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Special report

Improving household nutrition security and public health in the CARICOM, 2018–2022

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ABSTRACT The Caribbean is experiencing a worsening epidemic of obesity and noncommunicable diseases (NCDs) and it has the worst rates of premature mortality from cardiovascular diseases in the region of the Americas. Creating enabling environments to improve dietary diversity would help reduce obesity and diet-related NCDs. The Improving Household Nutrition Security and Public Health in the CARICOM project aimed to increase dietary diversity in the Caribbean, and to determine and implement effective, gender-sensitive interventions to improve food sovereignty, household food security, and nutrition in CARICOM states. Primary quantitative and qualitative research, scoping reviews, stakeholder engagement, implementation of interventions and dissemination activities were undertaken. This paper describes the overall project design and implementation, discusses challenges and limitations, and presents core achievements to inform further work in Small Island Developing States throughout CARICOM to advance the nutrition agenda in the Caribbean. The results of the project's research activities are presented in other papers published in this special issue on nutrition security in CARICOM states.

Keywords Noncommunicable diseases, food and nutrition security, public health, Caribbean Region.

The Caribbean has the highest rates of noncommunicable disease (NCD) morbidity and mortality and ranks first in premature NCD mortality in the Pan American Health Organization/World Health Organization (WHO) Region of the Americas. Guyana ranks first in the region with 831.4 deaths from NCDs per 100 000 population, compared with Canada with 291.5 deaths from NCDs per 100 000, and the regional average is 436.5 deaths from NCDs per 100 000 population. The top seven countries are Guyana, Haiti, Belize, Saint Vincent and the Grenadines, Trinidad and Tobago, Suriname, and Grenada, all members of the Caribbean Community (CARICOM) (1).

The economic cost of NCDs in CARICOM has been estimated at 1.4% to 8.0% of the region's gross domestic product (2, 3). However, only eight countries in CARICOM are on track to meet the WHO target of a 25% reduction in premature mortality from cardiovascular disease by 2025, compared with the 2010 baseline (4).

In CARICOM member states, NCDs, obesity (the leading modifiable risk factor for NCDs) (5), and inadequate food sovereignty with pockets of food insecurity are interrelated problems. In non-Latin Caribbean countries, on average 45.9% of men and 60.7% of women are overweight or obese, with 8% of children younger than 5 years being overweight (6). The underlying factor in this obesity epidemic is a diet/nutrition transition, namely: consumption of mostly imported, energy-dense, ultra-processed foods high in sugar, salt, and unhealthy fats, and sugar-sweetened beverages, coupled with low intake of vegetables, fruits, and fiber, and physical inactivity (7). A lack of economies of scale in small island states is compounded by global free trade agreements and aggressive

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marketing that encourage unhealthy consumption and poor dietary patterns among consumers (8). While consumption of vegetables and fruits is protective against NCDs, more than 90% of the CARICOM population do not consume the recommended five-servings of fruits and/or vegetables a day (9).

The Improving Household Nutrition Security and Public Health in the CARICOM (short name: Food and Nutrition (FaN)) project sought to answer the question "What are the most effective, gender-sensitive ways to improve food sovereignty, household food security, and nutrition in CARICOM states?" The aim of this paper is to describe the overall design and implementation of this project, discuss challenges and limitations, and present its core achievements. Other papers published in this special issue on improving household nutrition security and public health in CARICOM describe project findings and provide details on the relevant methodologies (10–15).

FaN PROJECT

The FaN project was designed to be a follow-up of two previous projects – From Farm to Fork (F2F, 2011–2014) (16) and the Evaluation of the Port-of-Spain Declaration (POSDEVAL, 2014–2017) (9). The F2F project created pathways for agriculture and schools to improve school feeding and the diets of children in two Caribbean countries: Saint Kitts and Nevis, and Trinidad and Tobago (16). The POSDEVAL project examined the implementation of policies and programs mandated by CARICOM Heads of Government in 2007 to confront the rise in NCDs in the Caribbean (9). The results of POSDEVAL indicated that diets, schools, and communications were the weakest areas of implementation, that the larger countries performed better, and that all countries did better on metrics with clear roadmaps and toolkits – reflecting a need for these regional public goods (9).

