

**SUMMARY REPORT ON THE LIFESTYLE CHANGES AND
CLIMATE RESILIENCE PROJECT IN THE REPUBLIC OF THE
MARSHALL ISLANDS**

EXECUTIVE SUMMARY

The GCCA+ SUPA project is about scaling up climate change adaptation measures in specific sectors supported by knowledge management and capacity building. The 4.5-year project (2019 – 2023) is funded with EUR14.89 million from the European Union (EU) and implemented by the Pacific Community (SPC) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the University of the South Pacific (USP) in collaboration with the governments and peoples of Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu.

The overall objective is to enhance climate change adaptation and resilience within ten Pacific Island countries. The specific objective is to strengthen the implementation of sector-based, but integrated, climate change and disaster risk management strategies and plans.

The GCCA+ SUPA Lifestyle Changes and Climate Resilience in RMI (LCCR) project is an upscaling of the Community Lifestyle Program (CLP) which was piloted on Majuro Atoll starting in 2015 by the Ministry of Health and Human Services (MOHHS) and Canvasback Missions Inc. The CLP aimed to establish health workers in multiple areas on Majuro atoll to check blood sugar and blood pressure especially for diabetic patients during weekend screenings in their villages. The GCCA+SUPA project offered the opportunity to upgrade and expand the CLP to the outer islands and improve health care on Jaluit atoll and Majuro Atoll. This project added cooking classes, agriculture classes and home gardens to the health program, thus making the program more holistic in its approach and more sustainable in the long term as climate change continues to adversely impact the lifestyles of the people living in RMI.

Under the GCCA+ SUPA project the CLP approach was expanded to the outer atoll of Jaluit and the Delap-Uliga-Darrit (DUD) corridor communities in Majuro and included a particular focus on sustainable agriculture in collaboration with the Ministry of Natural Resources and Commerce through their network of agricultural extension agents and the Taiwan Technical Mission. Majuro atoll is an urban environment while Jaluit atoll is a rural environment.

The overall objective of the LCCR was to enhance sustainable health and food security to adapt to climate change in RMI and the specific objective was to Strengthen community health, lifestyles and atoll agriculture in selected atolls.

In 2019 SPC contracted the Canvasback Wellness Center to conduct the LCCR project from 1 January 2020 to 31 December 2022. Other partners included MOHHS, MNRC, Taiwan Technical Mission, Marshall Islands Organic Farmers Association, the Marshall Islands Epidemiology Initiatives, Mayors Association.

This report presents the main outputs of the LCCR project. These are summarised as follows:

Agricultural assessments in Jaluit and Majuro atolls: At the beginning of 2020 agricultural assessments were conducted in three communities in Jaluit atoll: Jabor, Jaluit, and Imejj. The agricultural assessments included the types of crops grown, the numbers of livestock mainly pigs and chickens, and the number of households and their size. The communities of Jaluit and Jabor were identified as the main sites for agriculture. In Majuro 280 households were surveyed in the DUD corridor and the data were analysed to determine to determine which household was most likely to care for a home garden system.

Home gardens: In Jaluit 54 home gardens with raised beds were established and in Majuro 93 home gardens with raised beds were established. Raised beds were positioned about 1m above the ground to protect them from saltwater flooding and damage by livestock. They were built with wicking systems which provide for efficient watering relying on the suction that plant roots create in drawing water from the soil. The 93 households selected to receive the raised beds in Majuro were mainly the houses of patients with diabetes and hypertension. This vulnerable group was selected to help support and promote healthier lifestyles and healthy meals. The most successful plants were eggplant, cucumber, tomatoes, cabbages, okra. Householders were also provided with tools including wheelbarrows, rakes, shovels and gloves to help maintain their home gardens.

Agricultural training: A total of 21 home gardening training events were conducted in Majuro and Jaluit atolls between 2020 and 2022 covering practices such as placement of gardens, home gardening, planting, soil replenishment, harvesting and pest control. Two hundred and thirty-five people were involved in these training events (143 females and 92 men). Training in the pruning of overgrown breadfruit and pandanus trees was done in Jaluit, and the communities were provided with the necessary equipment.

Community garden and greenhouse in Jaluit: The community garden was established in 2021 and the community greenhouse was constructed in 2022 and men, women and youth were trained in the selection of seeds, planting and care of seedlings, and the transplanting and propagation of plants.

Training of health workers and health screening: 18 health workers were trained between 2020 – 2022 (females = 15, males = 3). The health workers use tablets or cell phones to record and chart patients' records. With the help of the Marshall Islands Epidemiology Initiatives, a database was developed using Kobocollect to record blood pressure, blood sugar and BMI status. This database system is integrated with the hospital system which tracks all NCD clinic patients. Over the 3-year LCCR project, 3,187 patients were screened (females = 1,932, males = 1,255).

Health screening and other equipment: Equipment for health screening - tablets, glucometers, test kits and medical supplies was provided to the communities in Majuro and Jaluit atolls as well as exercise equipment.

Nutrition education training and cooking classes: Thirteen training events on nutrition, food safety and the preparation and cooking of the locally grown vegetables were completed, attended by 469 persons (females = 270, males = 199).

Exercise groups: Fifteen groups participating in different forms of exercise were established: 8 walking clubs were established, and exercised daily, bi-weekly or weekly (females = 270, males = 55); regular volleyball, basketball and table tennis exercise activities were attended regularly by both men and women (female = 115, male = 124); 10 specific exercise events and tournaments involving 943 persons (females = 352, males = 591) were held for volleyball, basketball and tennis. Youth at the Jaluit High School were especially involved in the volleyball tournament in 2021.

Radio shows: 15 radio shows were broadcast between 2021 and 2022, including formal broadcasts on healthy lifestyles and call-in shows on the negative impacts of climate change.

