



PROMOTE AGRICULTURAL VALUE CHAINS TO STRENGTHEN LOCAL FOOD SYSTEMS (IMPACTED BY COVID-19)

August 2024

SDGs:



Country:

Cook Islands

Project Code:

TCP/CKI/3802

FAO Contribution:

USD 400 000

Duration:

1 July 2021–31 December 2023

Contact Info:

FAO Representation in Cook Islands
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Implementing Partners

Ministry of Agriculture (MoA), Ministry of Health (MoH),
Ministry of Education (MoE).

Beneficiaries

MoA officials; selected farmers, households, school staff
and students in Rarotonga, Aitutaki, Mangaia and
Mauke; women and youth, food processors, vendors
and suppliers.

Country Programming Framework (CPF) Outputs

CPF 2018-2022

Output 2: Sustainable and climate smart practices
promoted to help build resilient agriculture, fisheries
and forestry production.

Output 3: Food control and business practices identified
and promoted to facilitate efficient agri food value chains
which provide safe, nutritious and affordable food.



BACKGROUND

Domestic food production in the Cook Islands has sharply
declined over the past decades, leading to increased
dependence on imported foodstuffs, with imports rising
from NZD 10.3 million in 1986 to NZD 30 million in 2012.
This has created a high vulnerability in food security. The
per capita consumption of imported food in 2012 was
valued at over NZD 2 000 per resident.

The decline in local food production, rising trade
imbalance and increase in non-communicable
diseases (NCDs) necessitated urgent policies and
interventions to develop nutrition-sensitive crop value
chains, improve local food production and consumption,
and link agriculture to tourism, promote local agricultural
products for consumption and export.

The economic impacts of COVID-19, although the virus
had not reached the Cook Islands, were significant due
to declines in tourism, which was a major market for
local produce. This was likely to result in a recession
and disruption in food supply chains, impacting
household incomes and food purchasing power,
especially in urban areas reliant on imported foods.

Pre-COVID, the Cook Islands already had high rates
of NCDs, with 55 percent of adults and 30 percent
of children obese in 2016, and over a quarter of the
population suffering from diabetes. The pandemic
heightened the need for increased domestic food
production and access to nutritious food.

Vulnerable populations were to face greater challenges as
COVID-19 continued, requiring inclusive decision-making
and coordinated efforts to protect food security.
Agriculture, which accounts for 40 percent of water usage
in Rarotonga, had to improve water management in
response to climate change and infrastructure
developments.

The Government of the Cook Islands requested the Food
and Agriculture Organization of the United Nations (FAO)
for technical assistance to support local food systems
impacted by COVID 19. The project was designed to
(i) promote healthy crop value chains through improved
production, irrigation and postharvest management;
(ii) promote Integrated Pest Management (IPM) and
safe pesticide management; (iii) support the
implementation of the “SMART AgriTech” scheme;
(iv) enhance value-addition and food shelf life to meet
market demands; (v) promote healthy food consumption
through community awareness campaigns, including
in schools.

IMPACT

The anticipated impact of the project in the Cook Islands
was focused on significantly enhancing food security,
nutrition and community livelihoods. Through the
implementation of effective and sustainable pest
management controls and IPM approaches, the project
aimed to mitigate the impact of pests on agricultural
yields. Additionally, organic alternatives and safer
practices for pesticide use, thereby reducing reliance
on highly hazardous chemicals, were promoted. By
fostering these sustainable agricultural practices, the
project not only aimed to improve food safety and crop
productivity but also to enhance the resilience of local
communities against environmental and economic
challenges. This holistic approach contributed to creating
lasting benefits that support the overall well being
and sustainability of the Cook Islands' agricultural sector.



ACHIEVEMENT OF RESULTS

The project achieved significant outcomes across its key outputs. Under Output 1, agricultural value chain stakeholders across Aitutaki, Mauke, Rarotonga and Mangaia Islands received comprehensive training between October 2022 and September 2023. A total of 18 agriculture officials and 120 participants, including men, women, youth and secondary school agriculture students were equipped with essential skills in plant propagation, sustainable soil management and farm management. This training aimed to enhance agricultural practices and promote sustainable food production throughout the Cook Islands. Output 2 focused on training 28 farmers, food processors and government officials in proper food handling, safety measures, food processing and value addition techniques. Notably, 12 women and school students were also trained in food preservation and processing methods such as pickling, blanching, deep frying and making cordial drinks, chutney and jam. Technical support was extended to hydroponic and 'Smart Scheme' farmers on effective pest management strategies and ecologically safer alternatives. Despite achievements under Output 3, which saw the establishment of school gardening and healthy eating programmes in six primary and five secondary schools across Rarotonga, Aitutaki and Mauke, challenges related to human resources hindered the full implementation of activities aimed at strengthening healthy diets through school garden programmes in these schools and selected communities.

