

A woman in a green GOAL t-shirt and cap sits in the foreground of a light blue boat. A man in a light blue shirt is at the helm. The boat is on a body of water under a green bridge. A large blue bag is on the boat. The GOAL logo is visible in the top right and on the woman's clothing.

GOAL

LEARNING BRIEF

**GOAL'S BLUE ECONOMY PROGRAMME REDUCES
FOOD INSECURITY RISK AMONG FISHING
COMMUNITIES IN LATIN AMERICA AND
THE CARIBBEAN (LAC), 2016-2023**

EXECUTIVE SUMMARY

This learning brief looks at the impact of the “Resilience of the Blue Economy” Programme on the food security risk of GOAL’s target fishing communities in Latin America and the Caribbean region (LAC). The learnings are based on an independent evaluation carried out in the last quarter of 2023 of the programme implemented from 2016 -to 2023 in Colombia, Honduras and Haiti. Funded by USAID BHA (Bureau for Humanitarian Affairs), IUCN (International Union for the Conservation of Nature), MAR Fund (Mesoamerican Reef Fund), European Union, Nordic Fund for development, Irish Aid, Faroe Island Government, and Electric Ireland, the programme supported 32,795 people from 6,559 fishing families¹ strengthen their economic security and climate resilience between 2016-2023.

The evaluation found that the target communities perceived a very strong positive food security impact of the programme, with the majority reporting an increase in their capacity to be food and nutrition secure and an increase in their preparedness and response capacity to shocks that would threaten their food and nutrition security. The majority also reported that local economic systems have been strengthened, enabling people to produce food sustainably, in a climate resilient way. The quantitative data from the evaluation supported this hypothesis to some extent with acceptable food consumption scores reported by the majority of fishing families in Honduras and Colombia, less so in Haiti, where food insecurity risk is much higher. A key limitation of the evaluation was a lack of baseline data on household food security to compare against however triangulating the qualitative and quantitative data indicates a positive effect on food security risk in these communities.

GOAL is working in highly food and economically insecure communities in these countries and this evaluation clearly showed progress has been made in strengthening the market systems, increasing income and reducing both immediate and future food insecurity risk. Although the programme was not designed to reduce food insecurity it has succeeded in doing this, which indicates the significant potential impact if the programme design was expanded to include food and nutrition security as a core objective. As continuous climate, economic, political, and social crises affect these communities and continue to contribute to their risk of food and nutrition insecurity, further investment is needed to bring them further along from a state of crisis to resilience.

¹ This data is from Colombia, Honduras and Guatemala from 2016-2023

DATE

June 2024

THEME(S)

Food & Nutrition security, economic security, resilience, blue economy

LOCATION

LAC region:
Honduras, Haiti,
Colombia

DONOR(S)

USAID BHA (Bureau for Humanitarian Affairs), IUCN (International Union for the Conservation of Nature), MAR Fund (Mesoamerican Reef Fund), Nordic Fund for development, Irish Aid, Faroe Island Government, and Electric Ireland

INTERVENTION DATE(S)

2016 - 2023



BACKGROUND

The Blue Economy (BE) is vital to LAC, enhancing regional prosperity through tourism, fishing, aquaculture, and renewable energies, and supporting the cultural and economic livelihoods of its indigenous and Afro-descendant communities. In 2020, it supported over 2.3 million jobs in fishing and aquaculture² in LAC and produced 12.3 million tons of fish—15.3% of global marine output³. Artisanal fisheries are vital in the region, comprising 54% of the industry’s landed value.⁴ Mangrove forests and coral reefs offer vital ecosystem services, protecting coastlines and communities, supporting biodiversity, and sequestering carbon. However, artisanal fishing communities face climate shocks and stresses, economic instability, and food and nutrition insecurity. Hurricanes, rising sea levels and warmer seas devastate infrastructure, disrupt fish populations and displace communities. Overfishing, often by illegal industrial fleets, threatens biodiversity and local diets. Communities’ dependency on fishing, coupled with limited market access and unfair trade practices, makes them vulnerable to economic instability.⁵ Social exclusion of these indigenous and afro-descendant communities results in limited access to basic services such as water, sanitation, shelter, transport, energy and financial services further exacerbating their food and nutrition security risk.⁴

2 The World Bank Group, 2023. <https://www.worldbank.org/en/news/infographic/2023/06/07/oceans-blue-economy-in-latin-america-and-the-caribbean>

