In collaboration with

CBCRP-PCCC & FAO Virtual Training Course

GENERAL INFORMATION

"Climate Resilience and Food Production Systems – agriculture and coastal fisheries"

20 September – 15 October 2021

This is a general information pertaining the above-mentioned Pacific Climate Change Centre (PCCC) training. It is being implemented virtually as part of the Project for Capacity Building on Climate Resilience in the Pacific at the Pacific Climate Change Centre (CBCRP-PCCC), in collaboration with the Food and Agriculture Organization of the United Nations (FAO). The project is based on a bilateral agreement between the Government of Japan and the Government of Samoa in cooperation with the Pacific Climate Change Centre (PCCC) hosted by the Secretariat of the Pacific Regional Environment Programme (SPREP) in Apia, Samoa.

PCCC:
The Pacific Climate Change Centre (PCCC) was pledged by the Government of Japan at the Seventh Pacific Islands Leaders Meeting (PALM 7) in 2015 to respond to a number of needs on climate change in the region. With its strategy and business plan, the PCCC will deliver four mutually reinforcing functions: knowledge brokerage; applied research; capacity building through training and learning; and supporting innovation.

CBCRP-PCCC:
The Project for Capacity Building on Climate Resilience in the Pacific (CBCRP-PCCC) which is delivered jointly by SPREP, the Government of Samoa and the Japan International Cooperation Agency (JICA) aims to support the operationalization of the capacity building and training functions of the PCCC and contribute to the expected outcomes of the business plan.

I. Description of the Training Course

1. Background

The main objective of the Paris Agreement's (PA) is to strengthen global response to the threat of climate change by maintaining global temperatures well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit temperature increase to 1.5-degrees Celsius. A key principle in the Paris Agreement is that all countries are expected to submit enhanced Nationally Determined Contribution (NDC) and develop and implement their National Adaptation Plans (NAPs).

Climate change continue to affect agriculture, fisheries and food security and while impacts on food production yields and livelihoods will vary across countries and regions, they will become increasingly adverse over time and potentially catastrophic in some areas. As climate change impacts on food production systems intensify, it will become increasingly difficult to grow crops, raise animals, manage forests and catch fish in the same ways and in the same places as we have done in the past.

The food production systems are not only affected by climate change, they also contribute directly and indirectly to significant emissions of the three major greenhouse gases: carbon dioxide; methane and nitrous oxide. Annual anthropogenic GHG emissions that are classified in IPCC reports as originating in "agriculture, forestry and other land use" (AFOLU) are caused mainly by deforestation, livestock production and soil and nutrient management. Adaptation alone is insufficient, and mitigation is essential for ensuring the long-term food security of the world's population. The food production systems have potential to limit their greenhouse gas emissions while ensuring a primary focus on adaptation.

This training program is delivered by the CBCRP-PCCC in collaboration with the Food and Agriculture Organization of the United Nations (FAO). The training will provide an overview of climate change risks and vulnerabilities, including challenges of food production systems, and primary adaptation and mitigation options. The following modules will support participants to work as a group and to develop a logical framework as a key component of a project proposal.

2. Course objective

The overall goal of the training courses is to enhance capacities on climate resilience in the Pacific region. The virtual training program aims to:

- Enhance understanding of observed and projected climate change, climate risk and vulnerability on food production systems (agriculture, livestock and coastal fisheries), and nexus of climate change and agriculture.
- Raise awareness on the key international initiatives under the United Nations

Framework Convention on Climate Change (UNFCCC): the Koronivia Joint Work on Agriculture; and Lima Work Programme on Gender and its Gender Action Plan.

- Enhance understanding of adaptation and mitigation options of food production systems including climate smart agriculture, adaptation and mitigation co-benefits, sustainable fishing practices and climate information services
- Provide examples of case studies on climate change and food production systems implemented in the Pacific Island Countries.
- Develop skills to prepare problem trees and logical frameworks for concept note development and accessing financial resources.

