VRDTCA NTQF Level: 1

Facilitator Guide

Certificate I in Climate Change and Disaster Risk Reduction

CCDRR04

Explain ways in which the islands and people of Vanuatu are vulnerable to hazards and climate change

Facilitator: .....

Organisation: .....

Year/Dates:

Before you get started…

Dear Facilitator,

This Facilitator Guide (together with the relevant Learner Guide) is aimed at facilitators who will be assisting learners wishing to complete the following unit standard:

Title:	Explain ways in which the islands and people of Vanuatu are vulnerable to hazards and climate change		
VRDTCA code: CCDRR04		**NTQF Level:** 1	**Credits:** 6

This guide contains all necessary instructions to ensure that learners will attain the expected competencies required by the above-mentioned unit standard. This guide is designed to be used during the presentation of learning sessions in this unit standard. Learners are advised to read the unit standard in their own time.

Please discuss the unit standard with the learners to ensure that they understand what they must do to achieve the required outcomes of this unit standard.

Please indicate the learning programme(s) in which the learners are enrolled:

Number enrolled	
Learnership programme	
Skills programme	
Short course	
Total	

Note to Facilitator: If you are presenting this module as part of a full qualification or learnership, please ensure that you have familiarized yourself with the content of the qualification.

Please explain the above concepts to the learner.

There are three guides, namely the Learner Guide, the Learner Workbook and the Facilitator Guide.

These guides have been developed to address specific aspects of the learning experience. Each of the guides complements the others.

Make this an enjoyable learning experience!

Context of learning

Nowadays everyone is talking about climate change. A lot of information is available but is not always easy to obtain for people living in rural areas of Vanuatu. Some of us do not pay attention to the topic of climate change and some don't even believe that it is happening. But we are all aware of natural hazards that destroy our lives and our property - cyclones, earthquakes, volcanic eruptions, long periods of drought, floods, landslides, fires, etc. When the effects of a natural hazard become so great that the community cannot handle them by itself, and needs help from outside, the hazard becomes a "disaster".

This course of seven units (CCDRR01, CCDRR02, CCDRR03, CCDRR04, CCDRR05, CCDRR06 and CCDRR07) helps us to understand more about climatic changes and disasters that have affected us in the past and at present, and are likely to affect us in the future. Many people say that we cannot do much about these changes and disasters, but this is not true. We can do a great deal to reduce the impacts of climate change and natural hazards, both as individuals and in our local communities, and to adapt to these changes in the future. In fact our communities already have a lot of traditional knowledge that can help in reducing the risks and adapting to change. You will learn more about this as we proceed through the course.

This fourth unit helps us to understand more about the vulnerability of islands, communities and people to the negative effects of hazards and climate change. We shall see how Pacific island countries are exposed to a wide variety of natural and human-made hazards, climate variability and climate change. We will explain how the vulnerability of individuals and communities to hazards and climate change depends on their location and on their access to various assets of sustainable living. Then we will look at some of the impacts that result from a community's vulnerability to hazards and climate change, and find examples of each type of impact in Vanuatu. We will apply these concepts to a local community and do field research to assess its vulnerability and its capacity to reduce risks and adapt to change. This learning will be used to help the community to become more aware of its vulnerability to hazards and future climatic changes, and to take steps to further improve its resilience.

You, as the facilitator, have the challenge to ensure that the learning materials can be applied to the learners' own context, in other words, to their own situations, their own communities and their own islands. As much as possible, you must help them to refer to local examples of everything that is in the course.

The contextualization of the learning material is a very important step in facilitating the learning experience. You must ensure that enough time and effort is put into this.

How to use this guide…

Throughout the guide information is given specifically aimed at you, the facilitator, to **assist** in the actual presentation of the learning material and/or facilitation of the learning process. Although this guide contains all the information required for attaining competency in this unit standard, references to additional resources, both printed and electronic, are provided for additional reference by the facilitator and further study by the learner.

Please note that the purpose of this information is merely to **guide** you, the facilitator, and is provided as a suggestion of possibilities. It remains the responsibility of every facilitator to re-assess the learner/s in each learning situation throughout the learning process in order to stay in touch with his or her specific learning needs. The needs of each learner must come first!

As you go through this guide, you will come across certain code words and boxes that will help you to facilitate learning more clearly. They are as follows:

Instructions regarding **activities**, whether to be done in a group or individually, will be provided in this type of box.

Facilitator's 'tip' to give you additional information or to help you and the learners with the answer.

My Notes…

You can use this box for your own notes/comments.

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What will you be facilitating, and how will you do it?

The learning experience…

On completion of this unit, the learner will be able to:

- collect, organise and analyse information on the sectors, people and assets of a local community that might be more exposed to hazards and climate change, and on the community's assets for sustainable living;
- give talks on the impacts of hazards and climate change on the physical environment, livelihoods and human development in Vanuatu and in the Pacific region as a whole;
- organize a SWOT analysis of the local community;
- work in small groups to conduct the field investigation and to discuss concepts associated with vulnerability, resilience and the impacts of hazards and climate change;
- suggest why some people and communities in Vanuatu are more at risk than others, and evaluate the vulnerability and adaptive capacity of a local community;
- interpret a detailed risk map of the local community, and analyse diagrams and photographs that show the impacts of hazards and climate change;
- use the internet (optional) or printed resources to find examples of impacts of hazards and climate change in Vanuatu and the Pacific region;
- find appropriate ways to consult with the local community on its vulnerability to hazards and climate change, its assets of sustainable living, its priorities for development, and the building of greater resilience (especially among the most vulnerable members of the community).

The learner will also gain a basic knowledge of:

- ways in which the islands of Vanuatu are exposed to hazards and climate change;
- how vulnerability to hazards and climate change varies from individual to individual and from community to community, and is related to location and the assets of sustainable living
- the impacts of hazards and climate change on the physical environment, livelihoods and human development in the Pacific region;
- a local community's vulnerability to hazards and climate change, including its capacity to adapt to change;
- how to help a local community to become more aware of its vulnerability to hazards and future climatic changes

Before starting this unit, the learner is expected to have:

- some knowledge of hazards and climate change
- knowledge and experience of the dynamics of a local community (leadership, decision-making, cultural and religious practices, cooperative activities, negative social forces, positive social forces, etc.);
- basic functional literacy and numeracy
- basic graphicacy skills - graph construction and interpretation, mapping skills;
- knowledge and skills acquired from the preceding units of competency, CCDRR01. CCDRR02 and CCDRR03.

In general, upon completion of a unit at Certificate I level, the learner will be able to:

- perform a defined range of routine activities, usually under supervision;
- demonstrate basic practical skills;
- apply thinking skills such as induction and evaluation;
- participate in a team or working group;
- communicate effectively and convey information and ideas.

My notes:

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Time frame

Section of Unit	Hours allocated for tutorials (theoretical learning)	Hours allocated for practical activities and personal study	Hours allocated for field work	Total hours
Orientation	1	1	-	**2**
Introduction to Learner Guide	3	-	-	**3**
Section 1	2	2	-	**4**
Section 2	6	7	2	**15**
Section 3	9	13	2	**24**
Section 4	2	6	6	**14**
Section 5	2	5	6	**13**
Preparation for test	-	2	-	**2**
Summative test	-	1	-	**1**
Whole unit	**25**	**37**	**16**	**78**

Facilitator's checklist

Use this checklist to ensure that you are properly prepared and have all the materials needed for the facilitation of successful learning:

Tick this box when you are ready

PREPARATION

Knowledge of the qualification	I have familiarized myself with the qualification that the learners are aiming to obtain	
Knowledge of the unit standard	I have familiarized myself with the required level of this unit standard	
Knowledge of the unit content	I have sufficient knowledge of the unit content to enable me to facilitate with ease	
Application	I have done enough preparation to be able to deliver the programme	
Contextualization	I am ready to include information that is specific to the local community and to Vanuatu	

ABILITY TO RESPOND TO LEARNERS' BACKGROUND AND EXPERIENCE

Understanding of learners	I know something about my learners' gender, age, background and experience and am ready to deliver the programme accordingly	
Enthusiasm and commitment	I am enthusiastic about this subject and am committed to creating an environment that motivates learning	

MATERIALS AND EQUIPMENT

Learner guides	One for each learner	
Learner workbook	One for each learner	
Facilitator guide	One	
Copy of *Learning about climate change the Pacific way*	One Visual Guide (set of "toolkit" pictures) One Teacher's Guide	
Writing materials	Notebook, pen, pencil, graph paper & rubber per learner	
Other materials	Clipboard for recording information during fieldwork	
Butcher paper	One roll. Alternatively, large sheets of flip chart paper.	
Whiteboard & pens	One whiteboard & set of coloured whiteboard markers	
Blackboard & chalk	One blackboard and coloured chalk	
Data projector	Optional. To be used for power point presentations	
Laptop	Optional. To be used for power point presentations and internet connection. USB flash drive useful.	
Internet connection	Desirable but not always possible	
Attendance register	One	
Course evaluation	One sheet for each learner (copied from Learner workbook)	
Portfolio of evidence	One portfolio holder for each learner	
Summative test	One copy for each learner	

Contextualization of content

At this stage, it will be useful for you to go through this Unit and think about the specific information and local examples that should be included in the learning.