IMPLEMENTATION OF WORK PLAN AND BUDGET

Despite encountering delays in the implementation of certain activities, the project successfully delivered most of its intended outputs. To accommodate these delays, a no-cost extension until 31 December 2023 was requested and approved, ensuring all planned activities could be effectively carried out. The delays stemmed from various factors throughout the project duration, including administrative processes and challenges in personnel recruitment, as well as limited absorption capacity within the country. However, the overall budget allocation proved adequate for the successful implementation of the project's objectives. Moving forward, efforts are focused on mitigating these challenges to maintain momentum and achieve sustained impact in enhancing agricultural practices and promoting food security in the Cook Islands.



FOLLOW-UP FOR GOVERNMENT ATTENTION

The government, through the MoA, MoH, MoE and Outer Islands governance, will continue to manage and up-scale the activities of the project for long-term economic and food and nutrition benefits. Planting material of the high quality pineapple varieties will be distributed to selected commercial farmers on the project islands during the first quarter of 2025. The up-scaling of this third most important crop in the country will ensure increased supply of high quality fresh fruits to the local and visitor markets. Other species and varieties of fruit crops including citrus, passionfruit and mango will also be distributed to other project islands to enhance their production. The MoA, in close collaboration with the MoE and MoH, will continue to support and promote school gardening programmes through the provision of technical advice, supply of open pollinated seeds and the planting of selected fruit trees such as the 'sweet tamarind and custard apple' on school boundaries for their health and nutritional benefits.

SUSTAINABILITY

1. Capacity development

In the Cook Islands, the finalization of legal frameworks for national legislations on pesticides marks a significant step towards sustainability. The involvement of three key ministries (Health, Education and Agriculture) in incorporating project activities and recommendations into their fiscal year plans underscores a commitment to long term sustainability. This collaboration not only strengthens the foundation for ongoing work but also engages non-governmental organizations (NGOs) to sustain the project's outcomes. Looking forward, the MoA is poised to continue supporting these initiatives even after the project's funded component concludes, ensuring that capacity-building efforts persist and contribute to lasting improvements in pesticide management and agricultural practices across the islands. The project also encouraged the farmers to treat their activity as a small business enterprise. This has the potential to enhance the adoption of new practices and ensure sustainability of the project impact.

2. Gender equality

Gender sustainability in agricultural projects involves ensuring that both women and men are recognized as equal and essential beneficiaries. The project was designed to enhance suitable food production systems, focusing on cultivating healthy crops and implementing ecological-based alternatives to highly hazardous pesticides. This approach aimed to improve food safety and security within sustainable agricultural practices, benefiting both genders equally. By addressing gender disparities and promoting inclusive participation, the project strived to empower women and men alike in agricultural decision-making processes and economic opportunities. Ensuring gender equality in agricultural sustainability not only fosters social justice but also enhances overall community resilience and development.

3. Environmental sustainability

Promoting environmental sustainability entails adopting ecological approaches to pest management as viable alternatives to highly hazardous pesticides. By prioritizing these methods, the project to minimize the ecological footprint of agricultural practices while safeguarding biodiversity and natural resources. Embracing ecological pest management strategies not only reduces the environmental impact of farming but also contributes to long term sustainability by preserving soil health, water quality and overall ecosystem resilience.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

A HRBA to sustainability in food security is grounded in the recognition that access to safe, healthy and sufficient food is a fundamental human right. This approach centres on individuals and communities, affirming their entitlement to dignity, health and adequate nutrition. By prioritizing food as a basic human right, governments and organizations are obligated to develop policies and interventions that ensure fair and inclusive access to nutritious food, especially for marginalized and vulnerable groups. This holistic approach not only addresses immediate nutritional needs but also strives to build robust, equitable food systems that respect human rights and promote enduring socio-economic stability.