The three FaN project countries were Jamaica, Saint Kitts and Nevis, and Saint Vincent and the Grenadines. Among the Eastern Caribbean states agricultural production is a national priority for economic and social development in Saint Vincent and the Grenadines. Saint Kitts and Nevis, which has one of the highest rates of obesity and imported foods (> 90%) in the region (16), was the base for the development of the F2F school feeding model for CARICOM. Jamaica has the largest population in CARICOM and is home to multiple large food manufacturers and distributors which export to other countries in the region.

The FaN project was originally planned for implementation from January 2018 to January 2022. However, a 6-month no-cost extension was granted to allow for reorienting interventions as a result of the COVID-19 pandemic and restrictions.

Project objectives

The overarching objectives were to: build a shared understanding among stakeholders of the complex adaptive systems driving local food production and consumption in English-speaking CARICOM states; implement coordinated packages of interventions within national food systems that promote sustainable livelihoods of vulnerable groups, including rural populations and women; and combat obesity and diet related NCDs. These objectives were broken down into four project objectives (Table 1). The first two project objectives were

TABLE 1. Four objectives and activities of the FaN project

Goals	Project objectives
A. Information collation to identify intervention components	*1. To describe, by sex, age, and socioeconomic group, the current nutritional NCD risks in children, women, and men, and to investigate what factors influence their food sources and dietary patterns.* **WP 1(a)** secondary analysis of quantitative data to document nutrition-related health status and NCD risk factor profiles for the three study countries. **WP 1(b)** qualitative studies on the drivers of dietary preferences and patterns within households (disaggregated by sex), and the key drivers of consumption of consumers. *2. To engage with stakeholders and undertake critical appraisals of available evidence and data to understand how local food systems currently determine the dietary patterns of populations in the three study countries.* **WP 2.1** Secondary data analysis of routinely available data to understand the current food systems and the potential effectiveness and effect of food system interventions in SIDS. **WP 2.2** Stakeholder analysis, including private-sector producers, processors, importers, and retailers, and government agencies and civil society, through key informant interviews. **WP 2.3** Stakeholder workshops to build a consensus on causal loop diagrams of unhealthy eating for use in selecting coordinated gender-sensitive packages of system-wide interventions (Objective 3).
B. Design and assessment of the intervention packages	*3. To develop, implement and assess an integrated, adaptable, and gender-sensitive package of interventions that utilize local food systems to increase healthy eating and sustainable rural livelihoods.* Follow-up actions from the previous projects, POSDEVAL and F2F, and the formative work of Objectives 1 and 2 were used to select packages of coordinated interventions within food systems to improve diet and nutrition, particularly of women and vulnerable population groups. In addition, the high-level Project Advisory Committee recommended interventions to: a) increase demand for healthy foods in children; b) enhance communication along the value chain; and c) engage with the private food sector and local nongovernmental organizations. *4. To work with public, private, and civil society partners to expand project impact across the CARICOM region through innovative knowledge-sharing, communication, and policy action platforms.* **WP 4.1** Project results, methods, and tools are open access to build regional capacity through sharing of interventions, training, and education. **WP 4.2** The project website (https://www.food4changecaribbean.org) as well as linked social media on Facebook and Instagram were developed and host public communications.

FaN, Improving Household Nutrition Security and Public Health in the CARICOM; CARICOM, Caribbean Community; NCD, noncommunicable disease; WP, work package; SIDS, Small Island Developing States; POSDEVAL, Evaluation of the Port-of-Spain Declaration; F2F, From Farm to Fork.
Source: FaN project research group.

on information collation (research objectives) while the final two were to design, implement, and assess interventions, and to disseminate findings and build capacity.

Project leadership and partners

The project was led by the Caribbean Institute for Health Research, University of the West Indies, Jamaica. Researchers came from all three campuses of the University of the West Indies: George Alleyne Chronic Disease Research Centre, a unit of the Caribbean Institute for Health Research, University of the West Indies, Barbados; Institute for Gender and Development Studies, University of the West Indies, Jamaica; and Centre for Health Economics, University of the West Indies, Trinidad and Tobago. Three additional universities participated: University of Technology, Jamaica; University of Cambridge, England; and McGill University, Canada.

The project team remained intact for the 4.5-year project. Researchers and collaborators who were selected were team players who had demonstrated their willingness to share their research with colleagues and were open to collegial review and critique of their work. Consultants were engaged as necessary and were always persons who had institutional knowledge from their previous work at the target institution and had maintained good relations with their former colleagues.

