



Food Security Evaluation of GOAL's Blue Economy

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Executive Summary

GOAL's 'Resilience of the Blue Economy (BE¹)' program aims to support the critical role of coastal communities to address the multiple challenges and opportunities present in the BE 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 resilience².

GOAL supports livelihoods opportunities and improves governance of marine coastal resources for indigenous and afro-descendent communities across almost 1,500 km of coastline in the Latin America and the Caribbean (LAC) region (Colombia, Honduras, Haiti, Guatemala, El Salvador), supporting more than 5,000³ fishers and their families directly to have improved food and economic security as well as increased resilience to climate related hazards. To know the impact on the food security of the populations served, the evaluation of the execution of the program in the LAC region was proposed to: i) describe the scale of GOAL's BE work, ii) assess and document the relevance, impact, effectiveness, and sustainability of GOAL's BE work into food security and iii) make recommendations, as appropriate, for improvements and scale up of GOAL's BE work.

The methodology used included the review of documentary information, MEAL data and interviews with GOAL teams, key stakeholders, beneficiaries, and non-beneficiaries (face to face and virtual). The total sample interviewed was: 5 communities (Colombia), 10 fisher's organizations (Honduras), 163 people (144 beneficiaries and 19 non-beneficiaries), of which 69% were indigenous, 18% afro-descendant and 18% mestizo, with an age range between 18 and 94 years (77% men and 23% women).

Regarding relevance, the project has responded satisfactorily to the needs of both the countries and the beneficiaries. Although it can't be quantitatively demonstrated that the BE interventions achieved food security objectives, due to the lack of a baseline and previous measurements of key indicators (e.g., improved household food consumption score, diet diversification, and reduction in coping mechanisms), it has been demonstrated⁴ that fishers have increased their income and the quantity of food consumed, as well as market access.

Regarding the FS indicators, Food Consumption Score is 35 or higher in 97% of the participant population, with high dependence on fish consumption to achieve that score. Results showed that Haiti (37) and Colombia's (21.85) Reduced Coping Strategies Index- rCSI indicates food insecurity, Haiti having the highest levels of food insecurity, whereas respondents in Honduras (15.24) had low use of coping strategies and are classified as marginally food secure. Haiti is where there is a greater use of Livelihood Coping Strategies - LCS (9% emergency, 23.67% crisis and 47.73% stress) for a total of 80.49% of those interviewed implementing one or more of these

¹ BE: Blue Economy

² GOAL Annual Report 2020

³ According to the Terms of Reference background.

⁴ Specially through MiPesca project results which were available for this evaluation.

strategies. In Colombia, 49.53% of those interviewed implement some strategy (1.56% emergency, 18.59% crisis and 29.38% stress), while in Honduras, the country with the least use of LCS, 43% of the beneficiaries do so (10.08% crisis and 32.9% stress). Fishers monthly average income is close to National Wage Income in Colombia and Honduras, while in Haiti is 65% higher. The results of the non-beneficiaries were similar or inferior in most cases to those obtained by the beneficiaries.

During the evaluation, favorable results were also evident in terms of governance, access to finance services, traceability, community resilience and management of marine coastal resources. It is expected that the results of GOAL's BE will be maintained over time, but this will depend on the continuity of strategies such as associativity, governance in the management of marine fishing resources, strategic alliances, and adoption of created capacities.

GOAL's BE has generated multiple innovations and learnings that can be used to scale the approach to other geographic areas and environments, using the R4S⁵ methodology to adapt the essentials of BE to the particular conditions of each environment. Through the implementation of their 12 Essentials, GOAL have built a work path for those organizations or programs that wish to implement BE through a resilient livelihoods approach.

⁵ R4S is an innovative approach to build resilience of vulnerable communities using a systems approach.

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Glossary

BE: Blue Economy
CPI: Consumer Price Index
DRR: Disaster Risk Reduction
EU: European Union
FAO: Food and Agriculture Organization
FCSI: Food Consumption Score Index
FOGAPE: Fondo de Garantía para la Pesca Artesanal
FS: Food Security
HDDS: Household Dietary Diversity Score
IACHR: Inter-American Commission on Human Rights
ICSP: Ireland's Civil Society Partnership
IFI: Intermediary Financial Institutions
LAC: Latin America and the Caribbean region
LCSI: Livelihood Coping Strategies Index
MAR: Mesoamerican Reef
MEAL: Monitoring, evaluation, accountability, and learning
R4S: Resilience for Social Systems
RCBP: Regional Coastal Biodiversity Project
rCSI: Reduced Coping Strategies Index score
USAID: United States Agency for International Development
WFP: World Food Programme