5. Technological sustainability

Technological sustainability focuses on enhancing food production throughout the value chain and educating farmers on the efficient application of technology. By building the technical capacity of national authorities and stakeholders, the project aimed to empower them to actively participate in implementing these initiatives. The successful adoption of project-introduced knowledge is crucial for countries to transition fully to sustainable intensification in food production. This approach not only enhanced agricultural productivity but also fostered long-term sustainability by equipping local stakeholders with the tools and knowledge needed to manage resources efficiently and adapt to changing environmental conditions.

6. Economic sustainability

Economic sustainability of various commodity value chains in the Cook Islands is closely tied to two broad avenues, namely the government's commitment to allocate budget resources to support such activities and the inherent commercial viability of the enterprises through profitable activities. Therefore, a twin approach is being advocated where the government and donor support acts as a catalyst to foster commercially viable subsequent growth. This commitment is crucial given that there is currently no pledge for additional financial resources from other sources. By prioritizing funding for local initiatives, the government ensures that products and services are sourced from national institutions and local suppliers, promoting self-reliance and stimulating the local economy.



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Enhanced food security, nutrition and livelihoods of communities in the Cook Islands		
Outcome	Sustainable and nutrition-sensitive crops value chains and diets enhanced in the communities		
	Indicator	Nutrition sensitive crops value chains promoted by project end.	
	Baseline	0	
	End Target	At least five to ten nutrition sensitive crops value chains promoted by project end.	
Comments and follow-up action to be taken	The following nutrition sensitive crops value chains were promoted: citrus, avocado, mango, dragon fruit, papaya, passionfruit and pineapple.		
Output 1			
Strengthened capacities of crops value chains' actors on sustainable agriculture production and protection systems			
	Indicators	Target	Achieved
	Agriculture food value chains actors trained on sustainable agriculture production and protection systems.	At least ten agriculture officials and 100 farmers trained on climate, resilient sustainable agriculture and food production systems in Rarotonga, Mangaia, Aitutaki and Mauke.	Yes
Baseline	0		
Comments	<p>Agricultural value chain stakeholders underwent training in sustainable agriculture production and protection systems. Between October and November 2022, a total of 18 agriculture officials and 120 farmers, comprising men, women, youth and secondary school agriculture students, were trained across the four project islands. Training sessions were conducted as follows:</p> <ul style="list-style-type: none"> - Aitutaki Island (24–27 October 2022): 30 participants were trained, including ten women, 27 men and three agriculture officials; - Mauke Island (8–10 November 2022): 40 participants participated, including 17 women, 19 men and four agriculture officials; - Rarotonga Island (15–17 November 2022): 18 participants were trained, including two women, 13 men and three agriculture officials; - Mangaia Island (22–24 November 2022): 50 participants received training, including five women, 26 men, eight agriculture officials, and 11 secondary school agriculture students (six male and five female). <p>These training sessions focused on plant propagation, sustainable soil management and farm management, equipping participants with essential skills to enhance agricultural practices and ensure sustainable food production in the Cook Islands.</p>		
Activity 1.1	Identify crops, beneficiaries, and sites for the demo gardens establishment (stakeholders consultation workshop)		
	Achieved	Yes	
	Comments	<p>The project utilized the demonstration plots on Rarotonga, Aitutaki and Mauke for the conservation and regeneration of planting materials for fruit crops for further commercial planting. These fruit crops include important commercial and also rare cultivars of:</p> <ul style="list-style-type: none"> - Citrus – Mandarin (Afourer Delite, Beauty, Emperor, Encore, Satsuma, Scarlet): Orange (Caracara blood orange, Late Valencia, Harwood late, Navelina, Rarotonga Seedless, Washington Navel); Grapefruit (Golden special, Poorman); Tangerine; Hybrids (Miniola Tangelo, Ortanique); - Avocado – Introduced and Local cultivars Local – Ex. Napa, Ex. Ken Kingsbury, Ex. Roriki, Introduced – Hass, Fuerte, Reed, Sheppard; - Mango – Introduced (Israel, R2E2, Bowen/Kensington Pride, King Thai, Nam Dok Mai), Local selections – Mission, Oka, Tinito; - Dragonfruit – Red and White flesh; - Passionfruit – Panama Red and Yellow; - Papaya – Waimanalo and Sunrise solo; - Pineapple – four premium varieties introduced from France. 	