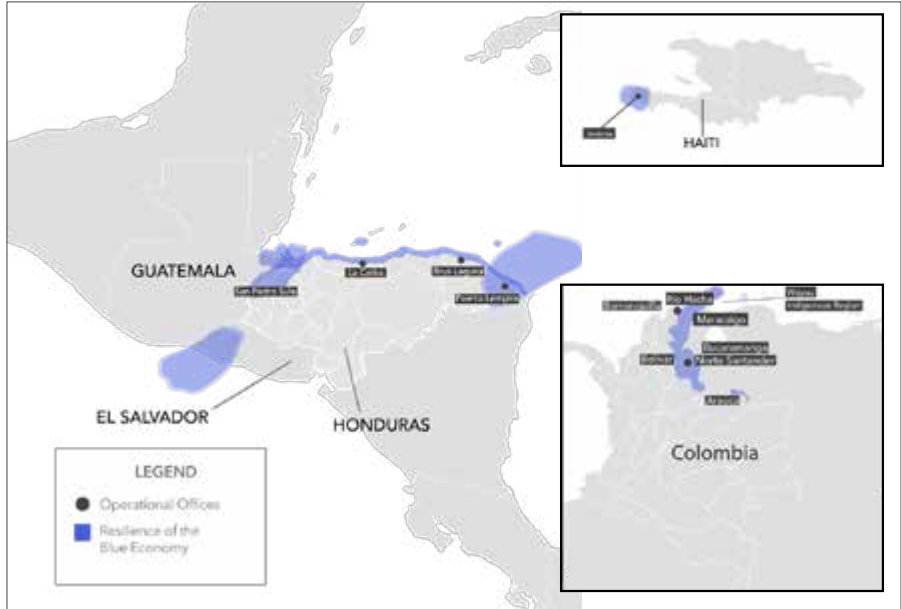
3 FAO, 2023. <https://www.fao.org/3/cc4627en/cc4627en.pdf>

4 TBTI, 2018. <http://toobigtoignore.net/latin-america-and-caribbean/>

5 GOAL R4S (Resilience for Social System) analysis on fisheries and financial systems in Honduras (2016, 2020), Colombia (2022, 2023) & Haiti (2023-24)

GOAL's Resilience of the BE Programme aims to support the critical role of artisanal fishing communities to address the multiple challenges and opportunities present through an integrated 'Local Systems' approach; from improved livelihoods and increased incomes, food security, protection of biodiversity and ecosystems, inclusion, good governance, climate adaptation, and mitigation to strengthened resilience⁶. Since 2011, GOAL has been supporting livelihoods opportunities and improving the governance of marine coastal resources for indigenous and afro-descendent communities across almost 1,500 km of coastline in the LAC region (Colombia, Honduras, Haiti, Guatemala, El Salvador). GOAL has supported more than 6,559 fishers directly and 32,795 family members of the fishers indirectly to improve economic security as well as increase resilience to climate related hazards. This was achieved through partnerships with many permanent actors in the system which were critical in achieving this outcome and co-benefitted from the actions, including fishing organisations, private sector partners, civil society organisations and government bodies.

Figure 1: GOAL Blue Economy Programme intervention areas in LAC





An evaluation of the BE Programme was conducted from October to December 2023 by an external consultant using mixed methodology of remote and face to face interviews, with a combination of open and closed questions targeting individual and organisational beneficiaries and non-beneficiaries. The total sample was 144 beneficiaries, 63% were Indigenous, 19% Mestizo and 18% Afro-descendant, with an age range between 18 and 94 years (77% men and 23% women). The majority of the 144 beneficiaries were from Colombia (n=69) and Honduras (n=62) with smaller numbers from Haiti (n=12) and 1 respondent from Guatemala.



Data was collected from 21 non-beneficiaries but since the sample was so small this was not included in the data analysis for food security indicators. Data collection took place between 8th October-2nd November. Data analysis took place during November in coordination with GOAL MEAL and Programme Technical teams with the report shared and findings disseminated via an online webinar in December 2023.

DESCRIPTION OF PROGRAMME ACTIVITIES

GOAL developed the 12 Essentials to guide GOAL's Resilience of the BE Programme (see graphic below) which focus on three main outcomes: economic, social and environmental.