Section	Specific examples from the local area, Vanuatu or the Pacific region
1	
2	
3	
4	
5	

Section 1 Show how Pacific island countries are exposed to natural and human-made hazards, climate variability and climate change

Learner Guide: Page 15

After completing this section, the learner should be able to:

1.1 review some of the natural and human-made hazards that affect the Pacific region;

1.2 demonstrate how the Pacific islands are exposed to the effects of climate variability and climate change.

Concepts 1.1 and 1.2	Time frame	Activities related to the concepts
1.1 Natural and human-made hazards that affect the Pacific region	**2 hours**	**1.1**
1.2 Exposure of Pacific islands to the effects of climate variability and climate change	**2 hours**	**1.2**

Please allow learners to complete activities 1.1 in their workbooks:

Type of activity	Resources
1.1 Pair work - matching exercise	Learner Guide
Instructions to give to the learners	
Activity 1.1: After studying pages 15-18 of your Learner Guide, work in pairs to complete the matching exercise. The aim is to find ten reasons why Pacific island countries are so exposed to hazards, climate variability and climate change. Join the key words in List A with the explanations in List B.	

Activity 1.1

RING OF FIRE

WARM POOL OF WATER IN WESTERN PACIFIC

EL NIÑO AND LA NIÑA

ATOLLS AND LOW, FLAT ISLANDS

MOST PEOPLE LIVE ALONG THE COAST

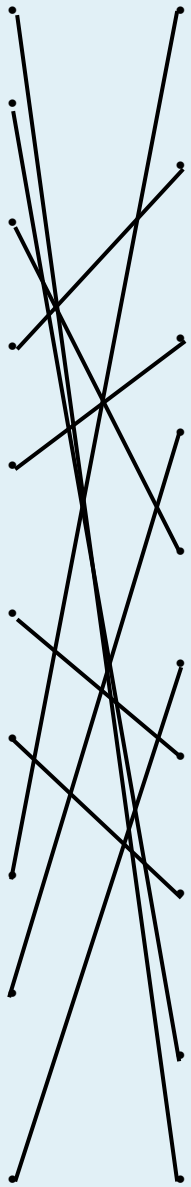
HIGH MOUNTAINOUS ISLANDS IN MELANESIA

LIVELIHOODS BASED ON AGRICULTURE, FISHERIES AND TOURISM

FOOD

SOME ISLANDS ARE VERY ISOLATED AND REMOTE

RISE IN OCEAN TEMPERATURES AND OCEAN ACIDITY



1. Mostly comes from ecosystems like forests, gardens and reefs, which are exposed to hydro-meteorological and biological hazards.
2. These islands may suffer from drought and lack of fresh water, and are easily affected by rising sea levels and coastal erosion.
3. Therefore the population and infrastructures are exposed to cyclones, tsunamis, flooding, coastal erosion and rising sea levels.
4. When disasters occur, it may take a long time for help to arrive.
5. In the Western Pacific, they cause a long period of drought, which is later followed by months of heavy rain.
6. Will affect fisheries and cause degradation of reefs.
7. These islands can receive heavy rain and are vulnerable to flooding and landslides.
8. Many communities depend on the resources in their environment to make a living, and these resources can be affected by hazards and climate change.
9. The warm ocean provides ideal conditions for cyclones to develop.
10. Because of this, islands in the Western Pacific suffer from earthquakes, volcanic eruptions and tsunamis

My notes:

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Now please invite learners to complete activity 1.2 in their workbooks:

Type of activity	Resources
1.2 Discussion in pairs	Learner Guide and own ideas
Instructions to give to the learners	
Activity 1.2: In pairs, discuss the three questions given in the Learner Workbook, write down your answers, then report back to your group.	

Activity 1.2

1. Yes. Warmer temperatures will make oceans warmer and lead to greater humidity in the air, so lead to stronger cyclones. The greater frequency of extreme weather events (storms, heavy rain, droughts, very hot days) will lead to more floods, landslides and bush fires). Warmer temperatures will favour the spread of viruses and insects, so leading to more cases of malaria, dengue and other vector-borne diseases. Warmer temperatures will also encourage the spread of plant diseases.

2. Examples of problems:
   - Flooding of kitchens and houses
   - Sewage floats and does not drain away easily
   - Salt water spoils any crops growing close to the sea shore
   - Erosion of land
   - More malaria-breeding sites
   - Old and disabled people cannot move about easily because of the flooding

3. Five reasons why the village is vulnerable to hazards and climate change:
   - Mangroves have been cut down in front of the village - so no protection
   - Right on the coast, so exposed to sea level rise and coastal erosion
   - Open to cyclones and storms
   - Fishing grounds will be affected by warmer water and ocean acidification
   - Village is on very flat land, so exposed to tsunamis and sea level rise.

My notes:

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Section 2 Explain how vulnerability to hazards and climate change depends on the access of individuals and communities to different assets of sustainable living

Learner Guide: Page 21

After completing this session, the learner should be able to:

2.1 take part in a "power walk" to find out whether everyone in a community is equally affected by hazards and/or climate change, and discuss the learning from this activity;
2.2 define "vulnerability" and "resilience";
2.3 identify ways in which men, women, children, the elderly and people living with disabilities have different vulnerabilities and are more or less resilient to hazards;
2.4 identify the five main "assets" ("dimensions") of sustainable living and show how their availability can make communities more or less vulnerable to hazards and climate change;
2.5 use a risk map to identify and explain the sectors, the people and the assets of a community that might be more vulnerable to hazards and climate change than others;
2.6 suggest why some communities in Vanuatu are more at risk than others.

Concepts 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6	Time frame	Activities related to the concepts
2.1 Effects of hazards and climate change on different people in the community	**2 hours**	**2.1**
2.2 Definitions of vulnerability and resilience	**2 hours**	**2.2**
2.3 The different vulnerability and resilience to hazards and climate change of men, women, girls, boys, the elderly, babies and infants, sick people and people living with disabilities.	**2 hours**	**2.3**
2.4 Five main assets(dimensions) of sustainable living	**3 hours**	**2.4**
2.5 Some areas/sectors, people and assets of a community may be more vulnerable to hazards and climate change than others.	**3 hours**	**2.5**
2.6 Reasons why some communities in Vanuatu are more at risk from hazards and climate change than others.	**3 hours**	**2.6**

Please allow learners to complete activity 2.1 and write up their learning in their workbooks:

Type of activity	Resources
2.1 Power walk	Instructions given by facilitator. Own ideas

Instructions to give to the learners

Activity 2.1:
Read through the instructions for this activity that are given in your Learner Workbook.

Activity 2.1

Read through the instructions, step by step, with the learners before you start this activity. Decide whether you want to do the activity in the classroom or outside in the open air. You will need plenty of space. You may have to repeat the activity twice before the learners really understand what to do.

Make sure that you have prepared all the roles in advance. Write each of them out on a separate piece of paper or a card. Some ideas are given below and on the next page, but you can also make up additional roles that are appropriate for the local community.

Be ready to read out the statements to the learners. A selection is given on the next page. You can read them out in any order. You can create additional statements that are appropriate for the local community.