Continuation of the LCCR: The LCCR has the support of the national and local government and the staff hired will remain on either the payroll of the Canvasback Wellness Center or on the payroll of the local government. Staff at the Canvasback Wellness Centre have been trained by MNRC to

maintain the agricultural activities and a gardener has been hired to do daily checkups on the gardens on Majuro, and local staff have been hired in Jaluit to look after the greenhouse and community gardens.

Recognising that behavioural and lifestyle changes may require generations to take effect, the LCCR has achieved significant progress in its 3-years of operation.

An external evaluation of the LCCR program was conducted in 2023. The executive summary from this evaluation is presented in Annex 8 of this report. The evaluation notes that continuation of the LCCR most likely lies in leveraging with other projects and plans. Specifically:

- A proposal to expand the LCCR to other atolls has been prepared and submitted to the Pacific – America Fund, supported by USAID following requests from other mayors.
- The outer islands of Wotje, Ebon and Likiep are now targeted by CWC to start similar work there. Conversations with the local governments have taken place and teams will soon be sent out to do data collection and speak with the communities to start the process.
- On Majuro, many people are making direct requests to CWC for a continuation of the home gardening classes and help for people to build their own gardens.
- Majuro Hospital is sending out health workers door to door in conjunction with the NCD clinic and upgrading their referral processes. CWC are upgrading their database system to better identify focus areas and are hiring two more health workers for Majuro.
- The prediabetes, diabetes and hypertension prevention classes have funds to go to smaller islands within Jaluit atoll and expand to Wotje and Ebon atolls. CWC will conduct zoom classes now until the Master Coach can train new lifestyle coaches on each atoll.

1. INTRODUCTION AND BACKGROUND

1.1 About the GCCA+ SUPA project

Climate change and natural disasters are among the greatest challenges jeopardising and undermining the ability of all countries, in particular Pacific countries, to achieve the sustainable development goals and reduce poverty. The Global Climate Change Alliance Plus – Scaling Up Pacific Adaptation (GCCA+ SUPA) project falls under the GCCA+ flagship initiative, which has three priorities: (i) mainstreaming climate change issues into poverty reduction and development efforts; (ii) increasing resilience to climate related stresses and shocks; and (iii) Supporting the formulation and implementation of concrete and integrated sector-based climate change adaptation and mitigation strategies.

The GCCA+ SUPA project is about scaling up climate change adaptation measures in specific sectors supported by knowledge management and capacity building. The 4.5-year project (2019 – 2023) is funded with EUR14.89 million from the European Union (EU) and implemented by the Pacific Community (SPC) in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP) and the University of the South Pacific (USP) in collaboration with the governments and peoples of Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu.

The overall objective is to enhance climate change adaptation and resilience within ten Pacific Island countries. The specific objective is to strengthen the implementation of sector-based, but integrated, climate change and disaster risk management strategies and plans.

The three key outputs for the GCCA+ SUPA project are:

1. Strengthen strategic planning at national levels;
2. Enhance the capacity of sub-national government stakeholders to build resilient communities; and
3. Scale up resilient development measures in specific sectors.

The activities will adopt a people centred¹ approach throughout and will take into account lessons learnt and wise practices from the regional, national, sub-national and community-based projects and programmes implemented over the last decade.

1.2 GCCA+ SUPA project in the Republic of the Marshall Islands

RMI is a small country of 29 atolls and 5 coral islands comprised of about 180 square kilometres in land area spread over an expanse of ocean in the North Pacific of more than 4,600 square kilometres and with an economic zone of around 2 million square kilometres. RMI consist of a total of around 1225 low lying islands, with very few places higher than three metres above sea level.

¹ SPC has adopted a people-centred approach which incorporates human rights, gender equality, social inclusion, environmental sustainability and culture. It places people at the centre of planning, implementation, decisions, monitoring and reporting

Almost 70% of the population of around 55,243 (2016 estimate RMI ESSPO based on 2011 Census and 2016 SPC estimates) are concentrated in urban centres on Kwajalein (Ebeye) and Majuro atolls. People have been migrating from the outer atolls to the urban centres of Majuro and Ebeye in search of income and education opportunities and for medical needs. The subsistence economy still plays an important part in people's livelihoods, especially outside urban areas. In terms of income-generating activities, copra, coconut oil and fish (particularly yellowfin tuna) are the main sources of revenue. In terms of formal employment, nearly half of the salaried workforce is employed in the public sector. Unemployment rates are high, especially among women. This narrow range of employment and income streams makes RMI economically vulnerable to changes in the country's physical environment, including those related to climate change.

At the start of the project in 2019 countries were asked to select their sector focus and a particular activity that they wished to scale up.

In March 2019, the Chief Secretary invited heads of government departments to express their interest in the GCCA+ SUPA project and submit proposals. The proposal from the Ministry of Health and Human Services (MOHHS) was selected.

Following further consultations in 2019 a project design document for the Lifestyle Changes and Climate Resilience (LCCR) in the Marshall Islands was finalised.

The RMI's National Climate Change and Health Action Plan of August 2012, identified several climate-sensitive health risks that will be addressed by this proposed expansion project. These include 1) malnutrition due to crop failures related to inundation and 2) obesity, circulatory disease, diabetes and related NCDs due to altered dietary patterns and dependence of processed foods and altered physical activity levels.

The GCCA+ SUPA Lifestyle Changes and Climate Resilience in RMI (LCCR) project is an upscaling of the Community Lifestyle Program (CLP) which was piloted on Majuro Atoll starting in 2015 by MOHHS and Canvasback Missions Inc. The CLP aimed to establish health workers in multiple areas on Majuro atoll to check blood sugar and blood pressure especially for diabetic patients during weekend screenings in their villages. The GCCA+SUPA project offered the opportunity to upgrade and expand the CLP to the outer islands and improve health care on Jaluit atoll and Majuro Atoll. This program added cooking classes, agriculture classes and home gardens to the health program, thus making the program more holistic in its approach and more sustainable long term as climate change continues to adversely impact the lifestyles of the people living in RMI.