Activity 1.2	Establish six (6) demonstration sites (for training purposes) in the selected islands	
	Achieved	Partially
	Comments	One demonstration plot was established in Rarotonga and another in Aitutaki, while the project supported the government fruit tree genebank in Mauke by introducing new varieties of avocado, citrus, and mango. Long-term land and labour insecurity affected plans to set up two plots on each of the project islands for demonstration and maintenance purposes.
Activity 1.3	Train producers, agriculture officials, and cooperatives/groups on climate resilient and sustainable production practices on the selected crops value chains	
	Achieved	Yes
	Comments	A total of 18 Agriculture officials and 120 farmers (men, women, youth and secondary school agriculture students) were trained on the four project islands between October and November 2022. Participants received trainings in aspects of proper fruit tree propagation methods, rootstock selection and management, nurturing propagated seedlings, field planting and spacing, nutrition and pest management, good pruning techniques and proper use of artificial hormones for better fruiting and yields.
Activity 1.4	Train producers, agriculture officials, and cooperatives/groups on crops pests and diseases management, pesticides management and IPM	
	Achieved	Yes
	Comments	<p>A total of 21 Agriculture officials and 139 farmers (men, women, youth and secondary school agriculture students) were trained on the four project islands between March and June 2023 on IPM of fruit, vegetable and root crops.</p> <ul style="list-style-type: none"> - Mauke Island (28–30 March 2023): 33 participants trained including 15 women, 15 men and three agriculture officials; - Rarotonga Island (4–6 April 2023): 40 participants trained including 11 women, 21 men and eight agriculture officials; - Aitutaki Island (11–13 April 2023): 32 participants trained including five women, 25 men and two agriculture officials; - Mangaia Island (30 May–1 June 2023): 34 participants trained including five women, 15 men, eight agriculture officials and 11 secondary school agriculture students (four male and two female). <p>The training aimed at enhancing the capacity of agriculture officials and farmers on the different pesticide types, crops registered for use, pests controlled, application methods, safer alternatives to highly hazardous pesticides and the withholding period during which time after spraying when the crop can be harvested for human consumption. It emphasized also the importance of an IPM approach, taking prior consideration of methods other than the use of pesticides, including quarantine, physical or mechanical, cultural and biological. Farmers were encouraged to use or promote the use of such an approach and that pesticides should only be used when all other do not work at managing the pest.</p>
Activity 1.5	Train agriculture officials and farmers on irrigation systems	
	Achieved	Yes
	Comments	<p>Training for agriculture officials and farmers on were conducted as part of the workshop on sustainable agriculture production and protection systems held on the project islands of Rarotonga, Aitutaki, Mangaia and Mauke. Drip irrigation systems is widely used by commercial vegetable and dryland taro farmers on the islands of Rarotonga and Aitutaki where the drip system is attached directly to the main water reticulation system. On the islands of Mangaia and Mauke, due to poor water pressure, farmers generally use bucket irrigation to irrigate vegetable crops while taro is cultivated in natural swamplands where the soil generally remains moist.</p> <p>During the workshop, farmers were taught how to set up the drip irrigation system to a water tank. The tank could either be set up at height of between 1.5 and two meters where water would flow by gravity means to irrigate the crop or the tank could be set up on level ground and a small two HP petrol pump is used to reticulate the water.</p>