Remind the learners that if their answer is YES, they should take a step forward. If their answer is NO, they should take a step back. If they are NOT SURE, they remain where they are (except for statements marked *, when they move one step back if they are not sure!)

Remember that the discussion at the end of this activity is very important. Ask the learners which people have advanced the most, and why. And which people are the furthest behind, and why?

ROLES
Father of a family. You have a wife and 6 children. You are a subsistence farmer on land next to the river.
Wife with two children. Your husband is working in Port Vila. You have no land.
Elderly widow living on her own. You don't have any family nearby
Village chief
Girl aged 9 years. You are at school but must cook and clean at home.
Boy aged 12 years. You go to school in the village. You are free to play. You don't have any responsibilities at home because your 3 sisters do all the housework.

ROLES (continued)
Male youth aged 17 years. You have a mobile telephone and like to go fishing and hunting. You have land a long way from the village.
Elderly man. You have sore legs and find it difficult to walk.
You are sick with malaria and are lying in bed.
Young female teacher in the village school. You are from another island, have no relatives in the village and live by yourself.
Single mother with two children. You have no other family to help you.
Elderly woman who is blind. You live with your eldest daughter and her husband, who are subsistence farmers.
Middle-aged man with a lot of land and many pigs. You live with your wife. Your three sons have well-paid jobs in Luganville.
You are very poor and have no family. You have no land, your house is falling apart and you survive because other people share their food with you.
Village pastor or priest. You have a high rank, and receive food and other gifts.
You are a hard working mother whose husband is often drunk and gives you no support.
You operate a kava bar in the village.
You are a newly married female from the Solomon Islands. You have just come to live in the community and you don't know anyone. Your husband looks after the local dispensary. You are heavily pregnant.
You are a female with new-born twins and three other children under 5 years. Neither you nor your husband has an income.
You are a subsistence farmer who has a lot of land on higher ground, well away from dangers of floods or tsunamis.
Your house was destroyed by a landslide last year and you have built a new one of local bush materials. Your three children are at school.
You lost your right leg because of diabetes, and stay at home all the time.
Girl aged 4 years. You are dependent on others in your family.
Boy aged 4 years. You are often sick.
Eldest daughter in the family, aged 18. You dropped out of primary school because you are deaf. You work in the garden most of the time.
Eldest son in the family, aged 21. You attend the local Rural Training Centre and you have successfully completed courses on building construction and climate change.

STATEMENTS

I have land rights on ground close to my village. I can use this land for growing food crops for my family or for producing cash crops like kava and copra.
My community considers my opinion to be very important.
* When I hear a tsunami warning, I am able to make a quick decision to move to a safer area. I move there immediately and take my family with me.
* When I hear a cyclone warning, I can easily help to make my house more secure, and if necessary I can move to a safer building in the community.
After a cyclone or a flood, I can respond to community requests for help.
I have access to some kind of income.
My income is enough to meet all my needs and my family's needs.
I have knowledge about farming and / or fishing
If a team of people came to my community to talk about climate change, I would go and listen to their talk.
* The river close to our community has flooded, but I am very lucky because most of my food crops were <u>not</u> destroyed. (*Note: All those whose crops were destroyed should move one step back. Ask all of those who moved back to raise their hands. Tell them that climate change is expected to increase the strength of floods and cyclones. All those who moved back should take another step backwards!)*
If there is an earthquake or cyclone or flood, I have a mobile phone that gives me access to people who can tell me what to do.
I can leave my community to work in Port Vila.
I am very worried about climate change. I am doing my best to plant crops that will give me food in times of drought and high temperatures.
I have access to food and other resources to look after my family after a disaster.
I think I have family members and people around me who will give me support during and after a natural disaster.
I don't have to worry about access to fresh water. Other people in my family go and get the water for me to drink and use every day.
* Although we are in an El Nino period, I have already cleaned my well and my water tank, and we use water very carefully in my household. *(Note: All those who do not have access to clean water sources in a time of drought should move one step back. Ask those who moved back to raise their hands. Tell them that climate change is expected to increase the likelihoods of drought. All those who moved back should take another step backwards!)*

(Remember that the symbol * means that if the learner is <u>not sure</u> whether the statement is true for him/her, and does not know whether to move forward or back, he/she <u>must move back one step</u>)

My notes:

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Now please allow learners to complete activity 2.2 in their workbooks:

Type of activity	Resources
2.2 Definitions	Learner Guide, own ideas
Instructions to give to the learners	
Activity 2.2: Write your own simple definitions of the following terms, in words that you can understand: **VULNERABILITY** **RESILIENCE**	

Activity 2.2

Vulnerability means how easily people, families or communities are likely to suffer from a hazard or from the effects of climate change. Vulnerability is great when people, families or communities have not been able to take any steps to reduce the risks, for example, by listening to warnings and moving to a safe place.

Resilience is the opposite of vulnerability. It means that people, families or communities have taken some steps to reduce the dangers brought by hazards or climate change, for example, by building stronger houses and covering their wells. Because they have taken these steps, they can cope with the risks and recover quickly from injury, stress or damage.

My notes:

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 Review:

Next, you can let learners complete activity 2.3 in their workbooks and through discussion:

Type of activity	Resources
2.3 Pair work - discussion and reporting	Learner Guide, own ideas

Instructions to give to the learners

Activity 2.3:
Read again through pages 23-25 of your Learner Guide. Than form pairs and discuss these questions. Write down your views. Then go and find another pair of learners and share your ideas with them. See whether you agree with them.

Activity 2.3

In this activity, pairs of learners first discuss the questions, then share them with another pair. In the new groups of four, they should try to agree on the answers.

Possible answers:

1. Two reasons for women's greater vulnerability to the effects of hazards and climate change:
   - They are the ones who do most of the gardening and food preparation, so they will be affected by poor harvests caused by high temperatures and extreme rainfall events.
   - In rural areas, they are the ones normally responsible for collecting water from sources of fresh water. In times of drought, they must walk further and carry more water for the family.
   - Women often do not have the same access as men to information about hazards and climate change, so are sometimes unaware of how to prepare for them.

2. One way in which women's roles help a community to be more resilient to the effects of hazards and climate change:
   - In times of emergencies and disasters, it is the women who feel very responsible for caring for children, old people, families and neighbours, so ensuring that they move to safe places and have the food and water they need.
   - Women often have traditional knowledge about water sources and useful medicinal plants.

3. Ways in which men may be affected more than women:
   - Those families whose livelihoods depend on fishing normally depend on the men to catch the fish. As oceans get warmer and coral reefs become more degraded, this will affect the fishermen.
   - It is the men who usually look after cash crop and livestock production in rural areas. When yields of cash crops such as kava, cacao and coconuts are affected by extreme weather events, and livestock are affected by hotter temperatures, it is the men who will feel the stress from loss of income.

4. Because they cannot move quickly in emergencies, are often unable to see or hear clearly, and are more vulnerable to sicknesses caused by hot weather, high humidity and dehydration.

5. Because they have experience of previous hazards and disasters, and may possess useful knowledge about how to build up resilience in the community.

6. Yes, because they learn about hazards and disasters and climate change in school. Also they learn how to access information available from VMGD and NGOs.

7. Yes, there are usually such people. They are more resilient because they can use their traditional knowledge to prepare for hazards, to replant suitable crops and use traditional methods of food preservation after a cyclone, to use traditional techniques for catching and preserving fish, and to use forests in a sustainable way.

8. Yes, because when all local sources of food have been damaged after a cyclone or in future extreme weather events, they have cash (or a reserve of pigs and mats that can be sold) to purchase food. They can also buy materials for rebuilding their houses.

9. Because they depend on others to look after them. Also it is easy for them to get dehydrated and to get infected by water-borne diseases such as diarrhoea.

10. Sick people are in bed and are too weak to move easily in an emergency. People living with disabilities may not be able to move about or to run to a safe place when a hazard event arrives. Blind people cannot find their way to a safe place unless there is someone with them. Deaf people may not be aware that there is an emergency.

11. Others who are at risk: Poor people, who have unsafe houses, live in unsafe locations and have little food and no cash. People who live by themselves a long way from the village. People who are intellectually handicapped.