Under the GCCA+ SUPA project the CLP approach will be expanded to the outer atoll of Jaluit and the Delap-Uliga-Darrit (DUD) corridor communities in Majuro and will include a particular focus on sustainable agriculture in collaboration with the Ministry of Natural Resources and Commerce through their network of agricultural extension agents and the Taiwan Technical Mission. Majuro atoll is an urban environment while Jaluit atoll is a rural environment.

The overall objective of the LCCR was to enhance sustainable health and food security to adapt to climate change in RMI and the specific objective was to Strengthen community health, lifestyles and atoll agriculture in selected atolls.



(To add an arrow with regular health checks)

In December 2019, a 3-year service contract was signed between SPC and Canvasback Wellness Centre to “Enhance community health, lifestyles and atoll agriculture in Majuro and one outer atoll, RMI”.

This overall summary report defines, describes, and analyzes the achievements, highlights the challenges and the lessons learnt from the project over the three-year period.

2. ENHANCE COMMUNITY AND HOUSEHOLD-BASED ATOLL AGRICULTURE IN SELECTED ATOLLS

2.1 Introduction

In 2020 agricultural assessments and action plans for atoll agriculture were prepared for selected communities in Majuro atoll and Jaluit atoll. The Canvasback Wellness Center partnered with the Ministry of Natural Resources and Commerce (MNRC) especially their agricultural extension agents, the Marshall Islands Organic Farmers Association (MIOFA) and the Taiwan Technical Mission.

During 2021 and 2022, raised beds and community gardens were established, extensive training was provided in growing different types of crops including tree crops, and small tools were provided to participating households in Majuro and Jaluit atolls. A community garden was established in Jaluit atoll and a nursery was constructed in Jaluit atoll.

2.2 Agricultural assessments

In late February 2020, an agricultural assessment was conducted in three communities in Jaluit atoll; Jabor, Jaluit, and Imej. The agricultural assessments included the types of crops grown, the numbers of livestock mainly pigs and chickens, and the number of households and their size.

One hundred surveys of agriculture were conducted and following data analysis, the communities of Jaluit and Jabor were identified as the main sites for agriculture. (Imej was not included because of the presence of unexploded ordinance left over from World War 2). During a follow-up visit the MNRC extension agent was trained in the construction and use of raised beds.

From March to May 2020 a team of ten agriculture agents were sent out house to house on Majuro atoll. They targeted the DUD corridor on the atoll. The survey questions were based on a standardized survey from Australia combined with other atoll specific survey questions from the MNRC survey on households. In total, 280 houses were surveyed, analysed and scored to determine which household was most likely to care for a home garden system.

2.3 Home gardens and raised beds

In Jaluit 54 home gardens with raised beds were established and in Majuro 93 home gardens with raised beds were established. Raised beds are positioned about 1m above the ground to protect them from saltwater flooding and damage by livestock. They are also built with wicking systems which provide for efficient watering relying on the suction that plant roots create in drawing water from the soil.

The 93 households selected to receive the raised beds in Majuro were mainly the houses of patients with diabetes and hypertension. This vulnerable group was selected to help support and promote healthier lifestyles and healthy meals.

Annex 1 presents the details relating to each home garden, including location, name of householder, date the home garden was started, crops planted and the most successful crops. (For Annex 1 – see [Excel spreadsheet entitled “All activities data” /Sheet 1 “Individual home gardens”](#))

The different vegetables planted included cabbages, eggplant, beans, cucumber, corn, raddish, pak choi, tomatoes, okra, kangkong. The most successful plants were eggplant, cucumber, tomatoes, cabbages, okra.

Householders were also provided with tools including wheelbarrows, rakes, shovels and gloves to help maintain their home gardens.

2.4 Agricultural training

A total of 21 home gardening training events were conducted in Majuro and Jaluit atolls between 2020 and 2022 covering practices such as placement of gardens, home gardening, planting, soil replenishment, harvesting and pest control, see Annex 2 for a list of the trainings. Two hundred and thirty-five people were involved in these training events (143 females and 92 men).

The new gardens in Jabor were protected from salt spray with new hedges.

Training in the pruning of overgrown breadfruit and pandanus trees was done in Jaluit, and the communities were provided with 5 chainsaws and 2 weed eaters. Land was cleared for the building of the greenhouse and the community garden.

Evaluations on Majuro found that no tree pruning was needed due to the maintenance done by local government for road safety concerns.

In partnership with the Taiwan Technical Mission and MNRC, over 100 pineapple, 50 taro and 50 cassava plants together with 75 papaya trees were planted.

2.5 Establishment of a community garden and greenhouse in Jaluit

In June 2021 the Jaluit High School garden was upgraded with multiple raised beds and more land was cleared for gardening. Training was provided to the Jaluit High School garden teacher and taro, pineapple, cucumber, spinach, cassava and sweet potato was planted.

While home gardening in Jaluit Atoll was already well in progress in the beginning of 2022 with more than 30 home gardens already in place, there was no local source for seeds, seedlings or small plants to stock the home gardens or the school and community garden. This could jeopardise the continuation of the LCCR project.

To ensure that the existing activities could continue, Canvasback Wellness Center together with the MOHHS applied for additional funding from the overall GCCA+ SUPA project to establish a sustainable source of seeds, seedlings and young plants. A proposal was prepared to build a greenhouse and train men, women and youth in the selection of seeds, planting and care of seedlings, and the transplanting and propagation of plants in Jaluit Atoll.