I. INTRODUCTION

GOAL's work with vulnerable indigenous and afro-descendent communities in Latin America and the Caribbean (LAC): Colombia, Honduras, Haiti, Guatemala and El Salvador, seeks to demonstrate how true sustainability may progress the resilience of the Blue Economy (BE), by using an innovative Local Systems Approach, based on improved livelihoods and increased incomes, food security, protection of biodiversity and ecosystems, inclusion, good governance, and climate adaptation and mitigation. This approach was implemented across almost 1,500 km of coastline in the LAC region, giving support to more than 5,000⁶ fishers and their families directly as well as local communities who benefits from improved management of fisheries and marine coastal resources. The goal was to improve food and economic security while also increasing resilience to climate related hazards.

The conceptual framework provided for this evaluation is delimited by the actions that, within the framework of the BE, have an impact on food and nutrition security. The actions were: improved subsistence production, better commercial production (linked to market access and the availability of nutritionally diverse products) and the consumption of an adequate diet by all. To carry out this evaluation it will be necessary to review the work that GOAL has carried out through the different projects implemented in the region, with emphasis on the strengthening of the market system, the local systems approach, climate smart actions, including business, financial and business development services, capacity building and governance.

Objectives of the evaluation

- Describe the scale of GOAL's BE work of the last four years by mapping out geographic spread, number of projects, interventions type, sectors covered, expenditure and reach.
- Assess and document the relevance, effectiveness, impact, and sustainability of GOAL's BE work in food security over the last four years.
- Make recommendations, as appropriate, for improvements and scale up of GOAL's BE work in the current and other geographical locations.

This evaluation seeks to answer questions related to the scale of the BE work of GOAL, the objectives and design of the BE interventions according to nutritional and food security needs, the achievement of food security objectives and results, the effects in food security among participating coastal communities, the likelihood that net benefits of the BE interventions in food security will prevail, the innovations and added value of GOAL interventions in the BE, and the learnings and recommendations for improvement and scaling.

A review of the BE Program's Theory of Change will be conducted, considering the intervention strategy and approach. This will include an examination of identified risks and assumptions, the logical connection between levels of results, and how the desired change contributes to Agenda 2030, particularly to the goals related to GOAL's work.

⁶ According to the Terms on Reference background.

II. EVALUATION METHODOLOGY

An approach based on the combination of several techniques was applied to obtain valid and reliable data, through five levels of assessment: i) Findings from project documents and MEAL, ii) Primary data collection (qualitative and quantitative), iii) Analysis of collected information based on the evaluation questions, iv) Comparison of data collected and MEAL (indicators and targets) to identify main findings (results per evaluated criteria) and v) Conclusive judgments and recommendations. The revision of documents and MEAL made possible the understanding of the scope of the actions carried out by GOAL's BE projects and served as input in the preparation of the primary data collection tools as well as to support the main findings of the evaluation.

Primary data collection and sample definition

Research questions were established in the Terms of Reference and additional questions suggested by the evaluation team were also included. A unique assessment tool (Annex 1) with all open (narrative answers) and multiple choice (selection between options) evaluation questions was developed, while determining which ones would be answered by each type of participating audience, including:

- Key stakeholders-officials: remote and face-to-face interviews with open questions.
- Beneficiary organizations: face-to-face interviews with open questions.
- Individuals (beneficiaries and non-beneficiaries): remote and face-to-face interviews with close questions.

Sample definition ensured proper representation of gender, countries, ethnic groups, levels of vulnerability and productive activities as follows:

- **Colombia**⁷: 5 communities, 69 individual beneficiaries and 12 individual non-beneficiaries.
- **Honduras**: 9 beneficiary organizations, 62 individual beneficiaries and 9 individual non-beneficiaries.
- **Guatemala**: 1 beneficiary⁸.
- **Haiti**⁹: 12 beneficiaries.

The total sample was 144 beneficiaries of which 63% are Indigenous, 19% Mestizo and 18% Afro-descendant, with an age range between 18 and 94 years (77% men and 23% women).

Site visits

Visits to Honduras and Colombia were carried out to conduct face-to-face interviews in the following dates: Colombia (Guajira) October 8-13th, Honduras (La Mosquitia) October

⁷ 100% of the interviewees in Colombia were indigenous and for this reason they were not included in the breakdown by ethnicity.

⁸ Given that the sample is much smaller than that obtained in the other countries, these data are not included in the analysis of the information. However, they are available in the research database.

⁹ 11 out of 12 interviewees in Haiti were Afro-descendants and men and for that reason no data is presented in the breakdown by ethnicity and gender.