Figure 2: GOAL LAC's 12 Essentials for building Resilience of the Blue Economy

1	Transparent and accessible market information supporting effective marketing strategies.	ECONOMIC
2	Relevant and accessible financial services.	
3	Relevant and accessible Business Development Services.	
4	Stable and equitable commercial relationships (between fishers, intermediaries, buyers and supporting service providers and suppliers).	
5	Necessary infrastructure, equipment, knowledge and procedures in place to ensure quality, safety, market and food standards are met.	SOCIAL
6	Clear legal and regulatory framework for fisheries market supported by strong market coordination and oversight from market actors.	
7	Equitable participation of women, youth and vulnerable groups across fisheries as well as a focus on social responsibility to improve access to basic services at community level.	
8	A functional traceability system adopted across the market system.	
9	Scientific research and development informs sustainable fisheries management, innovations and new technologies.	ENVIRONMENTAL
10	A Good Governance system for coastal marine resources based on participation and engagement of all stakeholders.	
11	Fishers employing Good and Responsible Fishing Practices.	
12	Early Warning Systems operational for principal hazards.	

MAIN ACTIVITIES AND OUTCOMES IMPLEMENTED IN THE RESILIENCE OF THE BE PROGRAMME ACROSS THE LAC REGION 2016-2023:

- **Increased access to inputs for fishers and fish processors:** including cold chain infrastructure, fishing equipment, boats, repair equipment and services, fish processing equipment through direct provision of inputs and through increased financial inclusion. Climate mitigative input access was increased through solar powered cold chain and gas rather than diesel powered boat engines. Skills building was also provided for stakeholders in the fisheries system to reach industry standards of packaging and food hygiene and safety and business development skills.
- **Increased financial inclusion:** through financial skills training, linkages to financial service providers, facilitating access to formal and informal financial services including the co-creation of new financial products tailored to needs of fishermen and women with local financial service providers.
- **Livelihood diversification:** creation of new products using fisheries waste (fish leather) and seafood products for specialized markets e.g. cured jellyfish for Asian market
- **Strengthened market inclusion:** through supporting fishing associations of small-scale fishers establish and build relationships with local, national and international market actors, identify market demands and support small scale fishers meet this demand through improving product quality, traceability and governance.
- **Social inclusion:** supported the participation of women in leadership and community governance spaces in the fisheries system, supported generation of new employment opportunities and financial inclusion specifically for women.
- **Strengthened governance-** supported fisher associations to formalize and comply with the government laws which increased their access to services and market opportunities. Developed a Central American sustainable seafood traceability system with government stakeholders which supports the demand and supply of sustainably caught seafood that complies with food safety standards which in turn increases market access and artisanal fishers' income. Supported the relevant government ministries to develop and strengthen food safety standards, compliance regulation and enforcement. GOAL advocated for increased fisher rights to access fishing grounds and protection of fish stocks
- **Marine coastal ecosystem management through strengthened policy and governance:** Increased understanding and buy in for sustainable fishing practices. Built capacities and protocols for the biological monitoring of marine-coastal species thus supporting the monitoring of sustainable fishing practices. Facilitated fisher associations with local government to develop and implement fishery and mangrove management plans to avoid overfishing, protecting biodiversity and

maintaining natural coastal storm barriers. Progression of territorial use rights for fishers & governance of marine coastal resources. These maintain viability of small-scale fishing livelihood for future generations. Quantification of carbon stocks in mangrove ecosystems to incorporate them into the community governance models adopted in La Mosquitia, Honduras. Development and implementation of the stock quantification protocol for the generation of the National Blue Carbon Inventory of Honduras

- **Early warning and response systems strengthened:** which reduced risk of death and injury of fishermen and women which in turn protects families's integrity, income and livelihood potential.
- **Research and Innovation:** R4S (resilience of socio-economic system) analysis was carried out on fisheries food systems in Haiti, Honduras and Colombia to inform programming. Additional R4S were carried out in financial system and handicraft systems that the fishing communities in Colombia depend on. The 1st study of blue carbon stock was carried out in mangrove forests in LAC, informing climate mitigation strategies.

Case Study: With GOAL's support in business management, governance, market access, financial inclusion, the development of a traceability system and quality control certification 23 fishing associations formed their own second level organisation, REDPESCAH, Red de Pescadores de la Costa Norte de Honduras (Network of Fishermen of the North coast of Honduras) to improve access to markets for all of their members. REDPESCAH were successful in securing a supplier contract with Honduras's main national grocery store franchise, Supermercados la Colonia, to supply seafood at fair market prices increasing profit and reducing price fluctuations for the fishers.

LEARNINGS

Food insecurity status of artisanal fishing communities: The evaluation respondents in all three countries (Honduras, Colombia and Haiti) were consuming an acceptable diversity and frequency of food groups on a weekly basis with 97% of respondents having an acceptable food consumption score of >35, however over 50% of respondents in Haiti and Colombia had poor access to sufficient quantities of food with the majority choosing to regularly reduce the quantity of food they consumed by reducing meal size and frequency. As result, the resilience to food insecurity in all three countries is being compromised due to economic insecurity with 75% of respondents in Haiti, 54.8% in Honduras and 52.17% in Colombia reported they did not have enough money to meet their food needs in the last week. In all 3 countries 50% or more of monthly income is used to buy food.