This additional activity was completed in 2022 in partnership with the Jaluit Atoll Local & Traditional Leaders and the Ministry of Education, Sports & Training. Blueprints from Ministry of Public Works were created using the design layout provided by MNRC. Ten men from Jaluit constructed the greenhouse and took part in the training on seed selection, planting and care and propagation. Training was provided by MIOFA and this training included students from Jaluit High School.

Plans are in place to maintain the greenhouse and to start a farmers' market on Jaluit atoll with produce from the home gardens, community gardens and greenhouse.

3. FOSTER LIFESTYLE CHANGES LINKING NUTRITION AND WELLNESS IN SELECTED ATOLLS

3.1 Introduction

Before the LCCR started in 2020, the Community Lifestyle Program only had a few health workers trained and they completed very basic weekly health assessments. The focus was on patients with easy access to the Majuro General Hospital. This section of the report presents the additional scaling up of the CLP achieved through the LCCR supported by the GCCA+ SUPA project.

3.2 Training of health workers

As a result of the LCCR 18 health workers were trained between 2020 – 2022 (females = 15, males = 3), see Annex 3. While some of the health workers moved to the USA, the LCCR has been able to recruit and maintain the community health workers.

The health workers use tablets or cell phones to record and chart patients' records. With the help of the Marshall Islands Epidemiology Initiatives, a database was developed using Kobocollect that does not require internet connections so it can be easily used in remote areas of Majuro and Jaluit atolls. Screening data such as blood pressure, blood sugar and BMI status is saved via a cloud service and reports are run on a monthly basis. This has helped track patients more closely and identify problems early. This database system is integrated with the hospital system which tracks all NCD clinic patients and helps the community health workers and the health care professionals track patient progress.

Preliminary findings show that while many people have followed the program of lifestyle change, more education and more community support is needed. In Jaluit, it is still hard to get fresh produce and people are completely dependent on imported foods. The home gardens have helped by providing some fresh vegetables. A trend is emerging showing that those who exercise and eat from the gardens have better control of their blood pressure and blood sugar.

Each week the health workers visit old and new patients. Over the 3-year LCCR project, 3,187 patients were screened (females = 1,932, males = 1,255), see Annex 3. Patients are referred to the Non-Communicable Disease (NCD) clinic at the hospital when needed. The health workers also help deliver medicines and provide transport to exercise classes and gardening classes at the Canvasback Wellness Center. Small community clinics are supplied with much needed medicine through partnerships with the Outer Islands Health Care team at the Majuro Hospital.

The LCCR has facilitated reaching out to the smaller islands within Majuro atoll by road and Jaluit atoll by boat. Many people living on the small islands had trouble reaching the main hospital or clinic for care. The Canvasback Wellness Center now works with the hospital to offer Community Based Rehabilitation to these remote areas.

3.3 Health screening and other equipment

The LCCR also purchased health screening and other equipment for the communities in Majuro and Jaluit atolls. The equipment included tablets, glucometers, test kits, medical supplies and exercise equipment – volleyball and basketball equipment, walking shoes. The equipment purchased is presented in Appendix 4.

3.4 Nutrition training activities

Nutrition education training was conducted as well as food safety and training in the preparation and cooking of the locally grown vegetables was provided. Thirteen training events were completed, attended by 469 persons (females = 270, males = 199), see Annex 5.

3.5 Exercise groups

Fifteen groups participating in different forms of exercise were established during the LCCR, see Annex 6 for details.

Eight walking clubs were established, and exercised daily, bi-weekly or weekly. These were more popular with females (females = 270, males = 55).

Regular volleyball, basketball and table tennis exercise activities were attended regularly by both men and women (female = 115, male = 124).

Ten specific exercise events and tournaments involving 943 persons (females = 352, males = 591) were held for volleyball, basketball and tennis, see Annex 6. Youth at the Jaluit High School were especially involved in the volleyball tournament in 2021.

3.6 Communications

Fifteen radio shows were broadcast between 2021 and 2022.

These included formal broadcasts on healthy lifestyles and call-in shows on the negative impacts of climate change, see Annex 7 for details.

4. LESSONS LEARNT, SUSTAINABILITY AND CONCLUSION

4.1 Challenges and lessons learnt

Better communication, time management and collaboration are the three most important lessons learnt moving forward. Understanding peoples' needs and their culture is essential for helping individuals change lifestyles in the face of climate change. Table 1 lists some of the challenges and how they were addressed during the 3-year project.

Table 1 Addressing challenges in Majuro and Jaluit

CHALLENGES FACED	HOW THEY WERE ADDRESSED
Lack of management training	Utilize online training resources.
Shortage of local transportation	Collaborate with local government leaders to provide transportation. Improvise and use boats to transport supplies to other places at the neighboring islands and share freight costs.
Water issues	Seek help from neighbors to allow patients to use water from their water catchment to water the plants. Make maximum use of rainwater harvesting during the wet season.
Covid pandemic restrictions on face-to-face contact and travel.	Wait until MOHHS provided the green light to carry on with activities.
Aggressive dogs	Call in advance to have patients restrain and look after dogs before and during visits.
Miscommunication	Provide advance advice and announcements before program starts. Provide regular updates and advice on activities conducted and upcoming events. (A sincere apology to partners, patients, and local and traditional leaders for any miscommunication).
Poor internet and cellular connections	Always call in advance to inform workers.
Bad weather	Substitute with indoor activities wherever possible.
Time management	Counseling and daily reminder on the importance of time management. Where necessary, work late to cover hours missed.
Rocky road	Travel light and transport supplies in advance.

High tides	Seasonable high tides make the road to Jaluit Jaluit impassable. Plan all activities and visits around low tide.
Shortage of staff	Hire local workers with experience in agriculture work, and local youth for unloading supplies
Limited space for raised beds	Construct 2 x 3 ft raised beds for safe delivery and suitability for household space available

4.2 Sustainability

The LCCR has the support of the national and local government and the staff hired will remain on either the payroll of the Canvasback Wellness Center or on the payroll of the local government. Staff at the Canvasback Wellness Centre have been trained by MNRC to maintain the agricultural activities and a gardener has been hired to do daily checkups on the gardens on Majuro, and local staff have been hired in Jaluit to look after the greenhouse and community gardens.