16-19th and Honduras (Atlantic Coast) October 30th- November 2nd. Last minute changes on the original schedule were necessary due to an unexpected change in political relations between Costa Rica and Honduras, that resulted in a visa requirement to travel to Honduras since October 10th. However, it was solved with support from local teams and by moving forward (two weeks) the draft report delivery dates.

Limitations of the evaluation

During the evaluation, the local teams had difficulty in achieving the participation of *non-beneficiaries* in the interviews, because they have not established relationships of trust with them to discuss sensitive topics such as income and consumption habits. This made it difficult to obtain a significant sample that would allow comparisons to be made with the beneficiary data. However, these *data have been included* in the report since, despite the small sample size, they have yielded results in line with what was expected.

The selection of the sample by the local teams was done prioritizing the intervention areas and those who had time availability were interviewed. For this reason, the final sample is a result of what prevails in the communities in terms of ethnicity, age, and gender.

Due to time and budget limitations, site visits to Haiti and Guatemala were not carried out. The evaluation team developed a link with the survey translated into French for distribution among the beneficiaries in Haiti to complete it on their own. However, this initiative did not prosper due to the complexity of the questions, especially those related to food security indicators. In Haiti there was support from the local team to carry out some interviews, but the sample size is considerably lower than in Colombia and Honduras, where site visits were carried out. However, these *data have been included* in the report since, despite the small sample size, they have yielded results in line with what was expected.

III. EVALUATION RESULTS

III.1 Description of the BE Program

GOAL began working in the Blue Economy in 2011 through the IDB funded Pronegocios program, EU FORCUENCAs, USAID MAREA and other projects¹⁰. During this period, the foundations were laid for the implementation of BE and work was done on its positioning. As a result of these learnings, from 2016 to 2023, GOAL has continued to implement its BE Program in Latin America and the Caribbean through a set of projects developed in Honduras (Gracias a Dios, Colón, Atlántida and Cortés departments), Colombia (La Guajira), Haiti (Region of Grand'Anse), Guatemala (Río Motagua basin) and El Salvador (Río Paz basin), which are detailed in Annex 1. The scale of the BE work of GOAL in Latin America is presented in Table 1.

¹⁰ The data included in this evaluation corresponds to the period between 2019-2023, which is extended to 2016 because it is the period in which MiPesca begins.

Table 1. Latin America. GOAL's BE work (2016-2023)¹¹.

Country and area	Project name	Partner and Expenditure	Reach
Honduras: la Mosquitia	"Participación ciudadana para el acceso a recursos y políticas locales de desarrollo de los pueblos indígenas y afro-descendientes de la Moskitia Hondureña"	European Union € 809,862.01 (2016-2019)	Nine (9) Business units (268 members), three (3) Territorial Councils, two (2) indigenous organizations, three (3) Municipal Women's Offices and three (3) Citizen Transparency Commissions.
Honduras: Atlantic Coast	"Construyendo bases para dinamizar las economías locales de mujeres y jóvenes de los pueblos tawahka, pech, miskitu, tolupán y garífuna, respetando la dignidad, los derechos humanos y la identidad de los Pueblos Indígenas y Afrodescendientes de Honduras (PIAH)."	European Union € 375,733.9 - (February 2019-July 2022)	640 young people and women from the PIAH towns, 16 economic initiatives (3,200 people), 4 territorial councils and 3 tribal councils (70 indigenous leaders, 10 for each council and tribe), 3 Municipal officials
Honduras: Cortés, Atlántida, Colón y Gracias a Dios.	Resiliencia de la Economía Azul y del Ecosistema Costero del Norte de Honduras: Mi Pesca	\$3.096.000 – Nordic Fund for Development through IADB/MIF (2016-2022)	18 fisher organizations (728 direct beneficiaries), 1074 participants trained (63% men y 37% women).
Honduras: Guanaja, Tela, El Porvenir, Balfate, and Roatán	MARFUND: Promoting coastal marine resilience and the BE in the Honduran Caribbean	\$100.000 - MARFUND/USAID 7 months (April 30th, 2023 – November 15th, 2023)	22 fisher organizations and 521 direct beneficiaries
	BRIDGE: Risk-sharing solutions to catalyze private investment and enterprise development for conserving and restoring the natural capital of the Mesoamerican Reef	MARFUND/USAID May 2023 to September 2024	
Honduras: La Ceiba and the Coastal Marine Communities (Atlantic North: Bay Islands, Gracias a Dios, Colon, Atlántida and Cortes) of Honduras	Ireland's Civil Society Partnership (ICSP) for a Better World	€800.000/year - Irish Aid (2023-2027)	1,130 individuals and 792 of those are expected to have access to or improve their market facing skills.
El Salvador, Guatemala, and Honduras (Muskitia, Motagua and Río Paz)	Regional Coastal Biodiversity Project – RCBP	\$2.545.101 - USAID/UICN (2021-2023)	11 fisher organizations (3 in Guatemala y 8 in Honduras).1350

