institute of Advanced Studies, Yokohama, Japan; Tel: +81-45-221-2300; Fax: +81-45-221-2302; Email: unuias@ias.unu.edu;

This seminar enabled participants to share their views on targeted communications and education in the Post-Decade on Education for Sustainable Development agenda.

E-Discussion: Education for Sustainable Development (April 29-May17), World We Want 2015

Web: www.worldwewant2015.org/node/342413; World We Want 2015; Moderated by Stephanie Hodge and Yoko Mochizuki; Contact: www.worldwewant2015.org/post2015-contactus;

Discussions on Education for Sustainable Development included what knowledge needs to be shared, what alternative sources of knowledge can be tapped into, how should knowledge be shared.

School Safety and Educational Material, Risk RED, Norway (from [Ilan Kelman](#), Center for International Climate and Environmental Research – Oslo, Norway)

Web: www.riskred.org/schools.html; Risk RED (Reduction and Education for Disasters), Oslo, Norway; Tel: +1-408-806-7888; Fax +1-408-516-5841; Email: riskred@riskred.org;

Risk RED's (Reduction and Education for Disasters) purpose is to increase the effectiveness and impact of disaster risk reduction education.

National Advisory Board on Climate Change & Disaster Risk Reduction Portal (from [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji)

Web: www.nab.vu; Department of Meteorology and Geohazards, Namba 2 Area, Port Vila, Vanuatu; Tel: +678 24686 / +678 23866; Fax: +678 22310; Email: commp@meteo.gov.vu;

NAB acts as Vanuatu's supreme policy making and advisory body for all disaster risk reduction and climate change programs, projects, initiatives and activities

Sustainability Frontiers Library (from [Fumiyo Kagawa](#), Sustainability Frontiers, England)

Web: www.sustainabilityfrontiers.org/index.php?page=resources; Sustainability Frontiers, Devon, EX10 0PH, United Kingdom; Tel: +44-(0)1395-577796; Fax: +44-(0)1395-577796; Email: info@sustainabilityfrontiers.org;

This section gives details and abstracts of recently published articles and book chapters, gives details of evaluation and technical reports, and currently available books authored/co-authored by members of Sustainability Frontiers.

Recommended Tools and Technologies

From [Ula Majewski](#), Pacific Climate Animation Project, Port Vila, Vanuatu

The Pacific Adventures of the Climate Crab

Video; written by Antas S; produced by EyeSpy Films; Australian Government's Pacific Climate Change Science Program, Australia; Email: paccsap@cawcr.gov.au / pacmetdesk@sprep.org; 2013;

Available at: www.pacificclimatechangescience.org/animations/climatecrab;

The animation is to raise awareness of the science and impacts of El Niño and La Niña and encourage Pacific Islanders to take early action in preparing for extreme events

Cloud Nasara

Video; written by Antas S; produced by EyeSpy Films; Australian Government's Pacific Climate Change Science Program, Australia; Email: paccsap@cawcr.gov.au / pacmetdesk@sprep.org; 2013;

Available at: www.pacificclimatechangescience.org/animations/cloudnasara;

It tells the story of a cloud meeting place and its interactions with a small island village, inhabited by a colourful cast of characters, including a reggae-obsessed parrot

From [Hanna Sabass](#), SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji

Vanuatu Education Road Map

Guideline; by the Government of Vanuatu; 2009;

Available at: www.ausaid.gov.au/countries/pacific/vanuatu/Documents/vanuatu-education-road-map-4dec-2009-final.pdf (PDF; Size: 275KB)

The road map sets out the agenda of the Government of Vanuatu for the development of its education sector over the medium term.

Pou and Miri

Book; by Sansom D, Christine F, Secretariat of the Pacific Community, Suva Regional Office, Fiji; Tel: +679 337 0733; Web: www.spc.int; 2011;

Available at

www.spc.int/lrd/index.php?option=com_docman&task=cat_view&gid=285&Itemid=48&limitstart=5 (PDF; Size: 4.55MB)

A booklet series for children describes the main greenhouse gases that are causing global warming; targets young Pacific readers to educate them on issues relating to climate change

The Children Take Action

Book; by Deo S. and Jayne K., Secretariat of the Pacific Regional Environment Programme, Samoa; Email: sprep@sprep.org; Tel: +685 21929; 2012;

Available at www.sprep.org/attachments/Publications/CC_Story_Eng_Ir.pdf (PDF; Size: 3MB)

This story is to assist the process of learning about climate change and what steps each child can take to deal with a global problem through his or her everyday actions.

iTaukei Climate Change Glossary

Book; by Ministry of iTaukei Affairs, Government of Fiji, Suva;

Available at www.pacificdisaster.net/pdnadmin/data/original/SPC_2012_CC_iTaukeiGlossary.pdf (PDF; Size: 937KB)

To promote standardization on the use of iTaukei phrases and terms relating to climate change ensure consistency in climate change messages going out to local communities.