A proposal has been prepared and submitted to the Pacific – America Fund, supported by USAID to expand the LCCR to other atolls following requests from other mayors.

The LCCR project successes have created leverage for future expansion and funding proposals for RMI and for CWC. Examples are:

- The outer islands of Wotje, Ebon and Likiep are now targeted by CWC to start similar work there. Conversations with the local governments have taken place and teams will soon be sent out to do data collection and speak with the communities to start the process.
- On Majuro, many people are making direct requests to CWC for a continuation of the home gardening classes and help for people to build their own gardens.
- Majuro Hospital is sending out health workers door to door in conjunction with the NCD clinic and upgrading their referral processes. CWC are upgrading their database system to better identify focus areas and are hiring two more health workers for Majuro.
- The prediabetes, diabetes and hypertension revention classes have funds to go to smaller islands within Jaluit atoll and expand to Wotje and Ebon atolls. CWC will conduct zoom classes now until the Master Coach can train new lifestyle coaches on each atoll.

4.3 Conclusion

Recognising that behavioural and lifestyle changes may require generations to take effect, the LCCR has achieved significant progress in its 3-years of operation. Continuation of the LCCR most likely lies in leveraging with other projects and plans.

Annex 1 List of individual home gardens (see Excel spreadsheet)

Annex 2 **AGRICULTURAL TRAINING in Jaluit and Majuro atolls 2020 - 2022**

Majuro training

Number of training events	Number of people trained		
	Females	Males	Total
Pest control	15	15	30
Soil Mixture	15	15	30
Garden placement	15	15	30
harvesting	15	15	30
replanting	15	15	30
Home Gardening & Planting, Soil refill	13	2	15
Pest Control & Harvesting	9	0	9
Home Gardening, Planting, Soil refill, Harvesting, Pest Control	6	5	11
Home Gardening, Planting, Soil refill, Harvesting	10	8	18
Home Gardening, Vegetables, Soil Refill, Planting, Harvesting	16	1	17
Home Gardening, Vegetables, Soil Refill, Planting, Harvesting	14	1	15

JALUIT AGRICULTURE TRAINING (2020-2023)

TRAINING EVENTS	NUMBER OF PEOPLE TRAINED		
	Females	Males	Total
Home garden raised beds	5	5	10
replanting	5	5	10
training - tree pruning	5	5	10
Home Gardening,Planting, Soil Refill, Harvesting, Pest control	1	9	10
Home Gardening, Planting, Soil refill, harvesting, Pest control	10	10	20
Replanting, soil refill, harvesting	6	14	20
Replanting, soil refill, harvesting	6	14	20
Home Gardening, Planting, Soil Refill, Harvesting	6	15	21

Replanting, harvesting, watering, soil refill,	10	11	21
Replanting, harvesting, watering, soil refill,	11	11	22

Annex 3 Health workers trained and screenings conducted

Name of Health Worker	Atoll/Island	Year Trained	Total number of males trained	Total number of females trained
Jolynn Langmoir	Majuro	2020	0	1
Clady Lauror	Majuro	2020	0	1
Mine Kaious	Jaluit – Jabor	2021	0	1
Hermy Jashua	Jaluit – Jabor	2021	0	1
Judy Balos	Majuro –tieti	2021	0	1
Rosemetha Leban	Majuro – Tur	2021	0	1
Malo Bukna	Majuro – Ionmaaj	2021	0	1
Sill Busin	Majuro – Ionmaaj	2021	0	1
Tammy Hekinos	Majuro – Tieti	2021	0	1
Samuel Jamba	Majuro – Batkan	2021	1	0
Leerok Lebon	Majuro – Light house	2021	1	0
Bearlynn Hertin	Jaluit – Imiej	2022	0	1
Todd Nathan	Jaluit – Jabor	2022	1	0
Cassiter Amram	Jaluit – Imiej	2022	0	1
Meia Hanchor	Majuro – Berrack	2022	0	1
Betty Johnson	Jaluit – Jabor	2022	0	1
Yolanda Matuato	Jaluit – Jabor	2022	0	1
Pearlynn Hertin	Majuro – Na Aiboj	2023	0	1
Joan Abon	Jaluit – Imiej	2023	0	1
Jebjin Samuel	Jaluit – Imiej	2023	0	1
Julitha Bill	Majuro – Alwal	2023	0	1

Year of Screening	Atoll/Island	Male	Female
2020	Majuro	284	537
2020	Jaluit	79	108
2021	Majuro	289	580
2021	Jaluit	177	179
2022	Majuro	310	230
2022	Jaluit	62	172
2023	Majuro	29	88
2023	Jaluit	25	38
Totals		1,255	1,932

Annex 4 health and other equipment purchased

Year Purchased	Atoll	Equipment name	Quantity Purchased
2020	Majuro	Lenovo Tablets	7
2020	Majuro	Tablet Covers	8
2020	Majuro	Test strips	20 boxes
2020	Majuro	Walking shoes	40 pairs
2020	Majuro	Volleyballs	2
2020	Majuro	Volleyball nets	1
2020	Majuro	Walking club t-shirts	103

Year Purchased	Atoll	Equipment name	Quantity Purchased
2020	Jaluit	Lenovo Tablets	1
2020	Jaluit	Glucometers	5
2020	Jaluit	Test strips	108 boxes
2020	Jaluit	Walking shoes	140 pairs
2020	Jaluit	Volleyballs	6
2020	Jaluit	Volleyball nets	6