3. Target countries and territories

American Samoa, Commonwealth of the Northern Mariana Islands, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna, and Timor-Leste

4. Eligible / target participants

To enhance coordination and collaboration among the relevant sectors and climate change unit towards development and implementation of their NDCs and NAPs, it is expected that officials and practitioners of governments and non-government institutions including private sector, who are working in the relevant units of agriculture, coastal fisheries, community development and climate change, will join this training program. The maximum number of participants per country is eight (8). It is requested that the nomination include at least 2 participants from non-government institutions, and the nomination is gender balanced where possible.

5. Language to be used in the programs

English (Note: English-French translation will not be available)

6. Training modules

The training modules are as follows. Please see annex for detailed agenda.

1. Understanding of climate risk and vulnerability of food production systems
   - 1.1 Climate and non-climate impacts on food production systems
   - 1.2 GHG emissions from food production systems

2. Climate mitigation and adaptation options for food production systems
   - 2.1 The nexus of climate change, gender and agriculture and key international decisions under the United National Framework Convention on Climate Change (UNFCCC)

2.2 Adaptation and mitigation options of agriculture
2.3 Adaptation options of coastal fisheries
2.4 Climate Information Services

3. Problem and objective trees, and logical framework
3.1 Project objectives
3.2 Exercise

7. Schedule of the training programs

The training consists of the following module and will be delivered from 20 September to 15 October 2021.

Week 1-2 (20 September – 1 October)

i) Self-paced learning on Module 1 and Module 2
Participants are expected to learn from training materials and relevant resources at the PCCC E-learning Platform. Q&A and discussion forum will be also available.

ii) Live session on Module 2.2
Experts will provide lecture on Module 2.2. The tentative schedule is as follows.

Date and Time (Apia)		Countries
23 September, Thursday	1-3 pm	All countries

iii) Live session on Module 2.3
Experts will provide lecture on Module 2.3. The tentative schedule is as follows.

Date and Time (Apia)		Countries
28 September, Tuesday	2-4 pm	All countries

Detailed agenda of live sessions will be posted on the E-learning Platform.

Week 3-4 (4 – 15 October)

iv) Module 3 and Group exercise
Participants of the same country/territory are expected to gather as a national group, and discuss and prepare a problem tree, an objective tree and logical framework on food production systems. Problems are selected from their relevant policies and strategies.
Deadline of outputs submission is 8 October for review by experts.

v) Live consultation
Consultations with experts and other participants to review the exercise outputs. The tentative schedule is as follows.

Date and Time (Apia)		Countries
13 October, Wednesday	2-4pm	Timor-Leste, PNG, Solomon Islands, Vanuatu, Fiji
14 October, Thursday	2-4pm	Tuvalu, Samoa, Tonga, Niue, Cook Islands
15 October, Friday	2-4pm	Palau, FSM, Nauru, Kiribati, RMI

Schedule of live sessions and country groupings are to be determined according to the number of participants nominated. If participants cannot attend the designated sessions due to work-related reasons and inform the secretariat of his/her absence and reasons in advance, the secretariat will arrange alternative option to complete these live sessions.

8. Certification of Completion

Participants who meet the requirements below will receive certification of completion of training.

- Post at least one input in any discussion forum for modules.
- Pass quizzes of Module 1 & 2 (10 quizzes)
- Attend all 3 live sessions
  - ✧ (if absent, review video and submit summary note to the project secretariat)
- Submit exercise outputs
- Submit course evaluation

II. Procedure for Nomination

1. Expected role of the Participants

(1) This course is designed primarily for national ministries/departments and non-state actors that are involved in climate change adaptation and mitigation actions. Participants are expected to use the relevant knowledge provided through the course for their current projects or future activities, and to contribute to the national planning and the implementation of the National Adaptation Plan (NAP) and Nationally Determined Contribution (NDC) to enhance climate resilience.

(2) The project team will follow-up the activities of participants and may disseminate their stories through the project newsletters and the PCCC website.

(3) The Climate Change Focal Points are requested to nominate participants from various units/sectors working in climate change projects according to the above expectations.