Environment Alphabet Poster

Poster; by Nature Fiji – Mareqeti Viti, Suva; Email: support@naturefiji.org; 2013;
Preview at www.spc.int/en/our-work/strategic-engagement-policy-and-planning-facility/policy-briefs/1272-new-environmental-alphabet-poster-brings-climate-change-education-closer-to-home.html

The poster brings the local environment into the classroom to support Fijian students in learning how to read and write and increase their appreciation of their natural resources.

Learning about Climate Change the Pacific Way

Picture based resource; Authors: Jipe Lebars, Secretariat of the Pacific Community (SPC), Hanna Sabass, SPC/GIZ Pacific German Regional Coping with Climate Change in the Pacific Island Region, Carol Young, University of Auckland;

View presentation at

www.pacificdisaster.net/pdnadmin/data/original/JM2013_JM_SE11_CC_PacificWay_20130711.pdf
(PDF; Size: 975KB)

To deliver nationally prioritized key messages relevant to climate change science, effects of climate change on the Pacific and options to mitigate its causes and to adapt to expected changes.

From [Doris Susau, Makelesi Batimala, and Ruth Kuilamu](#), *Live & Learn Environmental Education, Suva, Fiji*

Rapid Assessment of Perceptions

Approach; Live & Learn Environmental Education, Regional Office, 52 Imthurn Road, Domain, Suva, Fiji; Tel: +679 3315 467; Fax: +679 3305 868; Email: rmpacific@livelearn.org;

Available at livelearn.org/research;

Rapid Assessment of Perceptions combine community mapping, ranking, focus groups, and unstructured interviews to learn and document perceptions of diverse community members

Most Significant Change Techniques

Approach; Live & Learn Environmental Education, Regional Office, 52 Imthurn Road, Domain, Suva, Fiji; Tel: +679 3315 467; Fax: +679 3305 868; Email: rmpacific@livelearn.org;

Available at livelearn.org/sites/default/files/docs/methodologies.pdf (PDF; Size: 254KB)

The process involves the collection of significant change stories emanating from the field level, and the systematic selection of the most significant of these stories by panels of designated stakeholders

The Logical Framework Approach (from [Birtha Togahai](#), University of the South Pacific / European Union: Global Climate Change Alliance Project, Niue)

Approach; University of the South Pacific/European Union - Global Climate Change Alliance Project; Web: eugcca.usp.ac.fj;

The Logical Framework Approach is a widely used project management tool based on a set of inter-locking concepts used together in a dynamic fashion to develop a well-designed, objectively-described project.

Responses in Full

Ramon G. Mapa, People's Initiative for Learning and Community Development, Philippines

Dear Members,

The query is very much interesting since one of our thrust here at the People's Initiative for Learning and Community Development is mainstreaming climate change education and Disaster Risk Reduction (DRR) in Education and schools management in the formal and non-formal schools.

We have two major projects implemented in introducing Climate Change (CC) and DRR Education both in the formal and non-formal education. I would forward you to the following links of our projects on DRR and CC education in our website:

- pilcd.org/index.php?option=com_content&view=article&id=56&Itemid=62
- pilcd.org/index.php?option=com_content&view=article&id=106:mainstreaming-drr-in-education-and-schools-management&catid=1:latest-news
- pilcd.org/index.php?option=com_content&view=article&id=95:disaster-risk-reduction-based-functional-literacy-project&catid=1:latest-news
- pilcd.org/index.php?option=com_content&view=article&id=90:drr-education&catid=1:latest-news

Here is brief information of our projects on DRR and CC in Education.

www.solutionexchange-un.net//repository/pc/ccd/DRRProject_Info_PILCD.pdf (PDF; Size: 474KB)

On lessons learned, we find the following as significant:

- Linking DRR to climate change and the environment provides a more holistic perspective of looking at disaster risk reduction not only in terms of preparedness but of mitigation. Moreover, this kind of perspective facilitates reflection on our behaviours and lifestyles that affect the state of the environment and increase our vulnerabilities to natural disasters.
- Strengthening DRR education in teaching is a fluid entry point in introducing innovations in strengthening learning outcomes not only in the subject of DRR but to the other subject areas being taught by the teachers.
- Strengthening DRR in schools requires linking and strengthening coordination and partnership of schools to the larger community particularly the local government units. This will not only make the school's DRR plan relevant for the whole community but will also serve as the plans mechanism for sustainability
- Engaging school heads and local education officials is crucial to institutionalize CC and DR in education being taught and mainstreamed and not only being "complied"
- Strengthening participatory approaches in the teachers learning methodologies provide a another venue to reinforce the value of community cooperation and unity in building resilient communities and schools

- Utilizing participatory and creative approaches to learning reinforces the quality of learning outcomes and provide avenues for further reflection

Stephanie Hodge, United Nations Children’s Fund, New York, USA

Dear Members,

I work in the education department at the United Nations Children’s Fund (UNICEF) focusing on sustainable development. I am currently the 2013 Chair of the UN Educational, Scientific and Cultural Organization (UNESCO) Inter-agency Committee on the Decade on Education for Sustainable Development (IAC-DESD). I previously provided expert support to UN agencies on education and environment issues and helped the UN Education Programme develop a strategy for environmental education.