Year Purchased	Atoll	Equipment name	Quantity Purchased
2021	Majuro	Test strips	1,500 strips
2021	Majuro	Glucometers	20 machines
2021	Majuro	Alcohol pads	4,000 pads
2021	Majuro	Lancets	2,000 devices
2021	Majuro	Walking shoes	120 pair

Year Purchased	Atoll	Equipment name	Quantity Purchased
2021	Jaluit	Lenovo Tablets	2 tablets
2021	Jaluit	Alcohol pads	4,000 pads
2021	Jaluit	Test strips	6,000 strips
2021	Jaluit	Lancets	2,000 devices
2021	Jaluit	Basketballs	30 balls
2021	Jaluit	Paint for bb court	2
2021	Jaluit	Paint brush for court	2

Year Purchased	Atoll	Equipment name	Quantity Purchased
2022	Majuro	Alcohol pads	10 boxes
2022	Majuro	Test strips	10 boxes of 50 strips
2022	Majuro	Lancets	10 boxes
2022	Majuro	Glucometers	10 boxes
2022	Majuro	Tablets	2
2022	Majuro	Notepads	4
2022	Majuro	Pen/Pencil	10 packages
2022	Majuro	A1c test kit	50 tests

Year Purchased	Atoll	Equipment name	Quantity Purchased
2022	Jaluit	Alcohol pads	10 boxes

2022	Jaluit	Walking shoes	1 box
2022	Jaluit	Bluetooth speaker	1 speaker
2022	Jaluit	Test strips	10 boxes
2022	Jaluit	Flash drive	2
2022	Jaluit	Glucometers	10 boxes
2022	Jaluit	Lancets	10 boxes
2022	Jaluit	Tablet	2
2022	Jaluit	Cell phone	3
2022	Jaluit	Sim Cards	3
2022	Jaluit	Cellcard minutes	10

Annex 5 Nutrition training activities

Year	Atoll	Training type	Date	Men attended	Women attended	Total number trained
2020	Jaluit	Cooking class	Feb 22 nd	5	10	15
2021	Majuro	School lunch training	September	70	80	150
2021	Majuro	Jo-Jikum	June-July	5	3	8
2021	Majuro	Nutrition education for churches	Feb	60	90	150
2021	Jaluit	Home gardens cooking	Nov	5	20	25
2021	Jaluit	Cooking demo	Nov	2	10	12
2021	Jaluit	Food safety for schools	Nov	2	4	6
2021	Jaluit	Balance diet education for community	Nov	7	0	7
2022	Majuro	Replanting/Cooking Vegetables	March	13	12	25
2022	Majuro	Cooking demo in community	March	7	13	20
2022	Majuro	Nutrition education on vegetables	April	12	13	25
2022	Majuro	Food safety for schools	August	1	8	9
2022	Jaluit	Nutrition education and cooking	March	10	7	17

Annex 6 Exercise groups and specific exercise activities

Regular exercise groups

Atoll	Exercise type	Location	Frequency	Male	Female
Majuro	Walking club	Tur Weto	Daily	0	30
Majuro	Walking club	Berrak	Daily	0	30
Majuro	Walking club	Ionmaaj	Daily	0	30
Majuro	Biggest loser	Wellness ctr	1 month	0	5
Majuro	Zumba Class	Wellness ctr	Weekly x 1 month	0	20
Jaluit	Mens walking club	Jabor	Biweekly	50	0
Jaluit	Volleyball and basketball games	Jabor	Biweekly	50	30
Jaluit	Walking club	Jabor	Weekly	0	50
Majuro	Volleyball and basketball games	Various locations on Majuro	Weekly	30	25
Majuro	Walking club	Woja	Daily	5	0
Majuro	Table tennis	Marshall Islands High School	1 month	4	0
Jaluit	Walking club	Jabor	Daily	0	100
Jaluit	Walking club	Imiej	Daily	0	30
Jaluit	Volleyball	Jabor	1 month	30	30
Jaluit	Volleyball	Jabor	1 month	30	30

Specific exercise and sports activities

Event name	Location	Date	Male	Female
Keep Majuro Clean	Majuro Atoll	June 7-12 th , 2021	9	9
Keep Majuro Clean	Majuro atoll	August 2 nd -13 th	10	10
Veteran Beach Volleyball	Jaluit	Nov 2 nd -19 th	36	24
Biggest loser	Majuro	July 1-31 st	52	15
High School Volleyball Tournament	Jaluit	March 14-31	204	204
Jo-jikum	Majuro	July, 2021	10	20
Tennis club for youth	Majuro	August 2022	20	0
Volleyball Women's tournament	Majuro	December 2022	0	70

Basketball Tournament	Majuro	July 2022	125	0
Basketball Tournament	Majuro	November 2022	125	0

Annex 7 Radio shows

Topic of radio programme	Date	Feedback (formal/informal)	By	Radio Station
Introduction to Wellness and SUPA project	May 2021	Formal - Healthy Lifestyle	SUPA Manager & Dr David Hackley, Outer Islands Health Centre(OIHC), Marshall Islands	V7AB
Climate changes (Affecting Food Security)	May 2021	Formal - Healthy Lifestyle	SUPA Manager & Dr David Hackley, Outer Islands Health Centre(OIHC), Marshall Islands	V7AB
Public Awareness -Pilot Keep Majuro Clean	June 2021	Five communities were aware, All participated	Kilobar Lakmis, SUPA Manager	V7AB
Climate Change(Positive & Negative Impacts)	July 2021	Formal - Listeners both from Marshall Islanders and other countries gave their concern on ways to prevent any negative impact on climate change	Kilobar Lakmis & NDMO Directorate	Power 103.5
Public Awareness -Keep Majuro Clean Phase Two	August 2021	It was formal, Flyers were provided, communities were engaged	Kilobar Lakmis, SUPA Manager	V7AB
Climate Change (World Food Day)	October	Both Formal & Informal(Activities, flyers, booth , cooking demonstration, showcase of vegetables, distribution of seedlings	Wellness Team	Power 103.5
Climate change (World Diabetes Day)	November	Both Formal & Informal(Walk-a ton, Presentation, flyers provided, live music, strong collaborations between NGO's & Governmental sectors, patients interview and go live	Wellness Team	Power 103.5
Introduction to Wellness & SUPA project	April 7th	Formal	SUPA project manager Kilobar Lakmis & Radion Operator Yastamon	Power 103.5 six9too production