A project executive was established in year 2 comprising the principal investigator, three lead researchers, and the two project managers. The principal investigator and four of the other five members were women. The executive met for global monitoring, strategic planning, budget review, and review of the project's 6-monthly reports to its funding agency, the International Development Research Center.

All research and implementation partners, including selected regional organizations (Table 2), were part of the Steering and Working Group of the project. This group met monthly for the first 2 years of the project, every 2 months for the third year, and at least quarterly during the final year of the project. The Project Advisory Committee, composed of senior regional leaders in public health, education, agriculture, and communications, met at the start of the second year to give guidance on interventions, and at the beginning of the final 6 months to give guidance on dissemination. Country teams in Saint Kitts and Nevis, and Saint Vincent and the Grenadines comprised representatives from the ministries of agriculture, education, and health, civil society organizations, and local representatives of regional institutions. In Jamaica, the in-country work was anchored through previously established relationships between project researchers, the Minister of Health and Wellness, and others. The Minister of Health and Wellness, Jamaica, the Honorable Dr Christopher Tufton, was named a policy entrepreneur by the Project Advisory Committee for his leadership on the NCD agenda in Jamaica and regionally.

Budget and funding

A unique design of the project was that about 10% of the project funding was unassigned and to be used for interventions identified during the first 2 years of the project. The mechanism to decide the areas and types of interventions to fund was determined through group model-building workshops and advice from the Project Advisory Committee. COVID-19 restrictions also influenced what was possible to do.

TABLE 2. Regional partners of the FaN project research group

Caribbean Agriculture Research and Development Institute
Caribbean Community (CARICOM) Secretariat (Health, Agriculture, Human Resources Development) (Education)
Caribbean Public Health Agency
Caribbean Development Bank
CARICOM Regional Office for Standards and Quality
Caribbean Examinations Council
Food and Agriculture Organization of the United Nations
Healthy Caribbean Coalition
Inter-American Institute for Cooperation on Agriculture
Pan American Health Organization

FaN, Improving Household Nutrition Security and Public Health in the CARICOM.
Source: FaN project research group.

Gender considerations

Gender training was conducted at the project's inception workshop and gender perspectives were integrated in: the design, data collection, and analysis of the qualitative studies; the review of the interventions; and dissemination. A gender review of food and nutrition policies in the three FaN countries was conducted to assess coherence with policy commitments to gender equality and sustainable development at global, regional, national, and institutional levels and national practices. A similar review was conducted of policies on national trade, agriculture, and micro-, small-, and medium-sized enterprises. The results of these reviews will be published later. Working with the multidisciplinary FaN team and a wide range of FaN stakeholders facilitated knowledge-sharing on the importance of gender in food security, nutrition, and trade.

Midterm evaluation

A mid-term evaluation with project researchers, communication specialists, and key institutional partners in Year 3 (January 2020) assessed project implementation efficiency and identified key project achievements and barriers during the first 2 years.

Ethical considerations

The project received approval from the Institutional Review Board of the University of the West Indies, Mona, Jamaica, as well as appropriate approval from the study sites in each country. Institutional Review Board approval was also received for each individual research and intervention component.

CORE PROJECT ACTIVITIES

Details of the research findings are presented in other papers in this supplement (10–15).

Objective 1

Objective 1 was to describe, by sex, age, and socioeconomic group, the current nutritional NCD risks in children, women, and men, and to investigate what factors influence their food sources and dietary patterns.

Secondary data analysis of WHO STEPS and Global school-based student health surveys. Nutrition-related health status and NCD risk profiles for the three study countries were documented in reports of WHO's STEPwise NCD risk factor surveillance (STEPS) for adults (17) and the Global school-based student health survey (GSHS) for adolescents (18).

Sixteen countries in the region that had conducted the WHO STEPS survey in adults and the GSHS in adolescents aged 13–15 years were included in the secondary data analysis. The year of data collection in the countries ranged from 2006 (Aruba) to 2016 (Anguilla) for STEPS, and 2007 (Cayman Islands) to 2017 (Trinidad and Tobago) for GSHS.