2. Participant Qualifications

In addition to eligibilities in section I. 4, participants are expected to meet the following qualifications. The participants would not necessarily be employed by the applying organizations, as long as they are selected officially by the organizations for their specific purposes. The participants must be either persons who are engaged in the said field or working in a field directly related to program subject.

(1) Current duties

(a) Entry to mid-level officials or practitioners of governmental or non-governmental institutions including the private sector
(b) In charge of relevant fields of this training program: climate change, agriculture and coastal fisheries.
(c) Expected to be in the near future involved or already be involved in the decision-making process of planning/development and implementation of policies in the relevant fields.

(2) Essential Qualifications

(a) Computer skills: At least high computer literacy on Microsoft Office Suite.
(b) Educational Background: Diploma (two years of tertiary education) or equivalent
(c) Language: have a competent command of spoken and written English.
(d) Health: must be in good health, both physically and mentally, to participate in the Program
(e) Age: between the ages of 24 and 40 years
(f) Must not be serving any form of military service.

(3) Recommendable Qualifications

Gender Consideration: The project team is promoting gender equality. Women are strongly encouraged to participate in the course.

3. Required Documents for Nomination

Please fill out the Nomination Form (Annex) and submit to the CBCRP-PCCC Project Team through the Climate Change Focal Points by **Monday, 13 September 2021**.

4. Conditions for Attendance

(1) not to utilize knowledge and skills acquired in the training for military purposes.
(2) to strictly adhere to the course schedule.
(3) not to change the course topics.
(4) to refrain from engaging in any political activities during the training.

III. Administrative Arrangements

1. E-learning platform

The detailed information on the e-learning platform including training materials, Q&A and virtual sessions will be shared with all the participants at a later date.

2. Location in your country

The CBCRP-PCCC Project Team strongly requests a Climate Change Focal Point or an office designated by the focal point to arrange a central location for the virtual sessions.

3. Organizer

For enquiries and further information, please contact the below**.**

(1) Name: CBCRP-PCCC Project Team
(2) Email: cbcrp.pccc@gmail.com
(3) Office: c/o P.O. Box 240, Secretariat of the Pacific Regional Environment Programme (SPREP), Apia, Samoa

Annex: Agenda of the training program

1. Understanding of climate change risks and vulnerabilities of food production systems

1.1 Climate and non-climate impacts on food production systems

- IPCC risk-based conceptual framework and updates of observed and projected climate change in the Pacific
- Vulnerability of and climate change impacts on food production systems
- Non-climate hazards to food production systems
- Examples in the Pacific
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1.2 GHG emissions from food production systems

- Potential GHG emissions from food production systems
- GHG emissions from food production systems in NDCs of the Pacific

2. Climate mitigation and adaptation options for food production systems

2.1 The nexus of climate change, gender and agriculture and key international decisions under the United National Framework Convention on Climate Change (UNFCCC)

- Introduction to the nexus of climate change, gender, agriculture, food security and nutrition
- Introduction to the Koronovia Joint Work on Agriculture (KJWA) under the UNFCCC
- Introduction to Lima Work Programme on Gender and its Enhanced Gender Action Plan under the UNFCCC
- Role of women in agriculture
- Role of women in the climate negotiations and actions

2.2 Adaptation and mitigation options of agriculture

- Introduction to Climate Smart Agriculture adaptation and mitigation options:
- Case studies from countries on climate smart agriculture:
  Soil organic carbon, soil health and fertility and management;
  improved nutrients and manure management;
  Improved livestock management systems
- Adaptation-mitigation co-benefits of using integrated approaches.
- Project examples in the Pacific: FAO; CSIRO cases studies in Samoa and Solomon Islands in Cocoa.
- Improvement of facilities for cultivation, storage and primary processing