Home Gardening Classes/ Registration	April 14th	Formal	SUPA project manager Kilobar Lakmis & Radion Operator Yastamon	Power 103.5 six9too production
Outreach Hypertension Program	20-Apr	Formal	Hypertension Coordinator George George Jr & Radio Operator Yastaman	Power 103.5 six9too production
Heathy lifestyles and Nutrional education	May 11th	Formal	SUPA project manager Kilobar Lakmis, Dietician lone deBrum and radio operator Yastamon	Power 103.5 six9too production
Pre-diabetes, CLP, and Home gardening training updates	may 18th	Formal	Pre-diabetes coordinator Libon Jorkan, SUPA manager Kilobar Lakmis and radio operator Yastaman	Power 103.5 six9too production
Health promotion	May	Formal	Hypertension Coordinator George George Jr & Radio Operator Yastaman	Power 103.5 six9too production
Sports Championship Game	May	Formal	Royal Leban, Wellness Physical Activity and radio operator Yastaman	Power 103.5 six9too production
Dietician health promotion	October	Informal	Nutritionist lone deBrum & Kilobar Lakmis	V7AB radion station
Health promotion/Demonstration	December	Formal	Wellness Team	Power 103.5 six9too production

Annex 8 External evaluation of the LCCR project – Executive Summary

Executive summary

1.1 Background

The Republic of the Marshall Islands (RMI) is a small country of 29 atolls and 5 coral islands comprised of about 180 square kilometres in land area spread over an expanse of ocean in the North Pacific of more than 4,600 square kilometres and with an economic zone of around 2 million square kilometres.

People have been migrating from the outer atolls to the urban centres of Majuro and Ebeye in search of income and education opportunities and for medical needs. In terms of income-generating activities, copra, coconut oil and fish (particularly yellowfin tuna) are the main sources of revenue. Nearly half of the salaried workforce is employed in the public sector. Unemployment rates are high, especially among women. This narrow range of employment and income streams makes RMI economically vulnerable to changes in the country's physical environment, including those related to climate change. A number of RMI atolls are particularly vulnerable to the effects of climate change. Jaluit atoll is a designated Ramsar Wetland rural environment, while Majuro atoll is an urban atoll.

RMI is also facing significant health risks due to climate change, including waterborne diseases, food safety issues, and vector-borne diseases. The 2022 National Climate Change and Health Policy and Revised Action Plan (NCCHPv2) aims to improve health protection against climate-related risks, enhance community resilience, health and wellbeing and integrate approaches to health and climate change adaptation (Government of the Republic of Marshall Islands).

1.2 Program investment

The Lifestyle Changes and Climate Resilience (LCCR) program in RMI aligns with the NCCHP v2 goals. The LCCR project commenced in January 2020 with a planned completion in December 2022. LCCR is a multi-sector program designed to enhance community resilience in two atolls of RMI: Jaluit and Majuro, through four Key Result Areas (KRAs):

1. Enhance community and household-based atoll agriculture
2. Foster lifestyle changes linking nutrition and wellness
3. Mainstream climate and disaster risk into the health sector
4. Coordination and Communications.

The program focuses on building awareness about linkages between healthy eating for reducing non-communicable diseases and is also expected to contribute to enhancing food security after program completion. It is being supported by the European Global Climate Change Alliance Plus Scaling up Pacific Adaptation (GCCA+ SUPA) Project, addressing Output 3: to Scale up resilient development measures in specific sectors.

LCCR has been delivered under contract with Ministry of Health and Human Services (MoHHS), with the KRAs 1, 2 and 4 subcontracted to CanvasBack Wellness Centre (CWC). KRA 3 was delivered through the Australian National University and MoHHS. Other LCCR stakeholders include the Ministry of Natural Resources and Commerce (MNRC), Marshall Islands Organic Farmers Association (MIOFA), Taiwan Technical Mission (TTM), the Marshall Islands Epidemiology and Prevention Initiatives (MIEPI) and representatives from Majuro and Jaluit atolls. The program

design adopted a participatory and community-led approach, with particular emphasis on applying a people-centered approach to enhance sustainable community resilience.

1.3 Evaluation purpose, methodology and limitations

This summative evaluation aimed to assess the delivery and impact of the LCCR activities in Majuro and Jaluit, conducted by CWC under the GCCA+ SUPA Project. The findings and recommendations here are intended to help provide independent advice to EU and SPC which will be used to inform strategic decisions for future programming. The evaluation was designed to test program Effectiveness, Efficiency, Inclusivity and Sustainability as well as to identify recommendations.

1.4 Constraints and limitations

There has been no use of the LCCR program LogFrame in reporting and limited program reporting in general. CWC has reported by KRAs by atoll and SPC reports to EU at a GCCA+SUPA level. Financial reporting is also consolidated across countries in GCCA+SUPA reporting. Many of the findings here are informed through CWC self-reported results, most of which were tested through interview and observation, but not all.

1.5 Findings and Conclusions

While there have been some successes in promoting healthy behaviors and increasing physical activity, there have also been challenges in sustaining these initiatives over time. It is important to consider the reasons for the short lifespan of behaviour change reported and to identify strategies to overcome these challenges to promote long-term sustainable change.