Studies on the drivers of dietary preferences and consumption. Four focus groups were conducted in Saint Kitts and Nevis and four in Saint Vincent and the Grenadines with participants selected based on urban/rural residence and age. In each country, the four groupings were: urban participants aged 18–39 years, rural participants aged 18–39 years, urban participants aged 40–65 years, and rural participants aged 40–65 years. The groups included both sexes and aimed to have the same number of males and females. In Jamaica, seven focus groups were conducted across a wide range of institutions and community groups, including public sector groups, farmers' associations, academia, and civil society groups.

The focus groups were complemented by quantitative questionnaire-based studies conducted in all three study countries. Taken together, the data gathered will identify drivers of dietary preferences, patterns, and consumption within households disaggregated by sex. Self-administered electronic questionnaires and interviewer-administered paper-based questionnaires were used for data collection. Non-probability sampling of food system establishments was used, and all employees of the selected institutions and patrons were asked to participate. In Saint Kitts and Nevis and Saint Vincent and the Grenadines, all food system establishments were eligible for selection. Further details on the quantitative component of the study conducted in Jamaica are published in this supplement (10, 11). The results for Saint Kitts and Nevis and Saint Vincent and the Grenadines will be published later.

Objective 2

Rapid scoping review of food system interventions in small island developing states. To determine the potential effectiveness and impact of food system interventions in small island developing states a rapid scoping review was conducted, searching MEDLINE (via PubMed) and Web of Science (via Clarivate) from January 1, 2000 to June 31, 2019, for interventions to improve nutrition of human populations conducted in small island developing states (13). The 2020 *WHO Noncommunicable Diseases Progress Monitor* was also examined to assess nutritional policies in small island developing states (13, 19).

The results of this rapid review are reported in this supplement (13).

Effectiveness and impact of food system interventions in small island developing states. The potential effectiveness of food system interventions in each study country was investigated through estimation of econometric models to produce the cross-price and own-price elasticities. Sensitivity analyses were conducted using different tax and/or subsidy scenarios to identify the optimal levels and/or types of fiscal interventions to effect change in dietary patterns. The results of this investigation will be published later.

Stakeholder interviews. Semi-structured interviews were conducted in all three study countries (14 in Saint Kitts and Nevis, 15 in Saint Vincent and the Grenadines, and 41 in Jamaica) among key stakeholders knowledgeable about the food system, food industry, and the national initiatives to promote food security and healthy eating. A snowballing method was used as key informants were asked to recommend other key food system stakeholders. The sample was chosen to reflect diversity and balance in terms of sex, rural and urban residence, and business sector: private and public sector, and small, medium, and large enterprises. Detailed results of the stakeholder interviews will be reported in future publications after an in-depth analysis is conducted.

Food security, vulnerability assessment and mapping. National consultations, secondary data analysis, key informant interviews and focus group discussions were conducted to assess the livelihoods and capability of vulnerable households in each study country. The results of the vulnerability assessment will be published later.

Assessment of food systems governance. A conceptual framework was outlined to serve as a tool for assessing the governance for food and nutrition in the study countries. The assessment focused on good governance principles, including the PANTHER principles (participation, accountability, non-discrimination, transparency, human dignity, empowerment, and rule of law) that guarantee the right to food (20), and any omissions of these principles. Lessons gleaned from the governance assessments conducted in the three study countries will be reported later.

Group model-building workshops. Two stakeholder group model-building workshops were conducted, one in Jamaica and one in Saint Kitts and Nevis, which included stakeholders from Saint Kitts and Nevis and Saint Vincent and the Grenadines (21). Stakeholders were selected from ministries of health, agriculture, and trade, regional agencies, the private sector, civil society, local retailers, and farmers. The structure of the workshops was informed by previously outlined strategies (22 23), and the goals of the workshops were to build a shared understanding of the food system in the study countries, identify key leverage points within the food system, and propose targeted interventions (21).

Objective 3

Interventions. Inputs from Objectives 1 and 2, the Project Advisory Committee and the midterm evaluation informed the list of interventions that were developed and implemented by the research team (Table 3), classified into three broad categories: schools, communities, and CARICOM supports.