12. Yes. They can become more resilient, for example, by:
    - attending awareness talks on preparation for hazards and climate change;
    - erecting a strong water tank to ensure that they have a supply of fresh water;
    - maintaining and cleaning water gutters, pipes and tanks;
    - learning techniques of food preservation;
    - contacting the Department of Agriculture to ask for help in planting varieties of crops that are more resistant to high temperatures, waterlogging and droughts;
    - practicing agro-forestry (See Unit CCDRR05);
    - keeping their compounds clean and removing mosquito-breeding sites;
    - planting mangroves or other suitable plants along the coast near their village;
    - re-planting trees, especially on hillsides;
    - protecting important ecosystems and not over-using natural resources;
    - enabling women, the elderly, youth and those living with disabilities to participate in decision-making; honouring their knowledge, skills and contributions;
    - being prepared to respond to emergencies and disasters (e.g. by knowing evacuation routes and safe places, keeping stocks of food, water and medicines).

13. The women and young children are more vulnerable. The young children are the most vulnerable because severe effects of climate change will not be felt for several generations, by which time the mothers in this picture will have passed away. Also, those in the picture who are better informed and who have better access to finance and resources will be less vulnerable than those who are ill-informed and are poor.

My notes:

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Next, please allow learners to complete activity 2.4a and 2.4b in their workbooks:

Type of activity	Resources
2.4a Matching exercise	Learner Guide
Instructions to give to the learners	
Activity 2.4a: Draw lines to match the assets in the boxes on the left with the correct dimension of sustainable living shown on the right.	

Activity 2.4a

See page 21

Type of activity	Resources
2.4b Pair work	Learner Guide and own ideas
Instructions to give to the learners	
Activity 2.4b: Form pairs. Each pair should choose one asset from <u>each</u> of the 5 dimensions of sustainable living. For each of your chosen assets, say how it will help you to be more resilient to hazards and climate change.	

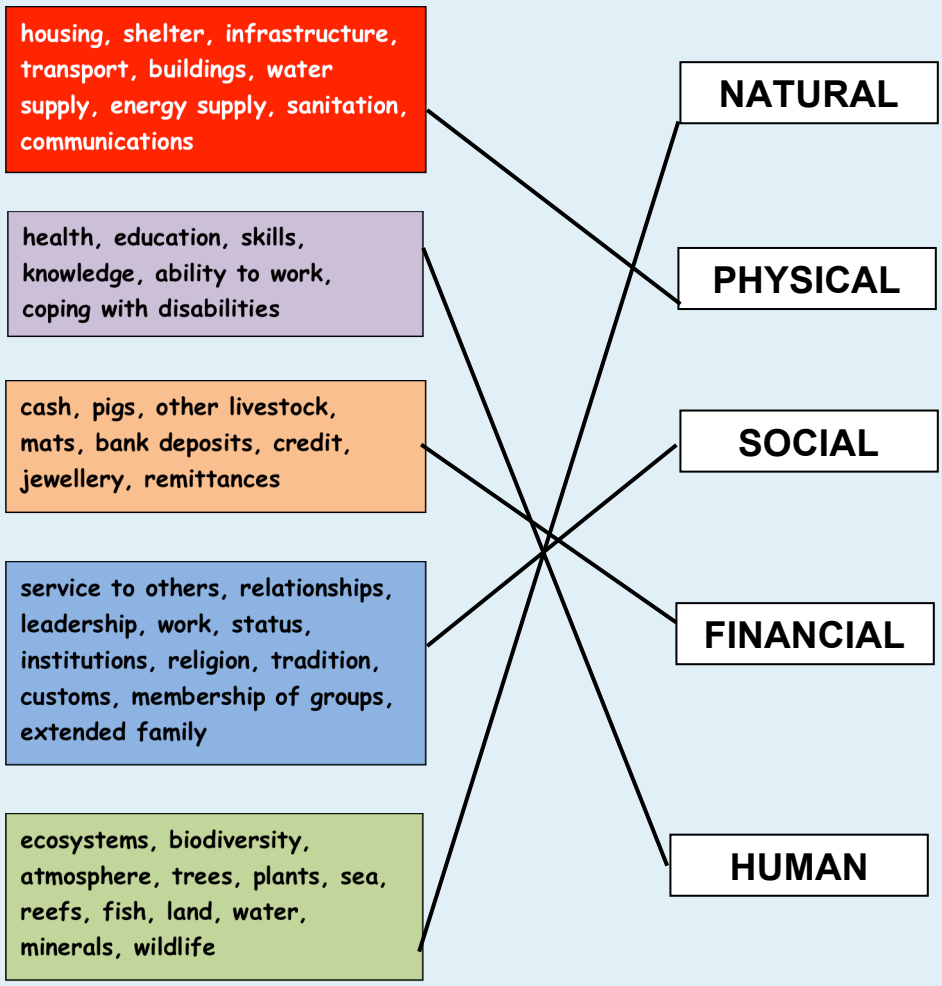
Activity 2.4b

See page 22

 Review:

Activity 2.4a

Ask the learners to look at the diagram (Fig. 13) on page 27 of the Learner Guide to find the answers. But note that the order in which the assets have been listed in each of the boxes is not exactly the same as that shown on the pie chart.



My notes:

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Activity 2.4b

Make sure that the learners look at the examples of assets that are given in the instructions for this activity on page 12 of the Learner Workbook. They do not have to choose these same examples. They can choose any one of the assets in each box.

Here are some possible answers to guide you and the learners:

NATURAL DIMENSION Asset: Wildlife
A healthy population of wildlife in the forests or bush (birds, insects, freshwater fish, wild pigs, frogs, etc.) is important for keeping a balance in forest and river ecosystems, as well as ensuring that pollination and seed dispersal takes place. A balanced ecosystem is better able to cope with extreme weather events than an ecosystem that is out-of-balance because of human activities such as hunting, pollution, logging, etc.

PHYSICAL DIMENSION Asset: Transport
A community that maintains well-surfaced roads and has ready access to other places by vehicle, canoe or speedboat, etc., is able to provide its population with evacuation routes when a hazard event arrives, and is better able to receive assistance from outside if needed.

HUMAN DIMENSION Asset: Coping with disabilities
If a community looks after people with disabilities, ensuring that their needs are met, that they are valued as people, and (as far as possible) that their hopes for independent living are respected, then such people will be able to cope during hazard events and will not become a liability for the community.

SOCIAL DIMENSION Asset: Service to others
If people are willing to freely give service to others, looking after their social, educational and spiritual needs as well as performing manual tasks like cleaning, washing and cutting firewood for each other, then there will be harmony in the community. Everyone will be ready to cooperate with everyone else to overcome any hardships arising from hazards and climate change. In addition, the more people serve others, the less they think about their own problems and more about what is best for the whole community.

FINANCIAL DIMENSION Asset: Cash
If a lot of people in the community have access to cash, they can build stronger houses, contribute to community projects such as solar power systems and micro-hydro power, and generally be in a better position to adapt to climate change and recover from disasters.

My notes:

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Next, please allow learners to complete activity 2.5 in their workbooks

Type of activity	Resources
2.5 Individual exercise - answers to discussion questions	Learner Guide Ideas from class discussion

Instructions to give to the learners

Activity 2.5:
After discussing the questions on the map of Pinat (Fig. 5) with your facilitator and your fellow learners, please record your answers to the questions in the spaces provided.

Activity 2.5

NOTE: When studying the map of Pinat, ask the learners to first identify the area that is low and flat, then the area that has gentle slopes (explain what this means), then the area that has steep slopes. Then they can better understand why some areas are more at risk than others. Ask the learners to use the map in their Learner Guide, which is larger than the one in their Learner Workbook.

Suggested answers to the questions are given below. Other answers are possible.

1. Community assets:

   school, church, dispensary, cooperative store, nakamal, white (coral) road, wharf, water tanks, wells, football field, Digicel tower, mangroves, forest, food gardens, coconut plantations, reef, river, traditional knowledge, …….