Output 2	Strengthened capacities of crops value chains' actors on value addition and agribusiness management		
	Indicators	Target	Achieved
	Number of agriculture food value chains actors trained on value addition/processing and agribusiness management.	At least ten agriculture officials and 100 farmers and food processors in Rarotonga, Mangaia, Atiutaki and Mauke trained on value addition/processing and agribusiness management.	Yes
Baseline	Farmers, food processors, restaurant workers, agriculture and health officials trained in food safety and handling, food, food safety regulations, food processing and preservation and agribusiness		
Comments	Twenty-eight farmers, food processors and government officials were trained in proper food handling and safety measures, food processing and value addition. Twelve women and school students were trained in food preservation and food processing techniques (pickling, blanching, deep frying, making of cordial drinks, chutney and jam making). Additionally, technical information was provided to hydroponic and 'Smart Scheme' farmers on pest management strategies and use of ecologically safer alternatives to pest management.		
Activity 2.1	Refurbish and prepare one food processing facility in MOA for training		
	Achieved	Partially	
	Comments	The food processing trainings were conducted at the MoE Trade Training Centre as the food processing facility in MoA had inadequate space to accommodate all the participants and lacked suitable equipment for the training. The MoA continued to upgrade the facility so it could be accredited for use as a food processing facility by interested individuals or groups. The facility will assist with the procurement of food processing items such as jars, lids and labels for sale to food processors.	
Activity 2.2	Provide training on value addition/food processing		
	Achieved	Yes	
	Comments	Eight days of theoretical and practical training were conducted in Rarotonga on "Food Handling and Safety, Agro-Processing and Value Addition" between 17 and 21 April 2023. The training workshop was attended by farmers, food handlers, agro-food processors, high school students and representatives from the ministries of health and agriculture (12 participants, eight males and four females). Topics covered included risk-based food inspection, vegetable preservation (blanching and freezing), food safety: food safety issues for preserved foods and value-added products (produce quality, preservation techniques, packaging), the importance of food preservation and food preservation, methods (drying and pickling), effect of food processing and preservation on food nutrient quality, canning, pickling, packaging and labelling requirements. Participants undertook practical training in the canning and pickling of vegetables, as well preparation of jams using local fruits. They also learned the importance of food safety and the role of food preservation in value-addition and processed the following fruits and leafy vegetables (taro leaves, stringed beans, cucumber, eggplant, mango, guava, banana and starfruit) by methods of pickling, blanching, freezing, canning, chutney, chips and jam making.	
Activity 2.3	Provide training on agrobusiness and farm management		
	Achieved	Yes	
	Comments	Agrobusiness and farm management trainings were incorporated as part of the activities under Activity 1.3 and 1.4.	
Activity 2.4	Provide training on food safety and postharvest management		
	Achieved	Yes	
	Comments	A two-day national workshop on post-harvest handling and food safety was held on Rarotonga Island from 30 November to 1 December 2022. The workshop brought together 16 participants, including farmers, food processors, restaurant owners and representatives from the Ministries of Health and Agriculture, comprising ten men and six women, with three officials from the MoA and two from the MoH. The topics covered during the training period were instrumental in advancing the project's goal of enhancing sustainable and nutrition-sensitive crop value chains and promoting healthier diets within communities. Participants discussed health regulations and food safety requirements specific to the Cook Islands, as well as explored opportunities in agro-tourism and establishing market linkages between farmers and food tourists. The workshop aimed to enhance understanding of personal hygiene in safe food handling and underscored the importance of a nutritious and balanced diet for maintaining good health.	

Activity 2.5	Promote agro tourism “food tourism”		
	Achieved	Yes	
	Comments	This activity was part of the training under Activity 2.4.	
Activity 2.6	Provide technical support to assist Government of Cook Islands in the implementation of “SMART AgriTech” scheme		
	Achieved	Yes	
	Comments	The project assisted farmers of the government SMART AgriTech scheme through the provision of technical advice in pest management, nutrition management, trellis system set up and sourcing of suitable high-yielding varieties. The project supported farmers on Rarotonga and Aitutaki that received funding as part of the scheme. The project promoted the use of organic and safer alternatives to pest management and foliar fertilizers under the scheme. Such options not only are cheaper for the farmers, but support the production of good quality, safer and healthier produce.	
Output 3	Capacities of selected communities strengthened to adopt healthy diets		
	Indicators	Target	Achieved
	Households trained on the production, preparation and consumption of healthy and nutritious food.	At least 250 households (including women and youth) and school staff and students trained on the production, preparation and consumption of healthy and nutritious food by project end.	Partially
Baseline	Ready to plant seedlings of selected vegetable crops were provided to primary and secondary school students to their gardening and healthy eating programmes		
Comments	Six primary and five secondary schools on Rarotonga, Aitutaki and Mauke established their school gardening and healthy eating programmes. However, Human Resources related challenges caused set-backs in the implementation of activities related to strengthening healthy diets in the schools through school garden programmes and in selected communities.		
Activity 3.1	Promote school garden schemes and raise awareness on healthy and sustainable diets in selected schools		
	Achieved	Partially	
	Comments	Ready-to-plant seedlings of selected vegetables were provided to six primary and five secondary schools on Rarotonga, Aitutaki and Mauke to promote the planting and consumption of healthy food products through the school gardening programmes. The MoA will continue to assist with the school gardening programme at the end of project cycle and will embark on a community gardening programme in collaboration with a women NGO for the promotion of healthy lifestyle through gardening and healthy eating.	
Activity 3.2	Raise awareness on the preparation and consumption of safe and nutritious foods in schools and communities		
	Achieved	Partially	
	Comments	The MoA will continue to assist with the school gardening programme at the end of project cycle and will embark on a community gardening programme in collaboration with a women NGO for the promotion of healthy lifestyle through gardening and healthy eating following the resignation of the Nutrition consultant.	

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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