Suggested Links and Resources

According to UNESCO, which serves as the Secretariat of the IAC-DESD, “[Education alone cannot achieve a more sustainable future; however, without education and learning for sustainable development, we will not be able to reach that goal.](#)” UNICEF has led great efforts in Education for Sustainable Development for the past eight years through the IAC-DESD. Serving as IAC Chair twice, UNICEF continues its leadership role in 2013, working to boost momentum for advocacy, coordination, strategic partnerships, knowledge management and resource mobilization for the ESD programme. The IAC brings together 22 UN Agencies committed to achieving DESD. Please click [here](#) for more information.

Resources

- Climate Change and Environmental Education MODULE | [English](#) | [Français](#) | [Española](#)
- Climate Change Adaptation and Disaster Risk Reduction in the Education Sector RESOURCE MANUAL | [English](#) | [Français](#) | [Española](#)
- Youth in action on climate change: inspirations from around the world | [English](#)
- Climate Change and Children | [English](#)
- Child-Friendly Education: Transforming the lives of children affected by climate change | [English](#) | [Española](#)
- Climate Change Take Action Now: A guide to supporting the local actions of children and young people, with special emphasis on girls and young women | [English](#)
- Disaster Risk Reduction in School Curricula: Case Studies from Thirty Countries | [English](#)
- Exploring the Impact of Climate Change on Children in South Africa | [English](#)
- The benefits of a child-centered approach to eliminate change adaptation | [English](#)
- Climate Change and Children: A Human Security Challenge | [English](#)
- Children's Vulnerability to Climate Change and Disaster Impacts in East Asia and the Pacific | [English](#)
- Climate proof children: Putting the child first in climate finance | [English](#)
- Climate change impacts on children in the Pacific: A focus on Kiribati and Vanuatu | [English](#)
- The impacts of climate change on nutrition and migration affecting children in Indonesia | [English](#)
- Children and Climate Change in Mongolia: Children's Increasing Vulnerability and their Capacity as Agents for Community Based Adaptation | [English](#)
- Global Climate Change and Child Health: A review of pathways, impacts and measures to improve the evidence base | [English](#)

- For other UNICEF publications on climate change and children, please visit: www.unicef.org/environment/index_60352.html
- **Name of Fellow -Guest:** Stephanie Hodge- 2006 MPA MC- Harvard Kennedy School- Co-Author - Mainstreaming Climate Change Adaptation and DRR in Education sector – A planning process toward Equity and Relevant Education for All.
- Climate Change Adaptation and Disaster Risk Reduction in the Education Sector RESOURCE MANUAL | [English](#) | [Francois](#) | [Española](#)
- Details and presentations on the Education for Sustainable Development in the Post-DESD Educational Agenda, please visit: www.ias.unu.edu/sub_page.aspx?catID=8&ddlID=2650
- Also see the results on the Post 2015 Education for Sustainable Development discussion at www.worldwewant2015.org/node/342413

I would be more than happy to support Vanuatu with the curricula work on CCEDRR. Please let us know how we can continue to help. Here are some recent questions asked to UNICEF relevant to climate change and disaster risk education www.solutionexchange-un.net/repository/pc/ccd/UNICEF-SeminarQs.pdf (PDF; Size: 453 KB)

Ilan Kelman, Center for International Climate and Environmental Research - Oslo, Norway

Dear All,

Some sources which might be of interest on climate and disaster risk education:

1. Coalition for Global School Safety and Disaster Prevention Education cogssdpe.ning.com
 2. United Nations Office for Disaster Risk Reduction (UNISDR)'s education page www.unisdr.org/we/advocate/education especially Ben Wisner's 2006 booklet 'Let Our Children Teach Us – A Review of the Role of Education and Knowledge in Disaster Risk Reduction'. Books for Change, India, full text at www.unisdr.org/files/609_10030.pdf (PDF; Size: 2730KB).
 3. Mickey Glantz' Spare Time University sparetimeuniversity.com
 4. School Safety and Educational Material www.riskred.org/schools.html from Risk RED (Risk Reduction Education for Disasters), a Non-Government Organisation that I co-direct.
 5. Connecting climate change and disaster risk reduction www.ilankelman.org/articles1/daeditorial2008.pdf (PDF; Size: 815KB) so that we educate and learn about these topics together, rather than separating them as different sectors.
 6. Walter Leal Filho's edited book "Universities and Climate Change: Introducing Climate Change to University Programmes" www.springer.com/economics/environmental/book/978-3-642-10750-4
 7. "Earthquake Safety for Schoolchildren" from Regional Development Dialogue, 2007, vol. 28, no. 2, contents www.uncrd.or.jp/pub/rdd/rdd28_2.pdf (PDF; Size: 31.9KB) and my editorial introduction www.uncrd.or.jp/pub/rdd/rdd28_2_editorial_introduction.pdf (PDF; Size: 828KB)
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Ula Majewski, Pacific Climate Animation Project, Port Vila, Vanuatu

Hi Pacific colleagues,

We have just launched two new animations, 'The Pacific Adventures of the Climate Crab' for the Pacific region, and Klaod Nasara a pilot animation focused on Vanuatu that integrate climate science and disaster preparedness. Some of you may have already seen these, but if not, you can view them at www.pacificclimatechangescience.org/climatecrab and www.pacificclimatechangescience.org/cloudnasara.