Table 1: Analysis of the food security indicators using the WFP CARI (Consolidated Approach for Reporting Indicators of Food Security) ⁷

FOOD SECURITY INDICATOR	LOCATIONS	FOOD SECURE	MARGINALLY FOOD SECURE	MODERATELY FOOD INSECURE	SEVERELY FOOD INSECURE
Food Consumption Score		Acceptable		borderline	poor
	Average	98%		2%	0%
	Honduras	97%		3.20%	0
	Colombia	100%		2%	0
	Haiti	91%		8.30%	0
Livelihood Coping Strategy Index		No coping	stressed	crisis	emergency
	Average	19.6%	47.7%	23.7%	9.0%
	Honduras	57.0%	32.9%	10.1%	0.0%
	Colombia	50.5%	29.4%	18.6%	1.6%
	Haiti	19.5%	47.7%	23.7%	9.1%

⁷ [WFP CARI \(Consolidated Approach for Reporting Indicators of Food Security\) Guidance 2021](#)

Of the three countries, fishermen and women in Honduras have a good food security status with the majority being marginally food secure, in Colombia they are moderately food insecure and Haiti they are the most food insecure according to household level food security indicators. This data is not surprising considering the multiple political, economic and social crises occurring in Haiti, with Grand Anse, the BE target location classified as Integrated Phase Classification (IPC) 4 acute food insecurity.⁸ In Colombia GOAL works with the most vulnerable communities to food and nutrition insecurity in La Guajira, which have the highest rates of malnutrition in the country.⁹

Malnutrition risk: Nutritional data **was not** collected in these communities however triangulation of the existing data suggests population level protein and micronutrient deficiencies, particularly zinc, iron, calcium, potassium, iodine, Vitamin D, B vitamins and E deficiencies (which are common in food insecure populations) are unlikely in these communities due to regular consumption of multiple types of seafood which are rich sources of these nutrients. The evaluation data showed that respondents consume fish six days of the week, frequently eating shellfish, crabs, shrimp and lobster. However, as these fishing families reported to struggle accessing enough quantity of food, they are food insecure and may suffer from inadequate macronutrient intakes from staple foods. Additionally, since 63% of households struggle to meet their basic needs including water, hygiene and health needs, malnutrition due to water borne diseases could be a risk among these populations. Finally, household food dynamics and Maternal and Infant and Young Child Nutrition (MIYCN) practices were not explored and there may be risk of multiple forms of malnutrition within fishing families, particularly for Pregnant and Lactating Women and children under 5 years.

Figure 3: The 6 pillars of Food Security¹⁰



8 Haiti IPC 2023-2024, <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1156571/?iso3=HTI>

9 ACAPS, briefing note, La Guajira, Colombia, October 2023

10 HLPE. 2020. *Food security and nutrition: building a global narrative towards 2030. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.*

Positive impact on household and community food security: According to the 6 pillars of food security the BE programme has directly addressed 5 of the 6 pillars through its portfolio of interventions, food access, availability, stability, agency and sustainability, with only the pillar of utilisation not being addressed. See figure 3 and 4 for more details. The perception of a positive impact of the BE Programme among the fishermen and women’s food security risk is very strong, with 61% reporting an increase in their capacity to be food and nutrition secure and 63% reporting an increase in their preparedness and response capacity to shocks that would threaten their food and nutrition security. 72% also reported that local economic systems had been strengthened enabling people to produce food sustainably, in a climate resilient way. The main reasons for reporting improved food security as a result of the BE programme were the increase in income, reported by 90% of respondents, increased market access (38%), which increased both the financial and physical access to food and increased financial inclusion (42%) which increases the stability of their access and availability to food via savings and loans that can be utilised in times of crisis.