2. 19
3. All the flat land along the coast.
4. 24
5. The slopes are very steep, and there are many food gardens there, with patches of bare soil. The forest has been removed. After heavy rain, the areas of bare soil will become waterlogged and can easily slide down on to the houses below. An earthquake can also loosen the soil and cause landslides in this area.
6. About 400 metres of shoreline.
7. Most vulnerable - cooperative store and dispensary, which are right on the coast. Other assets that will be affected eventually are the church, the school and the village nakamal, as well as water tanks and wells and private houses.
8. School, church, dispensary, cooperative store, nakamal, road, wharf, water tanks, wells, football field.
9. Church, nakamal, coconut plantation.
10. The area at the mouth of the river (risk of flooding and tsunamis).
    Also - all the flat area next to the coast (risk of coastal erosion, sea level rise, tsunamis, earthquakes, storm surge from cyclones).
11. Tsunamis, sea level rise, cyclones, heavy rain, river flooding, landslides.
12. It would cause severe damage from strong winds, river flooding, landslides, storm surge, etc. To be safe, people should shelter in the school.

Activity 2.5 (continued)

13. Yes. The warmer temperatures and more extreme weather events will affect food security (fewer fish, reduced yields from food gardens). Sea level rise will cause more coastal erosion and many of the existing buildings will disappear. Water supplies will be affected by salt water intrusion. The river may flood more often, causing damage to the buildings at the river mouth. The community is also vulnerable because it relies on just one source of income - copra from coconuts.
14. Possible recommendations to the chief of Pinat:
    - Start a scheme for planting mangroves along the coast that is being eroded.
    - Invite people from VMGD or from the nearby RTC to come and give awareness talks on preparation for hazards and climate change.
    - Encourage people to look for other ways of generating income.
    - Invite officers from DARD to show the people new varieties of crop and animals that are better able to withstand extreme weather conditions
    - Move people away from the area liable to flood. Relocate key assets to the empty area south-west of the present village.

My notes:

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Finally in this section, please allow learners to complete activity 2.6 in their workbooks and on large sheets of paper:

Type of activity	Resources
2.6 Group discussion and presentation	Learner Guide Ideas from group discussion

Instructions to give to the learners

Activity 2.6:
Form small groups of 3-4 trainees. In your group discuss questions 1 and 2. Then present your findings to the rest of your class. You could draw a sketch map on a large piece of paper to show the location of the disaster and the villages you have mentioned.

Activity 2.6

1. Some possible answers:
   - Location: they are inland, far from an active volcano, not on steep ground, built on strong rock, sheltered from strong winds, etc.
   - Physical assets - housing: villages with many strong houses built of concrete blocks and corrugated iron are more resistant to heavy rain, floods, landslides, ash falls, fire and cyclones (if roofing sheets are firmly fixed into the housing frame).
   - Financial assets - cash: if there are many people in the community with access to finance, they may have constructed strong, solid houses; they can also purchase food if a disaster destroys local crops and animals.
   - Human assets - awareness and preparedness: a community will be more resilient if many people are aware of the dangers of natural hazards and future climate change and have taken steps to prepare for the negative impacts, e.g. evacuation routes and cyclone shelters.

2. For this activity, encourage each group to find out about a real emergency or disaster that happened on their island. They must find out details about this hazard event. They must select one village or community that suffered a lot from the hazard event and say why. Then they must select another community on the same island that suffered less damage, and say why. Remind the groups that they must think of the location as well as the assets of the two villages. Encourage each group to draw a large map to show the disaster and the two villages they have selected.

My notes:

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Section 3 Identify some of the impacts that result from a community's vulnerability to hazards and climate change

Learner Guide: Page 35

After completing this section, the learner should be able to:

3.1 explain that the impacts of hazards and climate change on communities and individuals depend on both exposure and vulnerability;
3.2 identify some of the impacts of hazards and climate change on the natural landscape (floods, erosion, landslides);
3.3 identify some of the impacts of hazards and climate change on terrestrial and marine ecosystems;
3.4 identify some of the impacts of hazards and climate change on fresh water resources;
3.5 identify some of the impacts of hazards and climate change on livelihoods and economic activities such as agriculture, livestock, forestry, fisheries and tourism;
3.6 identify some of the impacts of hazards and climate change on property and infrastructures;
3.7 identify some of the impacts of hazards and climate change on human life (loss of life, injuries, stress, health and education);
3.8 identify some of the impacts of hazards and climate change on other human dimensions (ability to work, migration, traditional knowledge and structures, unity in the community, new opportunities, etc.).
3.9 describe examples of these impacts in Vanuatu, making use of appropriate information provided by people in your local area.

Concepts 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9	Time frame	Activities related to the concepts
3.1 The impacts of hazards and climate change depend upon both exposure and vulnerability	**2 hours**	**3.1**
3.2 Impacts of hazards and climate change on the natural landscape	**2 hours**	**3.2**
3.3 Impacts of hazards and climate change on terrestrial and marine ecosystems	**2 hours**	**3.3a, 3.3b**

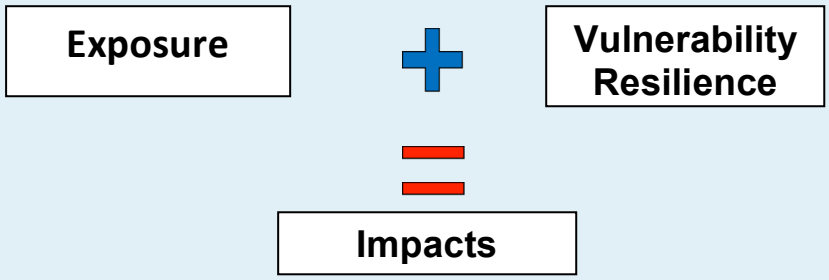
Concepts 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9	Time frame	Activities related to the concepts
3.4 Impacts of hazards and climate change on fresh water resources	**2 hours**	**3.4**
3.5 Impacts of hazards and climate change on livelihoods and economic activities	**2 hours**	**3.5**
3.6 Impacts of hazards and climate change on property and infrastructures	**2 hours**	**3.6**
3.7 Impacts of hazards and climate change on human life (loss of life, injuries, stress, health and education)	**2 hours**	**3.7**
3.8 Impacts of hazards and climate change on other human dimensions (ability to work, migration, traditional knowledge and structures, unity the community, new opportunities, etc.)	**3 hours**	**3.8**
3.9 Actual examples of impacts of hazards and climate change on the local community, on one island, or in other parts of Vanuatu	**7 hours**	**3.9**

Please allow the learners to complete activities 3.1 and 3.2 in their workbooks:

Type of activity	Resources
3.1 Individual exercise	Learner Guide
Instructions to give to the learners	
Activity 3.1: Answer the three questions given on page 17 of the Learner Workbook	

Activity 3.1

1. Complete the diagram as follows:



2. When hazards and climate change affect people or communities, the severity of the impacts depend on how vulnerable or how resilient the people/communities are. In other words, if people are vulnerable because they have taken no measures to protect themselves, then the damage / destruction can be very great.

3. Impacts are the effects of hazards and climate change on natural ecosystems and human societies. They may be negative, causing damage or destruction - e.g. a tsunami killing people who live on flat land right on the coast. Or they may be positive or beneficial - e.g. fertile soil from a volcanic eruption.

Type of activity	Resources
3.2 Pair work: questions on physical impacts	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.2:
Form pairs. Discuss each of the following questions and write down your answers.

Activity 3.2

1. Possible answers:
   - Because they have built their homes on low ground next to the river.
   - Because there are storms or heavy rains that cause the volume of the river to increase and overflow the river's channel.
   - Because forests have been cut down in the catchment area of the river, so leading to greater run-off and deposition of sediment in river and stream channels, so causing the river to rise up and flood.

2. Possible reasons:
   - Very high tides or king tides.
   - Storm surges during a cyclone.
   - Tsunamis.
   - Mining of beach sand and coral from other places along the coastline.
   - Sea level rise.
   - Removal of mangroves from the shoreline.

3. Possible steps:
   - Build homes well inland from the coast or away from a river channel.
   - Avoid cutting down mangroves.
   - Avoid the mining of beach sand and coral.
   - Avoid removing forests and bush along the sides of river valleys.

4. Natural causes of landslides in Vanuatu:
   - Earthquakes can cause soil and rocks to fall down steep slopes.
   - Heavy rain during storms and cyclones, when soil and porous rocks become saturated with water and slide down steep slopes.

5. Strategies for becoming more resilient to the risk of landslides:
   - Avoid cutting into steep slopes, or undercutting cliffs, to construct roads.
   - Avoid removal of forest or bush on steep slopes.
   - Do not build homes directly underneath steep cliffs or slopes, if possible.