The animations are exciting new communications tools that can be used to raise awareness of the science and impacts of El Niño and La Niña and encourage Pacific Islanders to take early action in preparing for these extreme events. A team of climate scientists, humanitarians, technical experts, artists and film-makers teamed up to produce the entertaining short films, which come with resource 'tool kits' for facilitators, to help link the information presented in the animation to decision-making and action on the ground.

El Niño and La Niña events influence rainfall, cyclone risk and sea levels in the Pacific region. These in turn impact Pacific communities in very real ways – for example the 2010/2011 La Niña event resulted in Red Cross responding to drought in Tuvalu and floods in Fiji. Good quality climate and weather information, warnings and forecasts can help us anticipate and prepare for changing risks.

The films and accompanying resources will be useful for those working in fields that address climate risk such as climate change adaptation, disaster risk management, health, education, food security, community planning, environmental protection, agriculture and natural resource management.

The Pacific climate animation project is the result of collaboration between Red Cross and the Australian Government's Pacific-Australia Climate Change Science and Adaptation Planning (PACCSAP) Program. The project has been implemented by the Red Cross, the Australian Bureau of Meteorology, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Vanuatu Meteorology and Geo-hazards Department (VMGD) and the SPC-GIZ Climate Change Program.

I hope you're all having a wonderful day and thanks to the wonderful exchange team for continuing to provide such a fantastic forum.

Ethan Allen, Pacific Resources for Education and Learning, Honolulu, Hawaii

Aloha All,

We are currently underway with a project, Water for Life (see prelw4l.wordpress.com), that bridges the areas of education and disaster risk reduction. Water for Life is building local communities' (in Palau, Yap, Chuuk, and the Republic of the Marshall Islands) awareness of drinking water issues, using this highly relevant topic to engage residents in learning about water, and fostering community service learning projects that build capacity and resiliency to cope with water-related disasters. Information from Water for Life is available on the above-noted website, and/or by contacting me (allene@prel.org; Skype ethana2013).

Water for Life also ties into other Pacific Resources for Education and Learning (PREL) work, the Pacific Climate Education Partnership (PCEP; pcep.dsp.wested.org)

and www.facebook.com/pcep.connect?ref=ts&fref=ts) that advances the role of education in dealing with disasters.

Hanna Sabass, SPC/GIZ Coping with Climate Change in the Pacific Island Region, Suva, Fiji

Dear colleagues,

Thanks a lot for posting the query on Education on Climate Change and Disaster Risk Management in Vanuatu and the fantastic contributions. It is great to see the growing interest in introducing Climate Change into formal education systems and strengthening ongoing efforts in Disaster Risk Management education.

The Ministry of Education in Vanuatu has achieved a couple of milestones in integrating Climate Change and Disaster Risk Management into the ongoing curriculum review process under the Vanuatu Education Road Map (VERM), supported by a range of partners (Government Departments like Vanuatu Meteorology and Geo-Hazards Department, Forestry, Fisheries, Agriculture, Water; Non-Government Organisations like WanSmolBag, Safe the Children's' Fund, Live & Learn Environmental Education, AusAID and New Zealand Aid Programs, the Vanuatu Education Road Map under the United Nations Children's Fund; and Climate Change programs such as the Pacific Centre for Environment and Sustainable Development (PACE SD) and the European Union funded Global Campaign for Climate Action (GCCA/EU) at the University of the South Pacific , and the Secretariat of the Pacific Community/German Development Cooperation (SPC/GIZ) Coping with Climate Change in the Pacific Islands Project (CCCPIR).

A summary of Vanuatu specific achievements and good practices is in this poster www.solutionexchange-un.net/repository/pc/ccd/EducationCCandDRMPPoster_Vanuatu2013.pdf (PDF; Size: 924KB) and a presentation on Climate Change and Disaster Risk Management Education (CC and DRM) by Roy Obed, Education Services Director for Vanuatu's Ministry of Education at given at the first joint meeting of the Pacific Platform for Disaster Risk Management and Pacific Climate Change Roundtable 2013 held in Nadi, Fiji www.solutionexchange-un.net/repository/pc/ccd/Vanuatu_Education_Obed_2013_07.pdf (PDF; 757KB),

Here is a summary of key messages as a result of a side event on education during the same meeting www.solutionexchange-un.net/repository/pc/ccd/SideEvent3KeyHighLevelMessages_2013_07_10.pdf (PDF; 412KB),

Good practices from SPC/GIZ CCCPIR's point of view:

(For teaching aids see hyperlinks below)

- Ensuring ownership and leadership by the Ministry of Education and Teacher Training Colleges
- Aligning to ongoing curriculum review processes this pays respect to education system's capacity 'issues'
- Curriculum Development Officers (and subcontracted Curriculum Writers) are trained experts on writing appropriate learning outcomes and scoping and sequencing any content. Training them and facilitating national consultations on CC and DRM is a key.
- Avoid, if possible, the setting up of new project steering committees. Rather use existing ones or if not present, help in setting up national ones under existing CC and DRM or Education governance arrangements suitable as an entry point for various partners.