LCCR implementation was only three years which has limited the ability for it to effect meaningful impact in changes in population health and community attitudes which are slow to shift. In the short-term, LCCR has been able to demonstrate short-term outputs: increasing the use of home and community gardening and building community awareness on positive nutritional and fitness choices. Overall, the program has had some success in increasing local gardens and providing agriculture-based training and equipment to communities. However, there are still some limitations and challenges to the program's impact, and more engagement and commitment from stakeholders are required.

The atoll needs' assessments conducted in 2020 were intended to target support where most needed. They identified a lack of gardening space, knowledge on pest control, and a high reliance on imported food in Majuro, and a lack of home gardening, pruning knowledge, and understanding about cooking with vegetables in Jaluit. The program provided equipment and consumable material, including material to construct garden beds, chainsaws, wicking systems, garden nets, raised beds, diesel containers, manure, and soil. However, some equipment fell apart after a year and was not replaced or able to be maintained to extend its use.

The 2019 design proposed several initiatives aimed at promoting healthy behaviours and increasing physical activity among community members in RMI. These initiatives included new walking and exercise clubs, men's wellness activities, high school sports competitions, health checks, and cooking classes.

According to interviews, there have been positive changes in attitudes toward vegetables in meals due to increased access to and affordability of fresh produce through home and community gardening. Jaluit High School has also incorporated vegetables sourced from the school garden into the meals prepared for students, with support from the principal and vice principals.

In terms of physical activity, there have been new walking clubs, community sports competitions and high school sports competitions supported by new equipment. However, there have been some challenges in sustaining fitness activities due to funding constraints, which have affected membership incentives and provision of supplies. Recently in both Jaluit and Majuro, the number of people regularly walking appears to have reduced, and in Jaluit the gym equipment is only used by men in an unsafe building until a better location can be found.

LCCR has made efforts to be inclusive and address the needs of diverse groups. The project design includes specific participatory and non-discrimination components and there are indicators targeted at reaching women, vulnerable groups, and men requiring special attention regarding health and lifestyle changes. The initial needs' assessments and target households were designed to reach those most vulnerable. LCCR has engaged with women through activities such as home gardens, and with youth through specific events and seminars, working with schools, and inclusive consultations. Although proposing to engage with Women United Together Marshall Islands (WUTMI) in the design, this was not achieved [Interviews]. The project has also worked with people living with disabilities and the elderly in partnership with the Marshall Islands Disabilities Person Organization. Supporting data in terms of the proportion of marginalized groups reached was not available as disaggregated data is not routinely collected or reported except in terms of patient presentations.

There have been some unexpected results reported as well. For example, some stakeholders have expressed concern that the focus on climate change and health may be taking attention and resources away from other important health issues, such as non-communicable diseases (NCDs) more generally. In contrast to this, the CWC organization was initially set up to address NCDs; so focus on these is implicit in their work. Additionally, the COVID-19 pandemic has disrupted program implementation. Challenges such as weather conditions, power outages, and poor internet have also been reported.

The appointment of a coordinator to head up climate change activities in MoHHS is a positive step towards promoting ownership and coordination of ongoing work in this area. However, it is crucial to ensure that stakeholders are aware of the different roles and responsibilities within the program and the status of results and finances over time. A thorough monitoring and evaluation system can help identify areas of improvement, assess the program's effectiveness, and inform future program planning and implementation.

It is crucial to establish sustainable funding options for this work to ensure its continuity. The fact that the program goals under GCCA+SUPA remain relevant and that there is a gap that cannot be addressed through existing government resources indicates that the program work remains essential and needed.

Stakeholders have generally valued the work and strong community engagement has developed through engagement of local councils, mayors and MoHHS but the reliance on funding and CWC has meant that in 2023 LCCR activities are piecemeal if at all. The lack of an exit strategy has meant that hand over has not been planned for or implemented formally. Despite informal completion and

handover, the LCCR project successes have created leverage for future expansion and funding proposals for RMI and for CWC.

- A proposal to expand the LCCR to other atolls has been prepared and submitted to the Pacific – America Fund, supported by USAID, following requests from other mayors.
- The outer islands of Wotje, Ebon and Likiep are now targeted by CWC to start similar work there. Conversations with the local governments have taken place and teams will soon be sent out to do data collection and speak with the communities to start the process.
- On Majuro, many people are making direct requests to CWC for a continuation of the home gardening classes and help for people to build their own gardens.
- Majuro Hospital is sending out health workers door to door in conjunction with the NCD clinic and upgrading their referral processes. CWC are upgrading their database system to better identify focus areas and are hiring two more health workers for Majuro.
- The prediabetes, diabetes and hypertension prevention classes have funds to go to smaller islands within Jaluit atoll and expand to Wotje and Ebon atolls. CWC will conduct zoom classes now until the Master Coach can train new lifestyle coaches on each atoll.

Challenges like border closures and logistics delays during the pandemic have also slowed access to technical assistance and products required to support the programming. There are challenges with maintaining momentum and ensuring expenditure on elements like equipment provision offer value for money. Additionally, there are multiple health and environmental programs being implemented in the country, which can make it challenging for the government to manage all effectively.

1.6 Recommendations

The report provides a series of recommendations; they are briefly listed here:

- Focus on effectiveness by aligning with the 2022 National Climate Change and Health Policy and Revised Action (NCCHP v2) and building on the most cost-effective activities in previous programs in RMI and regionally
- Include strong sustainability planning including long term funding that facilitates hand over to local partners
- Engage broadly and form meaningful partnerships. Share learning regionally and within RMI and communities regularly
- Recognising that behavioural change may take a generation, for programmes/projects of limited duration such as SUPA, the final year of implementation should focus on handover of key activities
- Strengthen country program coordination and donors and national program governance skills
- Ensure gender and social inclusion through a people centred approach continue to be a focus
- Ensure community participation in design and implementation continue