¹¹ Elaborated based on information provided by LAC MEAL team.

			direct beneficiaries (improved economic benefits)
Colombia: La Guajira, Norte de Santander, Bucaramanga Municipality in Santander.	Barrio Resiliente/Economía Azul	\$4.100.000 – USAID (2020-2022) Agriculture and Food Security \$735.673 Economic Recovery and Market Systems \$1.389.297	300 family units. 1042 beneficiaries (63% men y 37% women) ¹²
Colombia: La Guajira, and Santander	Ireland's Civil Society Partnership (ICSP) for a Better World 2023-2027	€800.000/year - Irish Aid (2023-2027)	Participants during the project cycle will be 1,187
Haiti: Region of Grand'Anse, Southern Haiti, comprising fisher associations and local communities in: Bonbon, Corrail, Caymanites Island, Jereme, Roseaux and Abricots.	Enhancing Climate Resilience and Livelihoods of Small-Scale Fishing Communities in the Grand Anse Region, Haiti	€107,000.00 - Faroe Islands Government Year 1: 12 months (July, 2021-2022)	1,000 fisher family members
		€107,000.00 - Faroe Islands Government Year 2: 12 months (2022-2023)	8 fisher associations and 800 fisher family members
Haiti: Grand'Anse region	Support the sustainability and resilience of artisanal fishers and the fisheries value chain in the Grand'Anse region, Haiti.	€12.000 - Electric Aid August, 2022-2023	500 Fishers/Fishmongers were directly impacted

It is estimated that since 2011 BE Program has implemented projects in LAC for an amount exceeding €20 million. In 2016, the “Resilience of the BE and the Coastal Ecosystem of Northern Honduras – **MiPesca**” project sets a milestone, due to the opportunity to implement a significant number of essential aspects of the approach through the following components and activities:

Components	Activities
Strengthen the administrative-accounting, operational and business capacities, and practices of fisher organizations so that they comply with the law, with the expectations of their partners and the requirements of the market.	<ul style="list-style-type: none"> -Training and technical assistance - Provision of equipment and materials for fishing and proper handling of the captured product (refrigeration) - Support in the formalization of fisher's organizations to comply with the law. - Creation of REDPESCAH, a company that gathers fisher's organizations, to improve their access to the market. - Training for the development of businesses that allow diversifying the income of fishers such as baking, cell phone repair, sale of ice cream and ice, fish leather processing, maintenance of refrigeration equipment and engines.
Developed traceability system and integrated supply chain that ensures	-Identification of artisanal fishers within the national registration system.

¹² March 2023

origin, capture volume by location and handling process carried out at each point in the chain, improving market access and fishers' income.	<ul style="list-style-type: none"> - Development of the traceability system, its records and controls in coordination with the National Authority. - Integration of the artisanal fishing traceability module to the regional (Central America) traceability system. - Donation of equipment (tablets) to fishermen's organizations to implement the system. - Generation of employment/income for people disabled by diving and/or their wives or children.
Implement a Reciprocal Guarantee Fund (FOGAPE) that facilitates small fishermen's access to formal financing.	-Development of financial products adapted to the particular conditions of the artisanal fishing sector.
Governance and community-based planning for the sustainable management of the mangrove ecosystem that helps determine capture quotas and closed times of its fishing resources, among others.	<ul style="list-style-type: none"> -Strengthening territorial governance platforms by supporting their planning processes. - Building capacities and protocols for the biological monitoring of marine-coastal species
Quantification of carbon stocks in mangrove ecosystems to incorporate them into the community governance models adopted in La Mosquitia	-Development and implementation of the stock quantification protocol for the generation of the National Blue Carbon Inventory of Honduras

The positive results and experience achieved by MiPesca, covering most of the BE 12 Essentials¹³, demonstrated BE program's impact and scale potential and allowed to gather funds from other projects, to provide continuity to the work carried out. In Honduras, this is materialized through the **Regional Coastal Biodiversity Project – RCBP**, which is also implemented in Guatemala and El Salvador, and whose objectives are: i) Improved livelihoods through promotion of climate-smart biocommerce activities that reduce threats to biodiversity, ii) Increased sustainable and climate – smart land use practices that target key opportunities to improve the economic and environmental sustainability of land use, iii) Strengthened governance and regulatory framework for biodiversity conservation and iv) Increased education and scientific capacity for evidence-based biodiversity conservation. Subsequently, the **MARFUND/BRIDGE** projects helped to continue the approach and scale it to the Bay Islands with the aim of contributing to improve management of marine resources in the territories of Marine Landscape and Guanaja, strengthen productive and commercial units through the promotion of better practices, increased access to financial services, and increase private sector engagement in sustainable business development that enables ecosystem conservation of the MAR¹⁴ through de-risking.