- Implement education and climate change initiatives in partnerships with Non-Government Organisations (NGO), networks and other CC and DRM initiatives

The three last points help to increase quality, enhance national level steering and ensure synergies.

Generally it is perhaps worth mentioning that in most small Pacific island countries text books and teacher guides are written and published by the Curriculum Development Units. This emphasises the need to train and support curriculum writers and to equip the Ministries' with funds for printing and distribution. Even though many programs, including ours, for various reasons opt for regionally suitable education materials, experience shows that Ministries of Education prefer country specific resources that reflect the local context, and are available in vernacular, designed and developed according to their standards and needs.

SPC/GIZ CCCPIR and its CC Education component:

Coping with Climate Change in the Pacific Island Region (CCCPIR) is a programme with six components implemented by GIZ in partnership with SPC on behalf of the Federal German Ministry for Economic Development and Cooperation (BMZ) in 12 Pacific Island Countries. Its CC Education component is aiming at increasing the capacities of education ministries, training institutions, schools and teachers to develop and deliver education on climate change adaptation and mitigation. It is being implemented in Fiji, Kiribati, Samoa, Tonga and Vanuatu and are undergoing curriculum reviews.

The implementation of the education component started with a regional CC and Education Planning Workshop in Nadi, 2011, in collaboration with the Secretariat of the Pacific Regional Environment Programme (SPREP) and USP/PACE SD. Representatives of the Curriculum Development Units, Teacher Training Institutions and respective national agencies in charge of CC identified the need to:

1. Incorporate relevant elements of CC and DRM across the curriculum from Early Childhood, Primary to Secondary Schools, deliberately not as a new subject but within existing subjects or strands and across levels;
2. Strengthen in-service and pre-service teacher training on CC and DRM through national Teacher Training Colleges;
3. Take stock of existing and utilized education materials/resources to identify appropriate materials and gaps (ultimately as a basis to decide upon and design new materials);
4. Strengthen coordination on CC and DRM Education at national level across sectors and also with non-state actors; and
5. Incorporate relevant elements into Technical and Vocational Education and Training (TVET). Samoa has already integrated CC and DRM into the education system and intends to focus on measuring the effectiveness.

In all five countries quite dynamic processes evolved with a high level of ownership and leadership taken by the Ministries of Education, supported by a range of national government departments, NGO, SPC, SPREP, USP and development partners. SPC/GIZ CCCPIR, being one of them, could contribute to the following:

- Learning outcomes and competencies on CC and DRM have been drafted across new school and existing TVET curricula in Fiji (Year 1 to Form 7, draft), Kiribati (Year 1 to Year 4, follow up aligned to Kiribati Education Improvement Program) and Vanuatu (Early Childhood to Year 13, draft)

- New competencies on CC and DRM have been incorporated into the Vanuatu National Training Council Qualifications Framework, Kiribati Institute of Technology and SPC Community Education Training Centre
- In Kiribati, Fiji, Samoa, Tonga and Vanuatu education stakeholders are contributing to national efforts to develop, implement and coordinate climate change policies and strategies
 - Fiji, Samoa and Tonga have established national level working groups on education on CC and DRM;
 - Kiribati has formed the national cross-sectoral Kiribati National Expert Group on CC and DRM with education being a pro-active member in developing the Kiribati Joint Implementation Plan; and
 - In Vanuatu coordination is enhanced with existing committees/working groups such as the Education Cluster, the NGO Consortium and the Information and Communications Technology Group under the National Advisory Board
- Education and awareness materials are being distributed to primary and/or secondary schools in Kiribati, Fiji and Vanuatu (such as 'Pou and Miri' in Fiji, Vanuatu and shortly in Tonga, 'The Children take Action' in Kiribati (by SPREP), the [i-Taukei Climate Change Glossary](#) and the Environmental [Alphabet Poster](#) in Fiji (by Fiji Ministry of Education and Nature Fiji), Fisheries posters in Kiribati)
- Stock-taking of existing and utilized education resources in Fiji and Vanuatu across Government Departments, NGO, resident Development Partners (in Vanuatu uploaded in the [NAB portal](#))
- A reference containing key messages and learning outcomes on CC and DRM has been drafted and utilized in trainings (currently in development)
- Regional and country education representatives presented their position to the Joint Pacific Climate Change Roundtable and Disaster Risk Management Platform 2013 and high-level key messages (linked above and Kiribati, Tonga and Fiji prepared presentations/posters)

Upcoming:

- A new picture based education resource 'Learning about Climate Change the Pacific Way' will be published shortly, distributed to schools and utilised for intense in-service and pre-service teacher training (with the AusAID funded Pacific-Australia Climate Change Science and Adaptation Planning; with many review partners)
- A regional framework on education on CC and DRM, including the development of consistent key messages on climate change, will be developed (currently coordinated by SPC with SPREP, USP, United Nations Educational, Scientific and Cultural Organization, Pacific Resources for Education and Learning and UNICEF. This informal network is always open to new partners; see [Paper](#) submitted to Forum Education Ministers' Meeting in 2012)

Please contact Christopher Bartlett (christopher.bartlett@giz.de) in Vanuatu or myself (hanna.sabass@giz.de) on education in case of any questions or comments. In CC you can find also Roy Obed, Director Curriculum Services, Charley Robert, Director Curriculum Unit, and James Melteres, Curriculum Coordination Officer from the Vanuatu Ministry of Education and Annette Theophile, Science Lecturer from the Vanuatu Institute of Education.

Melteres James, Ministry of Education, Vanuatu

Hi colleagues from the Pacific,

Many thanks for the clarification to the integration of Climate Change (CC) and Disaster Risk Reduction (DRR) into the Vanuatu core curricula.

At the Curriculum Development Unit, the writers have integrated CC and DRR into the curriculum from Primary to Junior and Senior Secondary school level, and the writing process still continues with the teachers' guide. The subjects which have not fully integrated concepts on CC and DRR will be integrated in the teachers' guide as an activity. We are about to complete all the syllabus from Junior and Senior Secondary school level and start to develop the teachers' guide.

In the meantime, other learning support materials ([Cloud Nasara](#), Danny and Rourou) are being developed with CC and DRR concepts and will be distributed to schools and trained teachers, while waiting for the syllabus and the teachers' guide to be completed and implemented according to each year or level of schooling; this is done in partnership with GIZ (German Development Cooperation) and other stakeholders.

Doris Susau, Makelesi Batimala, and Ruth Kuilamu, Live & Learn Environmental Education, Suva, Fiji

Dear Members,

Local knowledge and global understanding are the starting points in developing an ethic in environmental and development education. Local ownership of environmental and development education programs, open participation and equality remain the foundation of our organisation.

Live & Learn works with communities throughout Asia and the Pacific to design, implement and learn from community-based development projects. The projects are specific to each community and cover a number of thematic program areas. These include:

- Water, Sanitation and Hygiene
- Sustainable use of biodiversity
- Environmental governance
- Natural resource-based conflict management and peace building
- Understanding climate change
- Sustainable energy options
- Community-based waste reduction and management
- Human rights
- Community disaster prevention and preparedness

Methodologies

Live & Learn is committed to environmental and sustainable development education that is innovative, culturally relevant and grounded in local knowledge. To ensure that our projects meet these requirements we use two key methodologies:

1. Rapid Assessment of Perceptions
2. Most Significant Change techniques

In the beginning of Live & Learn projects, Rapid Assessment of Perceptions (RAPs) are conducted with our partner schools and communities. RAPs combine community mapping, ranking, focus groups, and unstructured interviews to learn and document perceptions of diverse community members. Findings from the Rapid assessment of Perceptions contribute to the (i) development and design of educational resources and tools, (ii) design of training and capacity building programs to ensure that we start from where our target groups are at and address their needs and (iii) also to strengthen the monitoring and evaluation process throughout the program. Live and Learn staff seek out community members, such as the elderly, women, youth and children, to participate so that disenfranchised community members are given opportunities to share freely their thoughts on various environmental issues.

Some key principles of a RAP are:

- Principle 1: Programs should start 'where the communities are at' focus should be relevant to community members' lives and needs
- Principle 2: Learning should have an emphasis on systems thinking (developing an understanding of how the social / economic / political and environmental systems are inter-related and dependent on each other)
- Principle 3: Programs should provide an opportunity for learning that involves developing and practicing critical thinking skills. Critical thinking should aim to investigate and challenge past, present and future developments scenarios
- Principle 4: Programs should involve developing partnerships between key people and institutions in the community and society. For example; decision makers, governments, business, non-government organizations, educators and community members
- Principle 5: Programs should be 'process oriented', using methods that can be applied to a range of issues, and should not be tied specifically to one issue
- Principle 6: Programs should involve 'learning through doing'. All tools should be directed toward empowering action that leads to change
- Principle 7: Programs should promote empowerment from within communities, and avoid creating dependency on outside influences

While Live & Learn project officers' conduct real time assessments throughout all our projects, the Most Significant Change technique is conducted with community members to identify the level of influence by a certain project.

The process involves the collection of significant change stories emanating from the field level, and the systematic selection of the most significant of these stories by panels of designated stakeholders or staff. The designated staff and stakeholders are initially involved by 'searching' for project impact. Once changes have been captured, various people sit down together, read the stories aloud and have regular and often in-depth discussions about the value of these reported changes. When the technique is successfully implemented, whole teams of people begin to focus their attention on program impact.

The Live & Learn Fiji Country Program has established a 10 step implementation process for the formal education program.