Most of these interventions will be documented in further detail in subsequent publications. However, this supplement includes reports on the nutrient cost analysis (14), and the results of testing foods for industry-produced trans fatty acids

TABLE 3. Interventions focused on by the FaN project research group

Category	Intervention Description
SCHOOLS	1) **Revision of two secondary school syllabuses with the Caribbean Examinations Council** CSEC human and social biology and CCSLC integrated science syllabuses revised to enhance noncommunicable disease risk education
	2) **Curriculum revision of primary school curriculum with CARICOM** HFLE curriculum for ages 5–12 years revised and an HFLE curriculum for ages 3–4 years developed to enhance noncommunicable disease risk education
	3) **Digital support for HFLE curriculum** Jamaican theatre company engaged to design and publish digital resources for HFLE curriculum with input from students 7–17 years of age through a story-writing competition
	4) **School nutrition standards** Development and finalization of a school nutrition policy for submission to the governments of Jamaica, Saint Kitts and Nevis, and Saint Vincent and the Grenadines, in collaboration with the ministries of health and other relevant agencies in each country
	5) **Community-based school feeding programme** Improvement in coordination of school feeding actors in Saint Kitts and Nevis through initiating multistakeholder partnerships, engaging mothers of schoolchildren in Photovoice, and implementing capacity-building activities among farmers
	6) **Parent–child dyads** Schoolchildren and their parents participated in Photovoice related focus groups to bridge the gap between parent and child perceptions of healthy eating and current consumption (including school meals)
COMMUNITIES	7) **Fifteen small grant projects** Maximum of US$ 7000 awarded to small groups to strengthen the main existing livelihood of households to break the cycle of poverty and lift them out of food and nutrition insecurity
	8) **Women's farmers academy** Eight-week online academy for women farmers run, in collaboration with Helen's daughters, to train and empower small-holder women farmers with training on crop production and management, climate resilience, nutritional marketing, and agri-business development
	9) **Community spaces for healthy eating** Partnership with Jamaica Council of Churches to provide a virtual programme of engagement and training in food and nutrition security, including tailored sermons and bible studies to be delivered through usual church services/bible study classes
	10) **Marketable meals** Training of a cohort of community members in healthy eating and health, cooking skills, and use of local ingredients, in collaboration with the Jamaica Home Economics Association, to deliver local, healthy, and delicious snacks, beverages, and main meals for potential uptake by the food industry
	11) **Enhanced laboratory capacity and nutrient cost analysis** Laboratory equipment purchased to enhance capacity in Jamaica for testing foods for fats, sodium, and sugar. Nutrient cost analysis program intended to generate data to inform purchasing of healthy foods, increase publication of best value foods, and develop a nutrition education tool
CARICOM SUPPORT	12) **Support for CARICOM's Regional Office for Standards and Quality in front-of-package labelling** Funding and technical support to enhance the capacity of CARICOM's Regional Office for Standards and Quality to establish regional standards for front-of-package labelling
	13) **Joint health and trade ministers meeting on NCDs** Support of CARICOM's Secretariat for the joint ministers of health and ministers of trade meeting on NCDs and trade and implementation process. Regional policy to ban trans fats

FaN, Improving Household Nutrition Security and Public Health in the CARICOM; CARICOM, Caribbean Community; CSEC, Caribbean Secondary Education Certificate; CCSLC, Caribbean Certificate of Secondary Level Competence; HFLE, health and family life education; US$, United States dollar; NCDs, noncommunicable diseases.
Source: FaN project research group.

and saturated fats facilitated by the enhanced laboratory capacity in Jamaica (15).

Objective 4

Objective 4 was to work with public, private, and civil society partners to expand project impact across the CARICOM region through innovative knowledge-sharing, communication, and policy action platforms.

Capacity-building and dissemination. Regional capacity was strengthened through awarding two Master of Public Health scholarships at the University of the West Indies at Cave Hill: one to a candidate from Saint Vincent and the Grenadines and one to a candidate from Saint Kitts and Nevis. The selected candidates conducted research in project-related areas. Two graduate students from McGill University conducted research in Saint Kitts and Nevis on community-based school meals.

Dissemination efforts began in Year 1 by informing ministers of agriculture and chief education officers of the project's main objectives and its plans to contribute to the food security and nutrition agenda of CARICOM, at the Caribbean Week of Agriculture and the regional chief education officers' meeting, respectively in 2018. The goal of these initial dissemination efforts was to secure buy-in and support from the ministries of agriculture and education for project activities. Over the course of the project, the principal investigator prepared annual reports on NCDs and the project for ministers of health at the Council for Human and Social Development caucus and chief medical officers at their annual side meeting at the Caribbean Public Health Agency health research conference. Dissemination webinars were held for project countries to share results and enhance sustainability, and our stakeholder network was

regularly updated through workshops and project bulletins. Dissemination to academia was done through presentations at academic conferences and publication of articles in peer reviewed journals.