The accumulated experience allowed the BE Program to achieve direct and indirect impacts on the food security 4 pillars. Thanks to REDPESCAH¹⁵ creation, it was possible to increase the physical presence of marine products in both local and national markets (**availability**). By providing fishing equipment and materials, the capacity of fishermen to obtain and/or acquire food in the desired quantity and quality (**access**) was increased.

¹³ BE Program 12 Essentials are a set of strategies with a systemic approach that aim to guide the implementation of the approach. [GOAL-Global Blue-Economy-Discussion-Paper June-2022 \(2\).pdf](#)

¹⁴ Mesoamerican Reef - MAR

¹⁵ REDPESCAH is a company made up of 23 fishermen's organizations, which came together to look for markets alternatives to sell products of sea, based on the comparative advantages that artisanal fishing offers from an environmentally friendly approach.

The **use of food** depends on cultural aspects (consumption habits) of families. Although the projects have not directly worked on actions for this purpose, practices such as salting and refrigerating have been promoted, which help communities extend the shelf life of the product to promote its consumption. In coastal communities, it is empirically known that fish is a product of high nutritional value and that is why, although sometimes also out of necessity, they self-promote its consumption. Although no direct actions have been taken to raise awareness about the nutritional value of food and the importance of consuming a diversified and balanced diet, alliances can be developed with leading organizations on the subject (FAO, WFP) to carry out joint actions. Regarding the **stability of the supply**, REDPESCAH has facilitated the connection with the markets, promoting the sale of species that were not previously offered, to ensure the supply of the product throughout the year. However, the measurement of these results has been limited until now, showing the need to strengthen the MEAL system to make them visible.

Food security must be seen not only from the perspective of individuals, but also from how good fishing practices and responsible management of the marine resource contribute to improving its availability, for feeding communities and the country. Although there is no baseline related to FS in the projects developed before date within the framework of the BE and therefore there are no clear indicators in this regard, the impact of BE actions on FS exists in everything we do, and in the beneficiaries' perception.

Luigi Loddo, GOAL Honduras

To improve the link between market access, increased income and food security results, the **Ireland's Civil Society Partnership (ICSP)** project was initiated in Honduras and Colombia in 2023. This project aims to continue sustainable and climate-resilient fishing actions, increase participants' capacities to be food and nutritionally secure, and promote preparedness and response capacity against hazards that threaten people's food and nutrition security.

In 2019, GOAL began in Colombia with the **Resilient Neighborhood** project (USAID), aimed at recovering livelihoods in vulnerable populations. In La Guajira, it was directed to strengthen artisanal fishing and weaving in 24 Wayuu communities. The action proposed from the beginning has been the recovery of livelihood, increase production capacity, quality improvement and management of alternative businesses. However, given the particularly adverse conditions faced by these populations, surpluses for sale have been occurring very slowly in those communities where the availability of fishing resources for food has been stabilized.

In Haiti, GOAL's BE projects have concentrated their efforts on strengthening and supporting fisher organizations in their financial, technical, and organizational capacity, as well as the improvement of the management of marine protected areas and coastal areas in the targeted communities, while sustaining economic development. During the process, it was identified the need to strengthen their cold chain storage capacity and to improve the quality of captured fish by preventing the fish from being damaged during capture and post-capture handling steps. To address these needs, seed capital investments were made to buy equipment and materials which can improve the quality and increase the yield of captured fish, increasing the market value for fishermen.

From the above, it is evident that the **scale of the intervention has been different in the three countries**, with differences in resources available, strategy applied, and results achieved, being the largest so far in Honduras, followed by Colombia and in lesser extent, Haiti¹⁶. Table 2 presents the 12 essentials of the BE and indicates in which countries they have been applied. Through the establishment of these 12 BE Essentials, GOAL has built a clear and systemic intervention path to address the implementation of BE through a resilient livelihoods approach, confirming its leadership on this subject at the regional level.

Table 2. The 12 Essentials of GOAL’s BE program¹⁷ applied by country (HN, Honduras; GUA, Guatemala; COL, Colombia; HAI, Haiti).