1. Stakeholder Analysis
2. Curriculum Inventory
3. Rapid Assessment of Perception (RAP)
4. Site Assessments
5. Project Framework
6. Education Activities
7. Capacity building and training
8. Community Awareness Programs (CAPs)
9. School & Community Actions
10. Monitoring and Evaluation

Lessons Learned

- Partnership is vital especially when carrying out school programs. Live & Learn Fiji has a Memorandum of Understanding with Ministry of Education and the Curriculum Development Unit. Live & Learn country programs in Vanuatu, Solomon Islands and Papua New Guinea also have similar arrangements with the relevant formal education authority. In Fiji, through the established partnership, a Curriculum Adviser from the Ministry of Education works closely with the team, and accompanies Live & Learn teams on visits to schools and communities, attends in-service teacher training workshops, engages in the review of formal education resources and provides advice for formal education programs.
- Engaging with whole communities – children, teachers, parents and school committees allows for a greater sustainability of our projects. Engagement also strengthens the links between school and communities.
- Ensure programs implemented are linked to national policies and international goals such as the Millennium Development Goals.
- Resources developed to be relevant, culturally sensitive and include inputs from CDU and the Ministry of Education. For example the 'Kids to Forest' DVD acknowledges traditional knowledge that needs to be revived and reintroduced into the school system. It has been designed to complement the curriculum and readily taken on board by the teachers.
- We must be aware of changes in national policies. Our partnership with government and especially the Ministry of Education ensures that we are made aware of information on any change in national education policies. This provides Live & Learn the opportunity to design educational programs that support national education policies.
- When resources are developed and training programs are facilitated it should cover all the local languages e.g. in Vanuatu resources and programs are facilitated in English, French and Bislama.

For more information on Live & Learn visit www.livelearn.org

Our resources on formal and informal education are also available online at www.livelearn.org/resources

Birtha Togahai, University of the South Pacific/ European Union: Global Climate Change Alliance Project, Niue

Greetings and Fakalofa lahi atu,

I read with interest the discussion on Climate Change (CC) and Disaster Risk Reduction (DRR) Education. I have been asked to integrate CC and DRR into the Niue National Curriculum. I attended the Proposal Preparation Using the Logical Framework Approach (LFA Workshop) last week. I would like to encourage everyone in the 9 Pacific countries participating in the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) project implemented by the Secretariat of the Pacific to attend the workshop. I have suggested to our Department of Education to use the LFA in our efforts to integrate CC and DRR into the Curriculum.

I appreciate all the constructive feedback on this topic and available resources mentioned. I have watched the Climate Crab and found it useful, would be even more effective to have it translated to our local language.

I look forward to learning more from the discussion as our students will benefit from learning early about CC and DRR.

Fumiyo Kagawa, Sustainability Frontiers, England

Dear colleagues,

I would like to share some disaster risk reduction and climate change education teaching and learning materials as well as other academic and professional publications from Sustainability Frontiers (www.sustainabilityfrontiers.org), a not-for-profit academic non-governmental organization dedicated to research and development in formal, informal and non-formal sustainability education.

First, as consultant for Save the Children Australia, we engaged with disaster risk reduction/climate change adaptation education curriculum research and development work in Vanuatu. The outcomes are as follows:

- *Disaster Risk Reduction Education in Vanuatu: A Baseline Study for Save the Children Australia.* By Fumiyo Kagawa & David Selby, Save the Children Australia, Port Vila, Vanuatu, 2012 (April), 71pp. www.savethechildren.org.au/images/content/where-we-work/vanuatu/Vanuatu_DRR_Curriculum_Baseline_2012.pdf
- *Disaster Risk Reduction Education in Vanuatu: Pilot Curriculum Materials, Teachers' Guide and Evaluation Instruments.* By Fumiyo Kagawa & David Selby, Save the Children Australia. Port Vila, Vanuatu, 2012 (May), 125pp. www.savethechildren.org.au/images/content/where-we-work/vanuatu/Vanuatu_DRR_Curriculum_Activities_11May_20012.pdf

We have also produced the following publications which may well be of interest to colleagues in Vanuatu:

- *Climate Change in the Classroom: UNESCO Course for Secondary Teachers on Climate Change Education for Sustainable Development.* By David Selby & Fumiyo Kagawa, UNESCO, Paris,

2013 www.unesco.org/new/ccesd (the flipbook format version)
unesdoc.unesco.org/images/0021/002197/219752e.pdf (the full PDF version)

- *Education and Climate Change: Living and Learning in Interesting Times*. Fumiyo Kagawa & David Selby (Eds). Routledge Research in Education Series, New York, 2010.
www.routledge.com/books/details/9780415805858/
- *Disaster Risk Reduction in School Curricula: Case Studies from Thirty Countries*. By David Selby & Fumiyo Kagawa, UNESCO, Paris/UNICEF Geneva. 2012.
unesdoc.unesco.org/images/0021/002170/217036e.pdf
- *Towards a Learning Culture of Safety and Resilience: Technical Guidance on DRR in School Curricula. Pilot Version*. By David Selby & Fumiyo Kagawa, UNESCO, Paris/UNICEF Geneva. 2013. unesdoc.unesco.org/images/0021/002194/219412e.pdf