2.3 Adaptation options of coastal fisheries

- Conservation of coral reefs and other fisheries habitats (e.g. protection, replanting and restoration of coral reefs; resilient species)
- Sustainable fishing practices: identifying and operationalizing practices (e.g. size limits, open/close fishing seasons, gear restrictions)
- Diversification of sustainable livelihood opportunities (e.g. fish aggregating devices (FADs), sustainable and resilient aquaculture, post-harvest/value-adding)

2.4 Climate Information Services

- Climate information services: optimization of practices (e.g. early warning system of tropical cyclone, pre-emptive adjustments to fishing or harvesting schedules) by using climate services; recognition of benefits of climate services; translation of climate and meteorological data for users; devices and tools for dissemination.
- Cases in the Pacific: Vanuatu Klaemet Blong Redy Adapt mo Protekt Project, CSIRO case studies, EAR Watch bulletin, PICOF tropical cyclone seasonal forecast guidance.

3. Problem trees and logical framework

3.1 Project objectives

In formulating a climate change project, the theory of change and the logical framework are key elements. They are described as tools for logic that connect causes and effects. Development of problem and objective trees will help to uncover these connections. Sub-module 3.1 shows participants how to use problem trees and objective trees and how these are used to craft the logical framework.

- Problem tree analysis: defining core problem, direct causes and effects, secondary causes;
- Objectives tree: identify the means of achieving a desired result or output at the end of a project, indicating the longer-term outcomes and impacts that the project can contribute to; and
- Logical framework: identify goal, outcomes, outputs, activities, inputs, performance targets, monitoring mechanisms, and assumptions and risks.

3.2 Exercise

Each country group executes problem tree analysis by identifying core problems related to climate change mitigation/ adaptation on food production systems. This exercise is followed by formulation of objective trees and development of a logical framework of the project/program related to adaptation and/or mitigation activities for food production systems.

Reference: Examples of Climate Change Policies and Strategies on food production in the Pacific Countries[1]

Country and Policy title	Agriculture	Fisheries
Cook Islands 2nd Joint National Action Plan - A sectoral approach to Climate Change and Disaster Risk Management 2016-2020	STRATEGY 2: WATER AND FOOD SECURITY Improve water quality, efficiency and conservation. Strengthen livelihoods and capacity for climate adaptation in agriculture and fisheries. 6. Improve food security, reduce import reliance and strengthen resilience to the impacts of climate change through the development of the agriculture industry at the community and national level. new crop varieties, coconut and other food crop replanting programmes, sustainable land management and farming practices (including removal of water-thirsty, flammable, alien vegetation), organic farming and pest control techniques. community based agricultural business.	Strategy 2: WATER AND FOOD SECURITY 7. Strengthen and build resilience in the fisheries sector, ensuring a higher resilience to the impacts of climate change. community based fisheries management. Document traditional knowledge on fishing, navigation and preservation techniques.
Fiji National Adaptation Plan (NAP)– A pathway towards climate resilience (2018)	12.A.1 Undertake regular climate change assessments, GIS mapping, and crop modelling, 12.A.2 Improve bio-security efforts (including border controls, early warning systems, on-site visits, and breeding programmes) 12.A.5 inclusive access to hazard maps and climate information services via a range of information communication technology 12. A 7 sustainable soil and land management techniques to address soil erosion, desertification, increased soil salination and to improve soil fertility, nutrient management, arability & soil restoration, 12.A.8 protecting existing water sources, improving and upscaling (low-cost) irrigation systems, improving and maintaining water drainage systems, applying and upscaling good agronomic practices for water conservation	12.F.1 Upgrade existing aquaculture facilities and develop pond aquaculture to boost brood and seed stock production. 12.F.2 Promote sustainable fisheries management and the replenishment of fish stocks through management tools such as establishment and better management of inshore and deep water marine protected and locally managed areas, seasonal closures, size limits and quotas, gear restrictions, and a review of the offshore fish license cap and fishing aggregating devices. 12.F.3 Upgrade existing database to capture data on the status of inshore/coastal and offshore marine resources 12.F.6 restoration, enhancement and conservation of coastal ecosystems such as mangroves, seagrasses and coral reefs, 12.F.7 Promote sustainable non-extractive cultured

[1] Participants will share the updated policies and strategies during the training program through “Discussion Forum” of the E-learning platform.