Figure 4: GOAL’s Resilience of the Blue Economy programme impact on the pillars of Food Security¹¹

ACCESS	AVAILABILITY	STABILITY	UTILISATION	SUSTAINABILITY	AGENCY
Increased income & access to savings & loans increases financial access to food	Increased seafood quantity and quality caught and increased diversification of seafood products	Increased financial inclusion with increased access to savings & loans from formal finance institutes	This pillar focuses on the nutritional quality of the diet, behavioural determinants of food and nutrition insecurity including access to WASH and health services and has not been addressed to date in GOAL’s Resilience of the Blue Economy programme in LAC	Mangrove and marine ecosystem restoration & protection protect seafood habitat, biodiversity, fish stocks and coastal storm protection	Strengthened governance of small scale fishing organisations and empowerment of women in the fisheries food system
Increased market access & improved fishing inputs increases physical access to food	Reduced food loss and waste through improved cold chain, preservation and transport infrastructure	Diversified livelihoods to provide income when fish catch is low or during off season		Tracability system creates demand and supply for sustainably managed seafood incentivising fishers to comply with sustainable fishing practises.	Advocacy for fisher rights and strengthened surveillance of IUU to protect their fishing access & rights

11 [HLPE, 2020, Food security and nutrition: building a global narrative towards 2030](#). A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.



The length and complexity of the programme is important to consider when reviewing its impact but so too is the vulnerability of the countries and systems according to GOAL's Crisis to resilience strategy. The evaluation showed that the target population in Honduras reported higher positive impact on immediate and future food security risk, followed by Colombia and to a lower extent by Haiti. It also noted that the programme in Honduras was implemented for much longer (since 2011) and with all the 12 Blue Economy Essentials compared to the other two countries (since 2020).

However, it could not conclude that the food security impact in Honduras was greater than that of Colombia or Haiti due to a longer and more diverse, complex programme because the countries and regions within countries experience very different food security risks from each other. Looking at GOAL's "Crisis to Resilience" ¹²framework they are in different places with Haiti firmly at crisis stage, with systems in a state of collapse or near collapse, so programme design here needs to focus on supporting fishermen and women meet their basic needs for survival compared to Honduras where systems are functioning and longer-term system change is feasible.

Limitations of the evaluation: Since food and nutrition security was not an objective of the Resilience of the BE programme in LAC, food security risk and status has not been measured until the evaluation took place. This meant that there was no baseline data to compare the household level quantitative data (e.g. food consumption score, diet diversity score, coping strategy index etc.) against those found by the evaluation. Therefore, the impact on food security is based primarily on endline data reported by the evaluation and qualitative data i.e. the perceptions of the target communities and their own interpretation of food security and their vulnerability to it. This qualitative data is strong and varied and provides useful insights into the food security impact of the programme, however, it would have been further strengthened if it could be triangulated with baseline quantitative analysis using global standard food security indicators. Further limitations of the evaluation include small sample sizes of respondents in Haiti (n=12) and Guatemala (n=1) and of non-beneficiaries across the 4 countries (n=21) compared to beneficiaries (n=144) due to access issues, security concerns in Haiti and time and budgetary constraints for travel. This meant that the analysis was limited mainly to Colombia and Honduras for beneficiaries with limited analysis from Haiti. The one beneficiary respondent from Guatemala and the non-beneficiaries were not included.

12 [GOAL 2025 Crisis to Resilience Global Strategy](#)

RECOMMENDATIONS

Expansion of Blue Economy Programme objectives to include food and nutrition security:

- The objectives of the programme should go beyond economic, social and environmental benefits to include the impact on food and nutrition security.
- To improve nutrition security the addition of social behaviour change interventions are required to address behavioural determinants of malnutrition and integration of health and WASH programming if/when they are major drivers of malnutrition in target fishing communities.

Monitoring, Evaluation and Learning:

- Ensure food and nutrition security is included in the results chain of BE projects, prioritizing food security outcome indicators of Food Consumption Score and reduced Coping Strategy Index. Livelihood Coping Strategy Index should also be considered due to it being a proxy for household economic and food security.
- The BE programme is a system development approach that is working to transform the fisheries food system to be sustainable and inclusive for small scale fishing communities. Due to the complex nature of strengthening food systems it is also difficult to measure in a quantifiable manner the impact of such work. As GOAL strives to expand its food system development work globally there is a need for guidance on how to measure impact, on both food systems and the communities that depend on these systems. This is likely going to a combination of qualitative and quantitative data. Going forward, GOAL will use its [ARC-D tool](#)¹³ for measuring the impact of system changes on the fishing communities' climate resilience as a major outcome and inform their resilience to food and economic security.

Funding: The BE programme has potential to be expanded globally, particularly if the above recommendation on widening the objectives to include food and nutrition security. GOAL and other organizations can pursue climate financing focused on sustainable food system transformation and climate adaptation and mitigation funding with food and nutrition security outcomes. This has been demonstrated recently with the expansion of the BE programme into GOAL Sierra Leone and South Sudan.

13 <https://www.goalglobal.org/other-programme-priorities/disaster-resilience/>

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