6. Climate change is likely to bring warmer temperatures and changing rainfall patterns, with more intense storms. Therefore rivers will be more likely to flood and erode the sides of their channels, and landslides are more likely in mountainous regions. Warmer air and sea temperatures will lead to sea level rise and stronger cyclones, which can cause greater coastal erosion.

My notes:

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Now please ask the learners to complete activities 3.3a, 3.3b and 3.4 in their workbooks:

Type of activity	Resources
3.3a Definitions	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.3a:
For each of the following terms, explain its meaning and give an example.

Activity 3.3a

Term	Definition	Example
Ecosystem	A group of living organisms and non-living elements of the environment that are found together and affect each other.	Coral reef in the Maskeleyne islands.
Terrestrial ecosystem	An ecosystem that is found on the land - rain forest, secondary forest, food garden, river, football field.	Rain forest in the middle of Maewo. Food garden on Ambae.
Marine ecosystem	An ecosystem that is found in the ocean or along the coast - mangrove swamp, coral reef, beach, open ocean.	Mangrove swamp near Loltong, Pentecost
Negative impact	An effect of something that causes damage, harm or distress.	Deaths of people in Baie Martelli, Pentecost, after the tsunami of 26/11/99
Positive or beneficial impact	An effect of something that provides benefits or good outcomes	Fertile soils in Middle Bush, Tanna, resulting from volcanic ash from Yasur.

Activity 3.3a (continued)

Term	Definition	Example
Biophysical impact	How hazards and climate change have an effect on the natural environment.	Heavy rain from Cyclone Lusi caused flooding and landslides on Santo
Socio-economic impact	How hazards and climate change have an effect on people's lives and on ways in which they make a living or take part in human activities.	Climate change will affect food security on small islands like Mota, Aniwa, Futuna.
Food security	When all people at all times have access to sufficient, safe, nutritious food that enables them to maintain a healthy and active life.	Santo is a large island with rivers and forests, so that there will always be food.
Sustainable development	Using natural resources without spoiling the ability of future generations to meet their own needs; economic development that takes place without using up natural resources.	Marine protected areas at Crab Bay, Malakula, and Nguna-Pele, Efate. Ecotourism in Big Bay National Park, Santo.

Type of activity	Resources
3.3b Pair activity - True or False	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.3b:
In pairs, read again pages 39-40 of your Learner Guide. Then state whether these statements are TRUE or FALSE.

Activity 3.3b

1. False
2. True
3. True
4. True
5. True
6. False
7. True
8. False (True in the short term, False in the long term)
9. True
10. False

Type of activity	Resources
3.4 Short answer questions	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.4:
Answer the five questions given in your Learner Workbook.

Activity 3.4

Note: These questions can be answered individually or in pairs.

1. a) Earthquakes and ash falls can break water pipes and damage septic tanks.
   b) Ash falls can contaminate streams, rivers, lakes, water tanks and wells.

2. Heavy rainfall causes floods. When a stream or river is in flood, it is carrying a lot more mud and sediment. Stream water is no longer fit to drink, and mud can contaminate wells and other water sources.

3. a) By strong winds and heavy rainfall during cyclones and storms.
   b) By earthquakes, which break the pipes.

4. Existing impacts on fresh water resources - digging wells to obtain water from the freshwater lens, pollution of freshwater through garbage, sewage, spraying insecticide, keeping cattle, burying dead bodies, etc.
   When sea level rises, the salt water will move into the fresh water lens. This will make the fresh water lens smaller and thinner. The community's supply of fresh water will be reduced.

5. Many answers are possible. Examples:
   - A river flood contaminated wells near to the river.
   - A cyclone destroyed gutters and rain water tanks in the village.
   - An ash fall contaminated all our streams and rain water tanks.
   - In the last earthquake, water pipes in our village were broken.

   Encourage the learners to be specific, giving the approximate date or year of the hazard and naming the village and places affected.

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 Review:

Next, please allow learners to complete activities 3.5 and 3.6:

Type of activity	Resources
3.5 Pair work - short answer questions	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.5:
In pairs, read pages 42-45 in your Learner Guide, then answer the questions given.

Activity 3.5

1. The warmer temperatures and changes in rainfall patterns are likely to cause:
   - more bush fires in times of high temperatures and drought;
   - wider spread of invasive species such as mile-a-minute;
   - changes in the flowering and fruiting time of certain tree species, which may upset the balance of the ecosystem;
   - stress for certain species in times of drought, e.g. lap-lap leaves.

2. They will be stressed by warmer temperatures and lack of water, and their food supplies (grass etc.) may also be affected. They will become thinner.

3. Possible negative impacts on food gardens:
   - Yields of root crops are likely to be less when there are warmer temperatures and longer periods of drought.
   - Warmer temperatures and greater humidity will encourage the spread of insect pests and plant diseases.
   - Changes in times of pollination and seed dispersal may affect crop production.
   - After long periods of heavy rain, waterlogged soils can cause root crops to rot in the ground.
   - More intense cyclones means greater destruction to food gardens.

4. Natural - tsunamis, sea level rise, cyclones, storm surges, ocean acidification, ocean warming. Human-made - pollution by plastic bags and engine oil, cutting down of mangrove forests, overfishing of reefs, sand mining on beaches.

5. Three ways in which tourism can be affected:
   - Earthquakes damage hotels and infrastructures, so tourists do not come.
   - Cyclones damage hotels and infrastructures and cause delays in flight schedules.
   - Long periods of heavy rainfall stop tourists from enjoying the beaches and sight-seeing, so they may decide not to come to Vanuatu any more.
   - As warmer oceans and ocean acidification cause the degradation of coral reefs, there is no longer the attraction of diving on reefs, so many tourists will not come to Vanuatu.
   - Coastal erosion, tsunamis and sea level rise will affect the beautiful white sand beaches and they will no longer be so attractive to tourists.

Type of activity	Resources
3.6 Drawing a picture	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.6:
In the box provided, draw a picture of a building or an infrastructure that you think would

Activity 3.6

Firstly, you can ask the learners to suggest the kind of features of a building that could reduce the negative impacts of hazards and climate change. Examples could be walls made of concrete blocks, corrugated iron roofs, gutters and tanks to harvest rain water, roofs held in place with cyclone-proof nails, traditional houses with a rounded roof reaching almost to the ground, etc.

Then encourage the learners to draw a house, a nakamal, a school, or other public building that has some of these features. It can be a real building in the village, or an imaginary one. The features should be labelled.

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Now, please allow learners to complete activity 3.7:

Type of activity	Resources
3.7 Pair work - short answer questions	Learner Guide, own ideas
Instructions to give to the learners	
Activity 3.7 Answer the 6 questions given on page 24 of your Learner Workbook.	

Activity 3.7

1. Possible reasons:
   - Millions of people were living in overcrowded conditions on the flat land next to China's two great rivers - the Yangtze and the Hwang-Ho (Yellow River).
   - There were severe storms and heavy rains associated with the summer monsoon that caused these two great rivers to greatly increase in volume and power, causing flooding and erosion.
   - People were unprepared - there was no radio at that time, nor were there any public warnings.

2. Injuries and loss of life could be caused by:
   - Buildings collapsing because of strong winds, with roofs and walls falling down on those inside.
   - Storm surges drowning people living in coastal villages.
   - Trees falling down on houses.
   - People touching electrical power lines that have fallen down.
   - People drowning in fast-moving river floods.
   - Iron roofs and sharp objects flying through the air.
   - Ships sinking in heavy seas, or being wrecked on coral reefs.

3. Other effects on people's health:
   - Fear and stress during the hazard event itself.
   - Mental and emotional stress after the event has passed, e.g. because of loss of loved ones, loss of homes, loss of livelihoods.
   - Outbreaks of typhoid and diarrhoea, caused by contaminated water.
   - Malnutrition, because of lack of healthy food.
   - TB, malaria and dengue fever, caused by overcrowded conditions and pools of stagnant water.

4. Climate change can cause negative effects on health:
   - Dehydration on very hot days.
   - Increase in vector-borne diseases because of warmer, wetter conditions.
   - More ciguatera poisoning because of warmer oceans.