Website, branding, and social media activities and radio interviews also formed a substantial part of dissemination activities. The project website (https://www.food4changecaribbean.org) hosts reports, videos, fact sheets, publications, and other information to support dietary diversity in the Caribbean. The website will be maintained as a resource for the region after the project finishes.

The project was rebranded in 2020–2021 with a more engaging slogan "Food 4 Change Caribbean" and logo to help boost dissemination efforts.

CHALLENGES

Private-sector engagement

Suboptimal private-sector collaboration directly affected project interventions, with some interventions having to be redesigned or cancelled. The project team invited a retired regional supermarket executive to join the project's Steering and Working Group to help engage the private sector, however, its involvement remained limited. In addition, the marketable meals competition (Table 3) was designed to develop delicious, healthy meals and snacks ready for uptake by the local food industry. The intervention proceeded, but the response to invitations to the private sector for participation in the design of this competition was poor, despite initial positive feedback from the Jamaica Chamber of Commerce. The research team also discussed the CARICOM heads of government plan to reduce its food import bill by 25% by 2025 (24) with the Caribbean Private Sector Organization to highlight the need for a targeted reduction in unhealthy food imports; however, this targeted approach was not adopted.

COVID-19 restrictions

Due to COVID-19, interventions were largely suspended for 18 months, or converted to virtual methods which needed new applications to the institutional review board, or cancelled. For example, while the project engaged with the United Theological College of the West Indies (a tertiary institution in Jamaica) in the first quarter of 2021 to review and revise their curricula, their proposed timeline was incompatible with the project's new timeline; therefore, this intervention was not pursued further. In addition, plans to evaluate the sugar, salt, and fat in school meals in Jamaica, using the new laboratory capacity facilitated by this project, were postponed because schools were now mostly being run virtually.

One of the follow-up actions of POSDEVAL was sharing lessons learnt from the sugar-sweetened beverage taxation in Barbados and the methodology of the Barbados sugar-sweetened beverage tax evaluation from POSDEVAL with Jamaica, Saint Vincent and the Grenadines, and Saint Kitts and Nevis. The hope was for possible adoption of a sugar-sweetened beverage tax in Jamaica and adaptation of Barbados' evaluation methodology in all three study countries. However, at the time, there was no appetite for taxes on sweetened beverages, especially after the economic downturn caused by COVID-19. In addition, in small islands with limited human capacity, any disaster (namely, COVID-19 and others described below) requires staff to be pulled from all areas to focus on the immediate threat, which leaves few resources or little capacity for any other initiatives.

Natural disasters

In St Vincent and the Grenadines, the effects of the COVID-19 pandemic were compounded by the volcanic eruption of La Soufrière in April 2021, followed by Hurricane Elsa in June 2021. This compromised the country's capacity to participate in some of the interventions because of resource and capacity issues; for example, school-based interventions could not be conducted as schools were being used to house displaced citizens.

ACHIEVEMENTS

The project created the capacity for Jamaica, for the first time, to be able to measure the salt, sugar, fat, and trans fat content of packaged foods. As a result of this enhanced capacity, the Minister of Health and Wellness of Jamaica was able to provide the Parliament for the first time with the results of an analysis of 308 samples tested for trans and saturated fats, and to report that about one third of the products tested contained varying levels of trans fats (15).

The project also supported CARICOM to convene joint meetings of ministers of health and ministers of trade to address NCDs, including a regional policy to ban trans fats agreed in April 2022. The project, working directly with the Ministry of Health and Wellness Jamaica, directly engaged with manufacturers in Jamaica to remove industrially produced trans fatty acids.

Fifteen small grants were awarded under the project's Small Grants Program to implement new or enhance existing agricultural activities to generate income and provide own-consumption. Three small grants were awarded in Saint Kitts and Nevis, three in Saint Vincent and the Grenadines, and nine in Jamaica, and all faced challenges related to COVID-19. Most of the beneficiaries were women and they were trained through technical support provided through the Rural Agricultural Development Agency in Jamaica.