In addition, we have published the following relevant articles:

- David Selby & Fumiyo Kagawa, 'World as "Lasting Storm": Educating for Disaster Risk Reduction,' *Green Teacher*, Summer 2013, Issue 100, 21-32.
greenteacher.com/contents100/
- Fumiyo Kagawa & David Selby, 'Ready for the Storm: Education for Disaster Risk Reduction and Climate Change Adaptation and Mitigation,' *Journal of Education for Sustainable Development*, vol.6, no. 2, September 2012. 207-17.
jsd.sagepub.com/content/6/2/207.abstract
- David Selby & Fumiyo Kagawa, 'Climate Change Learning: Unleashing Blessed Unrest as the Heating Happens', *Green Teacher*, Fall 2011, Issue 94, 3-15.
www.greenteacher.com/contents94.html
- David Selby, 'Education for Sustainable Contraction as Appropriate Response to Global Heating', *Journal for Activist Science and Technology Education*, vol.3, no.1, 2011, 1-14.
www.wepaste.org/jaste3.1.html
- David Selby & Fumiyo Kagawa, 'Runaway Climate Change as Challenge to the "Closing Circle" of Education for Sustainable Development', *Journal of Education for Sustainable Development*, 4(1), March 2010, 37-50. jsd.sagepub.com/content/4/1/37.abstract

For details of all our related publications, please visit the Sustainability Frontiers website library at: www.sustainabilityfrontiers.org/index.php?page=resources

If there are opportunities to collaborate with colleagues in Vanuatu for further development of CCA/DRR curriculum, teaching and learning materials, teacher training programs and research, we would be delighted to contribute. Please contact my colleague David Selby, dselby@sustainabilityfrontiers.org or myself, fkagawa@sustainabilityfrontiers.org

Charley Robert, Ministry of Education, Vanuatu

Dear all,

We will continue to work together for the Climate Change Programme in Vanuatu. I see this cross sectoral taskforce or committee in Kiribati is a vital strategy to prepare the people and students

on climate change concepts. It will easily cover formal and non-formal education sectors. Is the Vanuatu strategy going that far? The reason is because the number of population outside the schools is more than those in the classroom.

Two important stakeholders, the community leaders and the church must be actively involved in the climate change programme in Vanuatu.

We will take care of those in the classroom but a big portion is in the community and centres and they need to understand and be made aware because they make decisions on a daily basis that impact the environment. When we lose one tree a day and not replace it, we cannot stabilize the situation.

These are just few thoughts on furthering education in the community, and thank you also for the documents.

Priyatma Singh, the University of Fiji, Saweni, Lautoka

Dear Members

I am a Lecturer at The University of Fiji. The science program at the University is quite new and I was fortunate to be part of the consultation group responsible for distributing the units for undergraduate BSc program. The climate change impacts and disaster risks will pose even more threats in future and it is only fair our younger generations are made aware of the implication of these issues. We have incorporated Climate Change and Society as one of the mandatory service courses in the BSc program. In other words, undergraduate students enrolled in any BSc stream (Biology, Chemistry, Physics, Agriculture and Geography) are required to do Climate Change and Society course.

The course provides a panoramic overview from the fundamentals to the most intensive issues in Climate Change (CC) and Disaster Risk Management (DRM). A survey of the course revealed that students appreciate the nature of the course and the way it has been delivered. The lecturer made use of local and international current CC change and DRM scenarios and examples as a tool to capture interest of the students. Students are shown several CC videos/animations in between lectures and are asked to surf applicable CC and DRM websites to download current newsletters and project reports.

The course has been specifically tailored to suit the present needs of the Pacific Island Countries. As a form of assessment, recent scientific papers are given to students to analyze and they are asked to discuss case studies and report during tutorial workshops. A large component of the course assessment entails online forum discussions on relevant CC and DRM issues, something similar to our dialogue forum. Students have been using the online forum discussion as a platform to share their local community and traditional knowledge and experiences.

It is interesting to read what they have to say about the issues of CC affecting them. It is evident from their deliberations and arguments that many have already become CC ambassadors in their local communities. Few have even succeeded in convincing their village heads to host awareness workshops in their villages or at least partake in other awareness activities organized in the country. The latest example being the National Climate Change Summit held in the Narewa

Village in Nadi, Fiji. It was indeed pleasing to see students from University of Fiji attending the summit.

In a nutshell, the younger generation needs to be trained and made aware of the current global environmental crisis in order to bring positive changes in the future. We feel that providing them with an insight into CC and DRM issues at the undergraduate level would also encourage them to pursue CC studies in the post graduate level and perhaps increase the amount of research in this area.

Please feel free to contact me at priyatmas@unifiji.ac.fj for further information regarding our undergraduate courses.

Many thanks to all who contributed to this query!

If you have further information to share on this topic, please send it to Solution Exchange for the Climate Change and Development Community in the Pacific at ccd-pc@solutionexchange-un.net with the subject heading "Re: [ccd-pc-se] QUERY: Climate and Disaster Risk Education. Additional Reply."

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