5. Climate change can cause negative effects on children's education:
   - Extreme weather events will increase damage to school buildings.
   - Greater absence from school when there is damage to buildings and families lose their homes and livelihoods.
   - Malnourishment because of lack of healthy food can impact on performance.
   - Warmer temperatures could affect the concentration of children and teachers.

6. Possible strategies to reduce these negative impacts:
   - Strengthen walls and roofs of school buildings.
   - Ensure that all schools have covered water tanks and can harvest rain water.
   - Where possible, re-build schools and clinics in safer locations.
   - Encourage the construction of well-ventilated one-storey buildings.

   Other answers are possible. Encourage learners to think creatively!

My notes:

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Next, you can ask the learners to complete activities 3.8a and 3.8b in their workbooks:

Type of activity	Resources
3.8a Report on class discussion	Learner Guide, own ideas
Instructions to give to the learners	
Activity 3.8a: After discussing the questions on page 50 of your Learner Guide, write down your own views about each of the following issues.	

Activity 3.8a

You as facilitator must accept that there can be many possible viewpoints on these topics. Accept all of them, as long as the learner can support his/her opinion with an example.

Here are some possible responses:

Activity 3.8a (continued)

5. Traditional knowledge of crop planting and fishing may suffer when these crops and fish are no longer there because of warmer temperatures and more frequent extreme weather events. Also, as more and more young people go to school and leave their local environment (and as more and more move to towns because they cannot make a livelihood from the local resources in rural areas), they no longer learn the traditional environmental knowledge and practices from their parents and grandparents, and some cultural practices will gradually die out.
6. Yes, because of land disputes: as climate change reduces food supplies, people will want to clear new land to cultivate more crops, and this could lead to conflict. Also, rising sea levels in some coastal areas will reduce the available land, and people will claim land in other places, so leading to land disputes. There may also be conflict over water supplies as droughts become more frequent.

   No, because as supplies of food and water are threatened by warmer temperatures and changing rainfall patterns, people in village may decide to cooperate more closely to solve these problems. When there is greater unity in the community, people are more willing to help each other, and more able to contribute their ideas and consult together to solve their difficulties. Building greater harmony in a community will mean that there is greater resilience to the negative effects of climate change.
7. Possible answers:
   - The warmer temperatures will enable tree crops such as coconuts to grow at higher elevations than at present. This could increase the production of coconuts

Type of activity	Resources
3.8b Class discussion on a picture	Learner Guide, own ideas

Instructions to give to the learners

Activity 3.8b:
Each of you should study the picture provided (Fig. 8 in the Learner Workbook) and think about the answers to the questions that are given. Then you can all discuss your ideas together. After the discussion, you should write down your own thoughts.

Activity 3.8b

How do people meet their needs for food, water and shelter? From the local environment - food from forests, gardens and the ocean, housing materials from the forests, water from rain and streams.

How do they meet their social and spiritual needs? By living in family groups, by service to others, by traditional customs and responsibilities, through prayer, through religion and traditional beliefs, by working together on village tasks, etc.

(Continued on page 37)

What steps might people take to become more resilient to the effects of hazards and climate change? Building stronger houses, increasing their awareness of the effects of hazards and climate change, growing drought-resistant varieties of food crops (see CCDRR05), breeding pigs that can withstand warmer conditions (see CCDRR05), establishing Community Disaster and Climate Change Committees (see CCDRR07), listening to warnings, etc.

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Finally in this section, please ask the learners to carry out activity 3.9:

Type of activity	Resources
3.9 "Carousel" activity on examples of the impacts of hazards and climate change in Vanuatu	Learner Guide, own ideas

Instructions to give to the learners

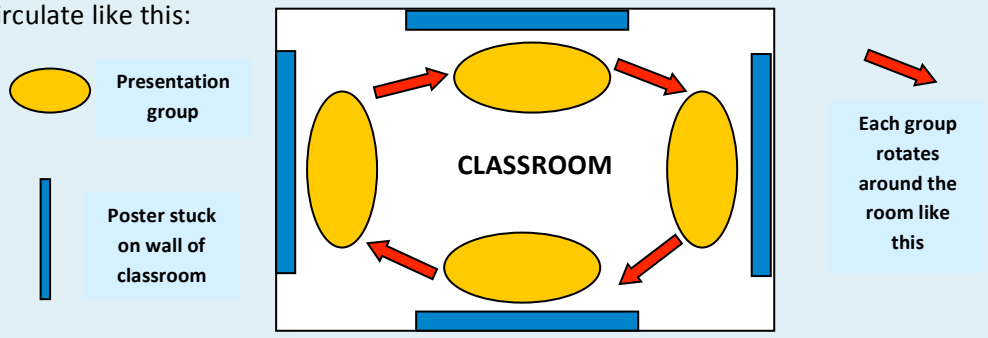
Activity 3.9:
The class should divide into four groups with four learners in each group. Each group selects one of the four topics given, then prepares a large poster with pictures and information about the topic. The posters are pinned on the wall, and new groups are formed. The carousel activity is then carried out, following the instructions given on pages 27-28 of the Learner Workbook.

In order to get information on the impacts of past hazard events in your area, you are encouraged to leave the classroom and go and talk to people from the local community.

Activity 3.9

You should go through the instructions for this activity with the learners, carefully reading the details on pages 27-28 of the Learner Workbook. Because there are four topics, there should be exactly four learners in the first group that is formed for preparing the poster. Then when the new groups are formed for the presentation, there will be four persons in each, with one who is an "expert" on each poster. One group will contain all the number 1s from the first groups, another will contain all the number 2s, and so on. Each of the new groups stands in front of one of the posters, and the person who knows about the poster will make his/her presentation. After about 5 minutes, you give a signal, and all the groups move to the next poster. This process continues until all groups have visited all posters.

They circulate like this:



If you have between 17 and 19 learners in the class, you can put more than four in each of two groups, and then when they give themselves a number, two of them can have the same number and so share in the presentation of the topic. If you have 20 learners in the class, you can add an extra topic, so that you have five groups of four learners. One way you could do this is to separate Topic 3 into two, with one group doing "fresh water resources" and another group doing "buildings and infrastructures". If you have less than 16 learners, you can reduce the number of topics, and have three instead of four. One way of doing this is to remove Topic 3, giving "fresh water resources" to the group doing Topic 1, and "buildings and infrastructures" to the group doing Topic 2.

This is a very good method of helping your learners to speak about a topic. Everyone has to speak about his/her poster, but only to a small group.

You should encourage all the learners to actually leave the classroom and go and talk to people from the local community who might be able to provide information on the impacts of past hazards in your area - teachers, pastors, elderly people, men, women, youth.

My notes:

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Section 4 Use field research to assess a local community's vulnerability to hazards and climate change, including its capacity to reduce risks and adapt to change

Learner Guide: Page 53

After completing this session, the learner should be able to:

4.1: conduct a SWOT analysis of a local community's assets or dimensions of sustainable living;
4.2: use the findings to evaluate the community's "adaptive and coping capacity".

Concepts 4.1 and 4.2	Time frame	Activities related to the concepts
4.1 Assets (dimensions) of sustainable living in a community	**7 hours**	**4.1**
4.2 A community's adaptive and coping capacity	**7 hours**	**4.2**

Please allow learners to complete activity 4.1 in their workbooks:

Type of activity	Resources
4.1 Group work - SWOT analysis	Learner Guide and own ideas

Instructions to give to the learners

Activity 4.1:
Form groups of 3-4 learners - preferably the same groups that produced the risk maps of a local community in CCDRR01. If you have lost your map, or prefer to start again, then this time you could try and produce your map with the help of people from the local community.

You should visit this community again, and with the help of your map and your observations, complete a SWOT analysis of the community's dimensions for sustainable living. You can complete the information for natural and physical dimensions using the information on your map. When completing the information on the human, social and financial dimensions, you should talk to people in the community and distinguish between the responses for women and men. Make a large copy of the table on page 30 of your Learner Workbook to record your findings.

Activity 4.1

Before you start, it is important to go through the example of a SWOT analysis given on pages 54-55 of the Learner Guide. Discuss this carefully with the learners, making sure that they relate the information to the map of Pinat on pages 29-30 of the Learner Guide. Take time to explain the meaning of the terms "strengths", "weaknesses", "opportunities" and "threats", using examples from Pinat to help you.