Training in crop production and management, climate resilience, nutritional marketing, and agri-business development (Women's Farmers Academy) was also conducted with Helen's Daughters, an organization in Saint Lucia, for women in Saint Kitts and Nevis, and Saint Vincent and the Grenadines.

The revision of two syllabuses of the Caribbean Examinations Council, the revision the Health and Family Life Education curriculum for ages 5–12 years, and the development of an early childhood Health and Family Life Education curriculum for ages 3–4 years to enhance NCD risk education provided a CARICOM-wide benefit.

The project website will house a range of regional public goods including: digital support for a Health and Family Life Education (HFLE) curriculum, comprising educational videos and classroom worksheets, among other things, created in collaboration with the Ashe Theatre Company and Slow Food Barbados; Women's Farmers Academy lessons; recipes from the marketable meals intervention; and 10 sermons

and 10 bible studies co-created with the Jamaica Council of Churches.

Project initiatives have been aligned with the new Ministry of Health and Wellness Jamaica NCD plan 2022–2030.

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Mejorar la seguridad nutricional de los hogares y la salud pública en la Comunidad del Caribe, 2018-2022

RESUMEN El Caribe está registrando un empeoramiento de la epidemia de obesidad y enfermedades no transmisibles (ENT) y presenta las peores tasas de mortalidad prematura por enfermedades cardiovasculares de la Región de las Américas. La creación de entornos propicios para mejorar la diversidad alimentaria contribuiría a reducir la obesidad y las ENT relacionadas con la alimentación. El proyecto "Mejorar la seguridad nutricional de los hogares y la salud pública en CARICOM" tiene por objetivo ampliar la diversidad alimentaria en el Caribe y acordar y ejecutar intervenciones efectivas con perspectiva de género para mejorar la soberanía alimentaria, la seguridad alimentaria de los hogares y la nutrición en los Estados de CARICOM. Se llevaron a cabo investigaciones primarias cuantitativas y cualitativas, revisiones exploratorias, ejecución de intervenciones y actividades de difusión, y se impulsó la participación de las partes interesadas. En este artículo se describen el diseño y la ejecución del proyecto en general, se analizan sus desafíos y limitaciones, y se presentan sus logros básicos para que se tengan en cuenta en la labor adicional que realizan los pequeños Estados insulares en desarrollo de CARICOM con el fin de impulsar la agenda de nutrición en el Caribe. Los resultados de las actividades de investigación del proyecto se presentan en otros documentos publicados en este número especial sobre seguridad nutricional en los Estados de CARICOM.

Palabras clave Enfermedades no transmisibles, seguridad alimentaria y nutricional, salud pública, Región del Caribe.

Melhoria da segurança nutricional doméstica e da saúde pública na CARICOM, 2018-2022

RESUMO O Caribe está passando por um agravamento da epidemia de obesidade e doenças não transmissíveis (DNTs) e tem as piores taxas de mortalidade prematura por doenças cardiovasculares na Região das Américas. A criação de ambientes favoráveis para melhorar a diversidade alimentar ajudaria a reduzir a obesidade e as DNTs relacionadas à alimentação. O projeto *Improving Household Nutrition Security and Public Health in the CARICOM* [Melhoria da segurança nutricional doméstica e da saúde pública na CARICOM] teve como objetivo aumentar a diversidade alimentar no Caribe e determinar e implementar intervenções eficazes e sensíveis ao gênero para melhorar a soberania alimentar, a segurança alimentar doméstica e a nutrição nos estados da CARICOM. Foram realizadas pesquisas quantitativas e qualitativas primárias, revisões de escopo, ações de envolvimento das partes interessadas, implementação de intervenções e atividades de divulgação. Este documento descreve a elaboração e a implementação geral do projeto, analisa seus desafios e limitações e apresenta as principais realizações para informar o trabalho futuro nos pequenos Estados insulares em desenvolvimento em toda a CARICOM, visando a avançar a agenda nutricional no Caribe. Os resultados das atividades de pesquisa do projeto são apresentados em outros artigos publicados neste número especial sobre segurança nutricional nos Estados da CARICOM.

Palavras-chave Doenças não transmissíveis, segurança alimentar e nutricional, saúde pública, Região do Caribe.