12 BE's Essentials	HN	GUA	COL	HAI
1.Transparent and accessible market information supporting effective marketing strategies.	X	X	X	
2.Relevant and accessible financial services	X			
3.Relevant and accessible Business Development Services	X	X	X	
4.Stable and equitable commercial relationships (between fishers, intermediaries, buyers and supporting service providers and suppliers).	X	X	X	
5.Necessary infrastructure, equipment, knowledge, and procedures in place to ensure quality, safety, market, and food standards are met.	X	X	X	X
6.Clear legal and regulatory framework for fisheries market supported by strong market coordination and oversight from market actors.	X			
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.	X		X	X
8.A functional traceability system adopted across the market system.	X			
9.Scientific research and development that informs sustainable fisheries management, innovations, and new technologies.	X	X		
10.A Good Governance system for coastal marine resources based on participation and engagement of all stakeholders	X			
11.Fishers employing Good and Responsible Fishing Practices	X	X	X	X
12.Early Warning Systems operational for principal hazards	X		X	X

When asking the beneficiaries if they know what the Blue Economy concept is, 60% indicated no, while 40% responded affirmatively. Considering that BE bases its operation on the understanding of causes and consequences (systemic approach), consideration should be given to raising awareness among beneficiaries and key stakeholders about the concept to achieve greater understanding and appropriation of the process.

III.2 Impact of BE on Food Security

Relevance

¹⁶ Scale up of Blue Economy to Haiti and Colombia was possible because it was included back in ICSP in 2019 and in Colombia because GOAL entered the country in 2019.

¹⁷file:///C:/Users/odp/Desktop/GOAL-BlueCarbon/Documentos/GOAL-Global_Blue-Economy-Discussion-Paper_June-2022%20(2).pdf

GOAL's "Resilience of the BE" program aims to support the critical role of coastal communities to address the multiple challenges and opportunities 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 resilience¹⁸. Also, the objectives and design of the BE interventions have had the challenge to respond to food security needs of beneficiaries and country(ies), as well as food security policies, although **no direct actions have been implemented** to address these issues and it is expected that they will be an indirect result of the improvement in fishermen's income and market access.

In **Honduras**, food insecurity has been recognized as a **major issue** at the national level (Table 3), and particularly in Atlántida, Colón and Cortés, where between 30-38% of the population is in phase 2 (accented) of the IPC Acute Food Insecurity classification¹⁹. In Colón, the situation is even more critical, with 40% of the population in phase 3 (crisis) and 10% in phase 4 (emergency)²⁰.

Table 3. Honduras: IPC Acute Food Insecurity classification. December 2022 to February 2023.

Departamentos	Población Total	Fase 1		Fase 2		Fase 3		Fase 4		Fase 5		Fase de área	Fase 3 +	
		#personas	%	#personas	%	#personas	%	#personas	%	#personas	%		#personas	%
Atlántida	508,228	238,867	47	162,633	32	91,481	18	15,247	3	0	0	3	106,728	21
Colón	360,498	173,039	48	111,754	31	68,495	19	7,210	2	0	0	3	75,705	21
Cortés	1,051,812	441,761	42	399,689	38	178,808	17	31,554	3	0	0	3	210,362	20
Gracias a Dios	110,288	22,058	20	33,086	30	44,115	40	11,029	10	0	0	3	55,144	50

Source: Unidad Técnica de Seguridad Alimentaria y Nutricional (UTSAN) de Honduras (2023)²¹

GOAL's BE actions have been developed in these 4 departments in **coordination** with Interinstitutional Governance Committees, which allow local teams to **better understand** the state of the situation and the challenges that each region faces, with the aim of coordinating actions to support their work, such as biological monitoring of species²² and construction of development plans, which function as a territorial guiding instrument attached to the National Fisheries and Aquaculture Law. These local structures, strengthened by GOAL, lead the interventions of the new projects, to ensure that they are aligned with their priorities and needs. Likewise, work has been done at the level of fishermen's organizations, with the aim of knowing their needs and guiding actions to address them properly.