Then start on activity 4.1. Allow at least 3 hours for field work to collect information from the community. Encourage the learners to talk to women and men separately.

After each group has produced its SWOT table, it can present its findings to the whole class. If you feel it is appropriate, the groups can arrange to present their information to the communities where they have been working. If this is the case, you should be there to listen to their presentations.

My notes:

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Now please allow learners to complete activities 4.2a and 4.2b in their workbooks:

Type of activity	Resources
4.2a Definitions	Learner Guide and own ideas
Instructions to give to the learners	
Activity 4.2a: Write your own definitions of the following: **ADAPTIVE CAPACITY** **COPING CAPACITY**	

Activity 4.2a

Adaptive capacity means the ability to put up with the effects of climate change, to adjust to these changes, to reduce any damage that might occur, and to take advantage of new opportunities that may arise. Adaptive capacity is improved if people have good access to the five dimensions of sustainable living - human, social, physical, natural and financial.

Coping capacity is a term used when considering disasters. It means the ability to face and manage difficult conditions, emergencies or disasters.

Type of activity	Resources
4.2b Group work - evaluation of adaptive capacity	Learner Guide and own ideas

Instructions to give to the learners

Activity 4.2b:
Now that you have completed the SWOT analysis of your community, try to evaluate the strength of the community according to these assets. If you wish, you can consult people from the community to help you.

Activity 4.2b

Read carefully through pages 55-56 of the Learner Guide and help the learners to understand that they are trying to measure the ability of a community to cope with hazards and climate change.

To do this, they first try to make a simple evaluation of the coping capacity of an imaginary village (Pinat): all they have to do is to rate it as "low", "medium" or "high". You can say to the learners: "All those who think that Pinat's capacity is low, please go to the right side of the room. Those who think that Pinat's capacity is high, please go to the left side of the room. Those who think that Pinat's capacity is medium, or who are not sure, please stay in the centre of the room. Then, in your groups, talk together and decide on the reasons why you have placed Pinat in this category". After they have moved into three groups and talked together, invite each group to present its reasons to everyone.

Next, they must try to evaluate the adaptive capacity of the community (or communities) where they have been working. They do this by completing activity 4.2b. It may be wiser for the learners to talk to people in the community and get an idea of how they themselves feel about their ability to cope with hazards and disasters. This will assist the learners to state their level of confidence on a scale of 1 to 10. The learners' final evaluation is going to be shared with the community when they have completed Section 5 of this Unit.

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Section 5 Help a local community to become more aware of its vulnerability to hazards and climate change

Learner Guide: Page 57

After completing this session, the learner should be able to:

5.1: determine the priorities of a local community for sustaining and improving its way of living;
5.2: work with this local community to determine the hazards and climate changes that might affect these priorities;
5.3: begin helping the local community to make plans for building greater capacity to cope with hazards and adapt to climate change

Concepts 5.1, 5.2, 5.3	Time frame	Activities related to the concepts
5.1 Community priorities for sustaining and improving its way of living.	**3 hours**	**5.1**
5.2 How hazards and projected climate change can impact on community priorities.	**6 hours**	**5.2**
5.3 Plans for building greater capacity to cope with hazards and adapt to climate change	**4 hours**	**5.3**

Firstly, allow learners to complete activity 5.1:

Type of activity	Resources
5.1 Group work - identification of community priorities	Learner Guide and own ideas Opinions from the community

Instructions to give to the learners

Activity 5.1:
Remain in the same small group that has been working with a local community. Your task is to help the community to identify its priorities for improving its way of living. You can do this yourselves, in your group. But it would be preferable to go out and consult with members of the community to do this. First ask men and boys. Then ask women and girls. Then put the two sets of answers together to find out the priorities for everyone. The question you can ask is this: *"Wanem samfala samting we yu wantem lukim long komuniti blong yu blong mekem se laef blong ol pipol i kam antap?"* Ask men and boys to give you the three ways that they consider are the most important. These are their priorities. Then do the same for women and girls. Then put all the answers together and find out which were the three top priorities for the community. Write them in the space provided in your Learner Workbook.

Activity 5.1

Before starting this activity, it is important to go through page 58 of the Learner Guide, so that the learners see an example of the things that people in a village might want to have in order to improve their way of life.

Then when everyone is ready, you can start on Activity 5.1. Encourage the learners to go and talk to people in the community in order to find out their top three priorities for improving their way of life. It is important that they interview the same number of men and women (for example, ten of each), but that they are interviewed separately. When doing an interview, it may be helpful to first ask the respondent to say all the things that he/she would like to see. Then the learner can ask the respondent to pick out the top three. You may like to ask the learners to practice their interview technique with each other in the classroom, before they actually go out into the community.

Each group of learners will return to the classroom with lists of priorities. Each group should go through their lists and record the priorities on a separate piece of paper, keeping a tally of how many people want each priority. Do the priorities for men. Then do the priorities for women. Then add the two together and see which are the **top three priorities** for the whole community. This information is then recorded in the Learner Workbook.

My notes:

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Now please ask learners to complete activity 5.2:

Type of activity	Resources
5.2 Group work - impacts of hazards and climate change on community priorities	Learner Guide and own ideas Opinions from the community

Instructions to give to the learners

Activity 5.2:
In Activity 5.1, you found out your community's priorities for sustaining and improving livelihoods. Your group can now help people to see how hazards and climate change could impact on their hopes and their goals. Hopefully, this will enable them to consider the measures that could be taken to reduce the effects of these risks.

Please follow steps 1-6 given on pages 33-34 of your Learner Workbook. At the end, you can record some of the things you have learned in the box on page 35 of the Learner Workbook.

Activity 5.2

This is perhaps the most important activity in this whole Unit. It brings together everything that the trainees have learned, and enables them to apply their learning to a real life situation.

Firstly, read together through the instructions on pages 58-59 of the Learner Guide and talk about the example provided.

Then invite each small group to meet and read the instructions in the Learner Workbook. Each group can plan what each of its members is going to do, and how to approach the people in its community.

Then the groups go and do their field work. You should allow at least 6 hours for the groups to do their interviews, to put together the information, and to share their findings with the community.

At the end of this activity, encourage each learner to reflect on what he/she has learned from this exercise and to write down some of the learnings in the box provided on page 35 of the Learner Workbook.

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Finally, please ask learners to complete activity 5.3:

Type of activity	Resources
5.3 Group work - building adaptive and coping capacity	Learner Guide and own ideas Opinions from the community
Instructions to give to the learners	
Activity 5.3: In Section 5.3 of the Learner Guide, there are some questions that you can ask to individuals and families in your community. The purpose is to get them to think more deeply about how they can build up their adaptive and coping capacity. As you ask these questions, write down some of the responses you receive.	

Activity 5.3

You can combine this activity with Activity 5.2 (Step 6), or if you prefer, you can ask the learners to go back to their communities later and do this as a separate activity.

You should allow about 4 hours in all for this activity - one or two for discussing the questions with the learners and formulating any new questions that could be useful, and at least two hours out in the field for the learners to talk to people and ask the questions. Responses should be written in the table provided on p. 36 of the Learner Workbook. If you wish, groups can also display their answers on large sheets of paper.

When all three activities, 5.1, 5.2 and 5.3 have been completed, it will be a good time for you, as a facilitator, to reflect on what you have learned from carrying out these investigations. Also think about how you could better organise these three activities in the future. There is a space below and on the next page where you can write down your thoughts.

My notes and reflections:

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My notes and reflections (continued):

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(space for illustrations)

What will I do differently next time?

Take some time to **reflect** on your own activities as facilitator of this Unit Standard.

Then write down five of the most important lessons you have learned:

What will I do differently next time?
1.
2.
3.
4.
5.

As a facilitator, you have gained hands-on experience in the application of the Unit standard. You may have experienced difficulties that the developers did not anticipate.

So it will be very helpful if you could give your comments below. They will contribute towards the future revision of this Unit, and should be brought to the attention of the VRDTCA Training Manager.

Difficulties I had with this Unit	Recommended changes to address the difficulties
1.	
2.	
3.	
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5.	
6.	
7.	
8.	