	12.A.12 irrigation schemes which support agricultural diversification and mitigate increased drought and flooding 12.A.13 sea wall and drainage infrastructure to reduce saltwater intrusion on agricultural land due to sea level rise, increased tidal surges.	fisheries 12.F.9 providing for landward migration of coastal fish habitats and allowing for the expansion of freshwater habitats, and in particular, address the effects of land management on nearshore ocean health.
Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management （KJIP）2019-2028	Result 3.1: Increased investment by businesses, including small and medium-sized enterprises and women in value-adding marine and agricultural products for the domestic and export niche markets. And benefit women and men equally. 1) Strengthen and promote “green” and gender-inclusive businesses, particularly small and medium-sized enterprises focusing on value-added agricultural and marine products. Result 4.2: Salt-, drought-, rain- & heat-stress resilient crops, fruit, vegetables and livestock breeds are identified and promoted, and communities preserve local food (fruit trees and seafood). Design, test, implement and evaluate agriculture production systems and household-level gardening to establish food-secure communities in the face of climate changes and disaster risks at community level.	Result 3.2: Private sector implements greening and risk management initiatives (in areas such as tourism, trade, transport, import and export) 3) Develop and strengthen local businesses and artisanal fisheries to capitalise on the likely increase in skipjack tuna stocks and to better use bycatch for food security. 4) Develop Fisheries Management Plans for key commercial species, including: beche-de-mer, aquarium, bonefish (sport fishing and subsistence), arc shells, giant clams, seaweed etc., to strengthen sustainable management and resilience, and ensure the increase of revenue from fisheries, considering the likely effects of climate change and disaster risks on these commercial resources. Result 4.3: Communities manage coastal fisheries taking into consideration sustainability of marine resources as well as climate change and disaster risks. f. Implement identified actions and monitor progress (such as artificial reefs, preservation of seafood, deployment of nearshore fish aggregating devices [FADs], management plans, establishment of marine protected area, farming of clams, etc.). 2) Deploy networks of nearshore FADs to increase access to pelagic fish and reduce pressure on coastal fisheries.
Palau	Section A: Agriculture and Fisheries Sector	Section A: Agriculture and Fisheries Sector

Climate Change Policy for Climate and Disaster Resilient Low Emissions Development (2015)	A.3 Stabilize soils by amongst other measures, re-vegetation, and paving of roads in the Ngerikiil Watershed and other priority locations.	A.2 Build resilience to temperature change and ocean acidification in marine ecosystems/fisheries by protecting coral sites
PNG National Climate Compatible Development Management Policy (2014)	55. Reduce GHG Emission Through Agricultural Practices: Establish educational programs and incentives to promote agricultural cultivation and livestock best management practices that reduce GHG emissions and that allow the sequestration potential of agricultural activities to be realized. 56: Protect Agricultural Land From Urban and Suburban Encroachment.	
Samoa National Climate Change Policy 2020-2030	2.3 Implementing adaptation actions to enhance the climate resilience of the 368 Communities of Samoa as identified in the respective CIM Plans and Strategy, Built environment (coastal and inland infrastructure), Ecosystems services, Biodiversity, Forest & protected areas, Health, Soil, Sanitation, Agriculture (crops, livestock, fisheries and marine resources and ecosystems), Food Security, Tourism investments and promoting actions that impact on multiple sectors and communities 3.3 Reducing GHG emissions through energy efficiency and renewable energy resources in the Transport Sector (land, and sea), Agriculture Sector Energy Sector, Tourism Sector, Trade and Commerce Sector, Manufacturing and Construction, Residential and Commercial and Waste	
Tonga Joint National Action Plan 2 on Climate Change and Disaster Risk Management 2018 - 2028	4.1.4 Implementing SMART agricultural and water management approaches in the context of climate change and disaster risks	4.2 Enhance sustainable development of fisheries and aquaculture to increase resilience to the impacts of climate change 4.2.2 Conduct fishery resource enhancement programme (aquaculture, including farmed coral and aquaculture of giant clam)
Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management 2012 -2016	2.1.6 Develop weather and climate products (weather maps, weather charts, tide predictions etc.) for the use of the agriculture and fisheries sectors, tourists operators, women and men 5.4 Mitigation plans for the agriculture and waste management sectors to reduce greenhouse gas emissions.	1.4 Coordinated planning and management of marine, coastal and land resources and systems (Whole Island Systems Management/ Ecosystem base management). 1.5 Responding to possible changes in migratory marine fish species movement due to climate change. 1.5.5 Develop Tuvalu's tuna fishing capacity to ensure food security and response to changes in migratory patterns 2.1.6 Develop weather and climate products (weather