In **Colombia**, decree number 1085 of 2023 declares **economic and social emergency** in the department of La Guajira, which faces a serious humanitarian crisis that hinders access to vital basic services such as drinking water, food, healthcare, infrastructure and

¹⁸ <https://www.goalglobal.org/stories/blue-economy-to-protect-oceans-and-livelihoods/>

¹⁹ <https://www.ipcinfo.org/ipcinfo-website/ipc-overview-and-classification-system/ipc-acute-food-insecurity-classification/en/>

²⁰ Unidad Técnica de Seguridad Alimentaria y Nutricional (UTSAN) de Honduras

²¹ <https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1156257/?iso3=HND#:~:text=Between%20December%202022%20and%20February,protecting%20livelihoods%20and%20reducing%20food>

²² Determining species stocks through biological monitoring makes it possible to know their behavior, define how much can be fished and implement protection measures for the marine resource such as closed seasons. This is a key aspect to achieving sustainability of work in BE.

education. This situation is aggravated by climate change. La Guajira has a prevalence of 59.7% of food insecurity classified as moderate and 17.5% registered as serious, and that is why the Inter-American Commission on Human Rights (IACHR) has issued measures to address this crisis and protect the population, especially children, pregnant and lactating women, and the elderly of the Wayuu indigenous communities. This is where GOAL executes its BE projects²³.

According to WFP (2023)²⁴, in **Haiti** the number of food insecure people has tripled since 2016, reaching one of the **highest levels of food insecurity in the world**. A total of 4.9 million Haitians - nearly half the population - do not have enough to eat, and 1.8 million are facing emergency levels of food insecurity.

GOALs strategy for the Blue Economy in these challenging areas and the reason GOAL was able to bring it to scale was entirely down to the application of Systems Approach²⁵. Using Systems Approach GOAL was able to identify **appropriate partners** to jointly develop actions that allow leveraging resources, taking advantage of programs that are already underway, such as training and strengthening of strategic weaknesses of the territories, including the alliance with Corpoguajira²⁶ for the training of people from the local communities as Environment and Peace Guardians. These Guardians will support biological monitoring actions inside their communities. To define the work strategy with the direct beneficiaries, multiple meetings were held with the communities and their leaders, jointly identifying the family units that directly benefit from the actions. This made management and decision making transparent, eliminating suspicions of political interference, and addressing those who had the greatest need and commitment to improving their conditions. The support that GOAL has received from beneficiaries, local governments, and partners to develop its BE projects shows that the **actions respond to their priorities** in terms of governance, responsible fishing, access to markets, higher income, and better access to marine products for consumption.

When asked about BE's contribution to **improving** beneficiaries' **food security**, 95% indicated yes. This result reinforces the possibility of additional income being available to improve their food security, which has been supported by most survey results and testimonies, even though the selection of the beneficiaries has not been made due to food insecurity but rather due to their level of exposure to extreme events and economic insecurity. The participation of **women**, as decision makers about food options and household keepers, has great relevance, and **should be strengthened** through the creation of capacities on leadership, family economy, nutritional value of food, food safety and security.

National governments, with the support of local governments and the World Food Program, have established a series of priorities in terms of food security, which must be considered to **align efforts** carried out through GOAL's BE. In Honduras these include:

- Expedite the timely delivery of social protection programs, food assistance and

²³<https://www.semana.com/economia/macroeconomia/articulo/la-guajira-y-sucre-regiones-con-mas-hambre-en-colombia-este-es-el-comportamiento-de-la-seguridad-alimentaria-segun-nuevo-indicador-del-dane/202315/>

²⁴<https://www.wfp.org/countries/haiti#:~:text=The%20number%20of%20food%20insecure,emergency%20levels%20of%20food%20insecurity.>

²⁵ Prior to application of R4S we completed system maps with other tools and approaches.

²⁶ <https://corpoguajira.gov.co/wp/>

direct transfers to producers, as a mechanism that responds to essential needs and establishment of multi-stakeholder synergies.

- Continue with cooperation and government programs and projects that encourage the recovery of livelihoods and the generation of response capacities with small farmers and entrepreneurs.
- Maintain a differentiated response plan for areas of the country with greater vulnerability to recurring natural and sociopolitical phenomena, contributing to their recovery, identifying immediate needs, and providing a prompt local solution.
- Promote marketing mechanisms that improve short circuits between producers and consumers to facilitate access to food in quantity and quality.

In Colombia, these efforts include:

- Actions in the agricultural and rural sector, with the purpose of guaranteeing food security and sovereignty in La Guajira, for which extraordinary measures are required to make the requirements and conditions of contracting of entities in the agricultural sector more flexible. The exceptional measures will seek to guarantee the financing, marketing, transportation, storage, sale, or distribution of agricultural products produced by small and medium-sized producers, as well as the titling of land, formalization of the use and exploitation of water in subsistence agriculture and aquaculture.
- To ward off the climatic phenomena that are approaching in La Guajira, Decree 1085 of 2023, recommends the prioritization of the use of water resources and the preservation of the ecological flow, that is, having sufficient flow for its provision of attention to human, collective or community consumption and "agricultural uses that are of or are generated for the purposes of food security."

