

CLIMATE CHANGE ADAPTATION AND AGRICULTURAL LIVELIHOODS

FACILITATED BY CHOISEUL YOUTH AT WORK PROGRAM

**FUNDED BY THE SECRETARIAT OF THE PACIFIC COMMUNITY THROUGH THE
YOUTH AT WORK PROGRAM AND SPC/USAID CLIMATE CHANGE ADAPTATION
PROJECT**

SHORT REPORT

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1.0 Overview

Zai Na Tina Centre for Organic Systems (ZNT) and ESSI jointly facilitated a workshop for the SPC/USAID Climate Change Resilience project and the SPC Youth at Work (YAW) program on the 8th -12th September 2014 on Taro Island, Choiseul Province. The workshop was aimed at training young farmers and youth to be climate change adaptation community trainers or leaders to prepare communities for the negative impacts of climate change on food security and agricultural livelihoods. The workshop was funded by SPC's Youth at Work program and the SPC/USAID Pacific Climate Change Resilience project, based in Suva, Fiji Islands. The workshop covered climate change causes and potential impacts on agriculture, adaptation strategies and technologies and the planning process for community adaptation initiatives, which includes risks or vulnerability assessment, monitoring and development of an action plan. The workshop also explored agroforestry as an adaptation technology, different agroforestry systems and the opportunities it presents for livelihoods by young entrepreneurs.

2.0 Workshop Participants

There were 42 participants who attended this workshop (See appendix 1). The participants came from 7 communities: Posarae, Sepa, Panarui, Sasamunga, Subesube, Loimuni and Vurango. Thirty five of the participants were youth involved with the SPC YAW program, while the remaining 7 were farmers from Sepa and Loimuni, the two communities where the SPC/USAID project is currently working to increase agricultural resilience to climate change impacts. There were 17 women out of the 42 participants who attended the workshop. Nonetheless, it was very encouraging to see young farmers attending the workshop.

3.0 Workshop Content

The workshop content was as presented in the schedule in Appendix 2. It was designed for trainers, who will go back and train their communities. It was aimed at providing a greater understanding of climate change and its impacts, especially on agriculture and food security, and to provide practical adaptation strategies to ensure food security and rural livelihood. The participants were also allowed to go through the planning process so that they can be able to develop their own climate change adaptation action plan. The workshop also emphasized agroforestry as an adaptation tool as well as an opportunity for livelihood for young entrepreneurs. The workshop also carried out practicals on adaptation technologies and assessment of soil fertility for monitoring purposes. Composting was demonstrated because it is a technology for increasing soil organic matter critical for soil fertility and stability.

4.0 Workshop Presentation

The workshop was presented in a variety of modes such as power-point presentation, handout notes, discussions, group activities and field practical activities

4.1 Group Activities

As part of the adult learning process, the participants were actively engaged in the workshop through group activities/discussions and presentations. Some of the activities and discussions were: (1)

Resource mapping, drawing of food diagrams, diversity matrix and priority risk assessment matrix (2) Designing integrated agroforestry farms with greater food diversity/biodiversity (3) Developing a Community climate change adaptation action plan.

4.2 Experiential Sharing

Opportunities were given to some of the participants to share their experience in small groups as well as to the greater audience on the current food security situations and the risks and challenges their communities are facing with regards to agriculture production.

4.3 Practical Activities

Composting, an adaptation technology, was demonstrated during the workshop at the Provincial farm at Choiseul Bay (See Appendix 4 for some photos). The compost heap was built using a cocoa wire mesh as an enclosure bought from the local Hardware shop in Taro. The compost was built on Tuesday so that participants had a chance to see the process at work. It was built with materials sourced locally from the farm. The participants had the opportunity to feel the heat coming out of an active compost as well as to turn the compost on the last day of the workshop.

Other activities carried out were on-farm soil assessment for monitoring soil health, such as looking at soil colour and counting soil organisms as a measure of biological activity. A slaking test was also carried out to test soil structure stability from soil samples taken from the Provincial farm and also from Vurango Community. The slaking test also indicate soil organic matter content important for maintaining soil resilience to climate change impacts. The soil samples were also tested for their soil pH using a simple pH meter.