		maps, weather charts, tide predictions etc) for the use of the agriculture and fisheries sectors, tourists operators, women and men.
Vanuatu Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030	7.4.1 Climate and disaster vulnerability and multi-sector impact assessment Vanuatu's urban and rural communities are diverse requiring that climate adaptation and disaster risk reduction action be tailored to the unique characteristics of each individual community. Climate and disaster risk vulnerability assessments shall be undertaken within communities to inform the design of effective projects and programmes, considering all sectors relevant to the local context, and inclusive of all stakeholders. Source: https://www.nab.vu/sites/default/files/nab/vanuatu_cc_drr_policy_minus_att4v4.pdf	

Nationally Determined Contributions (NDCs)

Country	NDCs
Marshall Islands Second Nationally Determined Contribution 2020 (Updated)	This update focuses on RMI's efforts to reduce emissions from the domestic shipping sector in order to help RMI achieve its economy-wide NDC target under the Paris Agreement of reducing emissions at least 45% below 2010 levels by 2030.
Papua New Guinea Enhanced Nationally Determined Contribution 2020	Mitigation Targets: Land Use Land Use Change and Forestry (LULUCF) By 2030, PNG is committing to a reduction in annual emission from deforestation and forest degradation, due to agriculture expansion and commercial logging of 10,000 Gg CO2 eq compared to 2015 level. This target is significant in itself but should also be seen in the context of PNG's projected business as usual scenario for the forest sector which would result in significant increases in levels of emissions (see Figure 1) As such PNG is working to deliver a significant change is the emission trend within the sector.
Solomon Islands Intended Nationally Determined Contribution 2015	Land sector accounting approach Appropriate methodologies drawn from international best practice to quantify sequestration from above 400m contour and forest plantations.
Tonga Second Nationally Determined Contribution 2020	targets for reducing greenhouse gas emissions AFOLU: non-emission targets of establishing a forest inventory as prerequisite to identify a GHG emission target for the 2025 NDC and planting one million trees by 2023,
Tuvalu Intended Nationally Determined Contribution 2015	Coverage/Sectors: Agriculture

Vanuatu First Nationally Determined Contribution (NDC) (Updated Submission 2020)	**AFOLU** Forestry - The forestry sector in Vanuatu is a net carbon sink. - Sustainable logging practices are being practiced in Vanuatu for commercial logging. - Vanuatu is committed to maintaining its forest cover in the country and is expected to remain net carbon negative in future as well. The REDD+ programme is currently being implemented in Vanuatu to improve sustainable forest management practices. No specific NDC actions identified for forestry sub-sector as the measures to reduce deforestation and promote good land care to accepted mitigation practices are still under development under the REDD+ initiative. Based on the results and outcome from the REDD+ initiative, potential mitigation interventions shall be included in future NDC update. Livestock - By 2030, Training and capacity building for livestock farming and pasture management - By 2030, Converting Pastures to Silvopastural Livestock Systems - By 2030, International Collaboration to Improve Livestock Efficiency It is to be noted that, actual GHG mitigation potentials of the above measures are not estimated due to lack of availability of data and defined methodology; however, the cumulative impact of these measure will result in higher than the estimate GHG emissions reductions.