4.4 Workshop Materials

During the workshop ZNT provided a Powerpoint projector and YAW provided other resources such as flip charts, marking pens and workshop venue. The main resource materials are the CC Leadership Manual and the Farm Technology Manual published by Live and Learn Environmental Education, as well the “Agroforestry Guide for Pacific Islands” by Elevitch and Wilkinson. A soft copy of the power point presentations was given to Ms Errinah Lawrence from YAW to share with any of the participating youth interested in running such workshop in their communities. However, due to lack of ICT facilities in the community, the use of flip charts were

5.0 Limitations, Constraints and lessons learnt

Time is a limiting factor, so some topics were not satisfactorily covered. The composition of participants, with different levels of educational background and understanding is also challenging. Nonetheless, the practical activities were much appreciated by all of them. Also the long-term nature of agroforestry systems needs to be understood properly so that benefits are not expected in the short-term. I have tried to take this

issue into account by putting emphasis on integrating short-, medium- and long-term crops so that those interested in pursuing agriculture as a business can be able to start earning an income in the short-term and therefore motivated to continue working towards long-term benefits expected from agroforestry systems.

Most participants enjoyed the planning process activities, and the agroforestry farm design activity. Many find the composting activity most useful. In the future perhaps some time should be spent on how to use an A frame for contouring/terracing, as well as on practical food preservation methods as adaptation strategy such as turning taro and banana into chips, which could also be a business opportunity for some of them.

6.0 Workshop Outcome and Conclusion

The One week workshop on climate change and agroforestry was a success with much positive feedback from the workshop evaluation (see Appendix 3 for the summary of the evaluation). The participants did learn a lot from the topics presented. They find the training very informative and useful, as content of the workshop covers useful new concepts and techniques they could use to link and address the challenges faced concerning food security due to climate change and also to devise practices and ways to address issues affecting livelihood. At the end of the workshop a lot of interesting comments and appreciations were presented by the youths. Participants were empowered and a lot of discovery learnings are fully pinned down, explained and elaborated through the field practical exercise, group activities and presentations done by youths and the presenter during the workshop. The youth's attendance was excellent (Appendix 1 and attached signed attendance list) and they are enthusiastic towards learning and doing hands on practical during the 1 week program. Apparently, they want to learn more on some of the topics. Unfortunately due to time constraints these could not be covered and are more appropriate for another workshop focussing specifically on production.

Acknowledgment

I would like to sincerely thank the sponsors of the workshop, in particular SPC/USAID and SPC YAW program for funding the workshop. In particular I would to acknowledge Ms Vuki Buadromo and Mr. Nick Nonga from the SPC/USAID project for their support, and especially Nick and Mark Biloko for their valuable contributions to the workshop discussions. I would also like to thank Ms Mia Rimon and her staff, especially Korolyn Zutu and Errinah Lawrence for their hard work in administering the workshop. In addition, I would like to acknowledge that the agroforestry component of the workshop was an initiative of ESSI and YAW. Finally, I would like to thank my colleague and assistant, Pita Kabolo, for assisting in the workshop and especially for the practical demonstrations of the compost making process.

Signed:



Dr. Shane Tutua, Workshop Facilitator

Appendix 1: Workshop Participants' Details and Attendance (✓) Register

No.	Name	Sex	Village	Mon	Tue	Wed	Thu	Fri
1	Nelrishia Johendy	F	Posarae	✓	✓	✓	✓	✓
2	Lynce Taki	M	Posarae	✓	✓	✓	✓	✓
3	Nicholas Tana	M	Posarae	✓	✓	✓	✓	✓
4	Jugha Martin	M	Posarae	✓	✓	✓	✓	✓
5	Sam Poloso	M	Sepa	✓	✓	✓	✓	✓
6	Henry Pitasua	M	Sepa	✓	✓	✓	✓	✓
7	Mygrace Kere	F	Sepa	✓	✓	✓	✓	✓
8	Jimmy Kinio	M	Sepa	✓	✓	✓	✓	✓
9	Diom Mandalyn	F	Sepa	✓	✓	✓	✓	✓
10	Timothy Bau	M	Sepa	✓	✓	✓	✓	✓
11	Philemon Polosokai	M	Sepa	✓	✓	✓	✓	✓
12	Andie Oraeno	M	Sepa	✓	✓	✓	✓	✓
13	Gladys Rube	F	Sepa	✓	✓	✓	✓	✓
14	Marjory Valaka	F	Panarui	✓	✓	✓	✓	✓
15	James Malasa	M	Panarui	✓	✓	✓	✓	✓
16	Angelina Renga	F	Panarui	✓	✓	✓	✓	✓
17	Conley Pitabose	M	Panarui	✓	✓	✓	✓	✓
18	Albert Pitakamoki	M	Panarui	✓	✓	✓	✓	✓
20	Mayumi Otani	F	Sasamunga	✓	✓	✓	✓	✓
21	Maelyn Frank	F	Sasamunga	✓	✓	✓	✓	✓
22	Doris Qilakomala	F	Sasamunga	✓	✓	✓	✓	✓
24	Reymas Base	M	Sasamunga	✓	✓	✓	✓	✓
25	Andrew Luluvae	M	Sube Sube		✓	✓	✓	✓
26	Losta Lavana	M	Sube Sube		✓	✓	✓	✓
27	Abasae Kuaka	M	Sube Sube		✓	✓	✓	✓
28	Leborus Pgezingo	M	Sube Sube		✓	✓	✓	✓
29	Steven Tinga	M	Sube Sube		✓	✓	✓	✓
30	Cornelius Kulabule	M	Loimuni	✓	✓	✓	✓	✓
31	Jonathan Remmy	M	Loimuni	✓	✓	✓	✓	✓
32	Doreen Pitapapele	F	Loimuni	✓	✓	✓	✓	✓
33	Glenda Kulagole	F	Loimuni	✓	✓	✓	✓	✓
34	Woodford Pitakoe	M	Loimuni	✓	✓	✓	✓	✓
35	Dorah P	F	Loimuni	✓	✓	✓	✓	✓
36	Pasapa	M	Loimuni	✓	✓	✓	✓	✓
37	Roselyn Kaiga	F	Vurango	✓	✓	✓	✓	✓
38	Amelia Rotoava	F	Vurango	✓	✓	✓	✓	✓
39	Linalyn Zaza	F	Vurango	✓	✓	✓	✓	✓
40	Haggai Otokaba	M	Vurango	✓	✓	✓	✓	✓
41	Ray Keve	M	Vurango	✓	✓	✓	✓	✓
42	Kimsley Banga	M	Vurango	✓	✓	✓	✓	✓

Appendix 2. Workshop Content and Schedule at Taro, Choiseul Province

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Time	<i>Theme: Climate Change</i>	<i>Adaptation Potential</i>	<i>Adaptation Strategies 1</i>	<i>Adaptation Strategies 2</i>	<i>Adaptation Plan</i>
8.00 am	Workshop Opening and Introductions	Practical: Adaptation Technology – Composting	3. Managing the soil Importance of Soil organic matter to CC	Linking CC Adaptation Technologies to strategies	Practical: Turning a compost heap at the Provincial farm
	Introduction to the Farmer Field School	Practical: Adaptation Technology – Composting	Soil organic matter conservation methods	Linking CC Adaptation Technologies to Strategies	Practical: Turning a compost heap at the Provincial Farm
10.00 am	Morning Tea	Morning Tea	Morning Tea	Morning Tea	Morning Tea
	Adult learning tools	Practical: Adaptation Technology – Composting	Soil and Water Conservation methods	Developing a Community CC Action Plan	Practical: Turning a compost heap
	Understanding Climate Change and impacts	Practical: Assessing soil quality for monitoring purposes	4. Food Preservation Discuss/share methods of food preservations	Developing a Community CC Action Plan	Summarize Workshop, Emphasize Main Points Closing Remarks
12.00 pm	Lunch	Lunch	Lunch	Lunch	Lunch
1.00 pm	How CC will affect Agriculture and Food Security	Adaptation Strategies 1. Diversifying Food Crops Diversifying Food Crops	5. Grow More Trees Agroforestry - Importance for CC adaptation	Developing a Community CC Action Plan	Participants start to leave
	Rapid Assessment of CC and FS in Communities	Conserving plant diversity	Agro-forestry systems in the tropics and Choiseul	Group Presentations	
3.00 pm	Afternoon Tea	Afternoon Tea	Afternoon Tea	Afternoon Tea	
3.30 pm	CC & FS Risk Assessment and Presentations	2. Increased Planting and Management of Emergency Food	Improving agroforestry system design to maximizing economic outcomes	Group Presentations	
	CC & FS Risk Assessment and Presentations	Exploring Emergency Foods on Choiseul	Agroforestry products/Markets/ business opportunities	Group Presentations	
4.30 pm	Closing time	Closing time	Closing time	Closing time	

Appendix 3. Workshop Evaluation Summary of Feedbacks

CLIMATE CHANGE ADAPTATION & AGROFORESTRY WORKSHIP

WORKSHOP EVALUATION

1. The participants learned something new in the workshop

Agree			Disagree	
1	2	3	4	5
36	2			

2. The information provided in the workshop was useful

Agree			Disagree	
1	2	3	4	5
38	1			

3. The terminologies or words used in the workshop are understandable

Agree			Disagree	
1	2	3	4	5
33	3	1	1	1

4. The workshop facilitator uses enough illustrations or examples

Agree			Disagree	
1	2	3	4	5
35	3			

5. The workshop facilitator gives enough group activities

Agree			Disagree	
1	2	3	4	5
35	3	1		

6. There are enough practical activities

Agree			Disagree	
1	2	3	4	5
30	7	1		

7. The facilitator allows enough participation by the participants

Agree			Disagree	
1	2	3	4	5
29	5		2	

8. The facilitator gives enough handout information

Agree			Disagree	
1	2	3	4	5
35	2			

9. How do you rate the workshop Presentation?

Excellent			Poor	
1	2	3	4	5
34	2			

10. Which topic(s) do you find most useful?

- Types of agro forestry system
- Climate change
- Crop diversity & emergency crops
- Soil management
- Why agro forestry is very important
- How to be able to handle risks
- Soil management

- Farm technology
- Agro forestry and climate change
- Climate change
- Every topic
- Food security to adapt to climate change
- Agro forestry
- Agro forestry
- How to maintain crop diversity
- Agro forestry
- Agro forestry
- Soil management
- Organic farming
- Types of agroforestry
- Agro forestry & adaptation strategies
- Planting trees and crops
- Organic farming
- Agroforestry and soil management
- Compost & climate change
- Climate change & Food security risk assessments
- Clay soil was useful
- Agro forest
- Agro forestry
- Types of agroforestry system

11. Which topic do you find least useful?

- Food preservation
- Food preservation
- Soil management
- Every topics are useful
- Every topics were useful
- No topic are not useful
- Crop desertification
- Composting
- Planning
- Seed managing
- Compost
- None
- Soil compost
- None
- Composting
- How to minimize soil erosion
- None
- Soil managing

- none
- None
- None
- None

12. Which topic or area would you like to learn more about?

- I like to learn more about preservation
- Risk management
- About organic matter
- Agro forestry
- How to protect soil
- Crop diversity, making compost
- Agroforestry & compost
- Climate change
- Agroforestry
- All topics
- Soil management
- Agro forestry
- Agro forestry and soil improvement
- Preservation method
- Farming crops diversification
- Agro forestry
- Climate change adaptation to agriculture
- Composting and soil management
- Agro forestry
- Planting more tree
- Grow forestry
- Agro forest
- Agro forestry
- Mixing of soil organism
- Agro forestry
- Agro forestry
- Understanding climate change
- Like to learn more
- Manure
- Farming crops adaptation
- I want to learn more about climate change

13. Any comments

- No comments just to know more about preservations
- Soil management, one of the way to fight climate change

- Important to share all information to other people as well and not only youths
- Learn more new things
- Very good and very interesting topics
- Thanks for teaching us all the topics that we have covered in our workshop
- None
- The days for the workshop is not enough
- The workshop is very useful we will have benefited on agriculture
- I learn more about important things
- I think this training is ok
- I think this course will work out because the facilitator also provides handouts as well
- Very good workshop indeed
- The workshop is very important
- Excellent
- I need to learn more from you
- Need to provide workshop to communities
- Excellent
- The workshop is very important
- In this workshop it is really interesting and I enjoyed it
- Great advice from facilitator on climate change so that we can cope
- It was very good with CC
- Clear our programs
- Must continue this kind of workshop in ur community
- No comments the topics are very clear

Appendix 4. Some photos from the workshop



Fig 1. Part of the Participants that travelled down to the Provincial Farm for the Practicals



Fig 2. Building a compost using a cocoa wire mesh as the enclosure