BE Program continued to respond when circumstances changed.

In May 2020, when circumstances changed due to COVID-19 pandemic, MiPesca Project undertook the study "Vulnerability analysis of the small-scale artisanal fishing system on the North coast of Honduras"²⁷, whose objective was to establish the level of vulnerability, the impact on the actors and their relationships due to COVID-19, in a context where the strict quarantine throughout Honduras almost completely paralyzed the central activities of the artisanal fishing system. This study was of great significance for the project, since once the project staff obtained the safe passage, enabled by the government, the state of the small-scale fishery began to be documented, finding out that, despite the suppression of national economic activity, the artisanal fishery sector continued to operate, which highlighted the **capacity and resilience of the fisher** and the sector in general to face this difficult circumstance. It also made it possible to identify urgent needs for food and biosafety supplies and to prioritize actions in each fishermen organization, as well as in REDPESCAH.

In Colombia, during the pandemic, food was delivered to families. Also, when flooding or drought events have occurred, in addition to food, water filters have been delivered.

²⁷ Using GOAL's R4S Methodology. <https://www.goalglobal.org/wp-content/uploads/2023/03/R4S-Sept22.pdf>

GOAL`s R4S approach has proven **effective** in quickly and accurately understanding the socio-economic systems that serve the needs of their populations in each specific society. It addresses recurrent crises and effectively builds resilience through an integrated systems approach, creating short-term and self-managed solutions.

Other needs and/or priorities addressed by the BE Program.

The diversity of strategies included in the BE approach allows to **address a wide variety of needs** of beneficiaries, organizations, territories and even countries. For example, at the national level in Honduras, work was done on the creation of a traceability system for artisanal fishing. Also, a protocol for the quantification of blue carbon stocks, the National Mangrove Inventory, was created. This inventory was developed with the support of national authorities and participation in the National Roundtable of the Social Movement of Fishing, Aquaculture and Artisanal Diving of Honduras, to present proposals for the new elected government. At the territorial level, the construction of governance/management plans for marine fishing resources, training guides and videos on good practices in the Miskito language was supported.

At the level of fisher organizations, GOAL has supported their formalization, administrative and business management, acquisition of equipment to improve the management (cold chain) and transformation of the fishery product. Also, fishers were supported through processes of capacity building for responsible fishing, occupational and economic health of divers with disabilities, access to markets, acquisition of materials and equipment for fishing and access to financing. **Relevant results** have also been obtained in the participation of women, which has increased especially in the primary transformation processes of fishery products, as well as in the diversification of their productive activities towards complementary areas such as fish leather processing, handicrafts, tourism, and food processing. All of these actions have **made it possible to address needs** related to their economic security, inclusion, market access, achievement of livelihoods, resilience and adaptation to climate change, and responsible management of coastal resources.

III.3 Effectiveness²⁸

Food security objectives and results

GOAL's BE objectives, outcome and outputs in Food Security have been set out in Strategy 2025: From crisis to resilience. Through **Goal 3** of the strategy 2025, **People have food and nutrition security**²⁹, GOAL's work to strengthen people's food and nutrition security will be achieved through improved subsistence production, improved commercial production (linked to better market access and availability of nutritionally

²⁸ Survey results have only been disaggregated by ethnicity in Honduras, which is the country where the most representative sample was achieved. Disaggregation by gender applies only in Colombia and Honduras and sometimes in Haiti, since the information in some cases was completed only by men.

²⁹ GOAL previous strategy which was in place up until 2022 included separate GOAL 3 Food Security and GOAL 4 People have Sustainable Livelihoods and the BE fell under GOAL 4 until recently.

diverse foods for the community at large) and improved consumption of an adequate diet by all. All these strategies are being implemented starting in 2023 and are **expected to help** strengthen the results achieved so far by BE in food and nutritional security. However, it will be important to **review MEAL outcomes and outputs** (and their respective indicators) to ensure that they are linked to these strategies, especially those related to consumption of an adequate diet.

Objective 3.1 *Strengthen local economic systems that enable people to produce sustainably, and in a climate resilient manner.*

Outcome: % of targeted participants that increased their income due to GOAL assistance.

Outputs: # of people provided with the resources to protect and rebuild livelihood assets (3.1.1), # of people receiving vouchers to support livelihoods (CC4), # and % of people accessing formal financial services (3.1.3), # and % of people accessing market facing skills (3.1.4), # and % of targeted producers adopting nutritionally improved / climate smart / sustainable practices (3.1.5).

Objective 3.2 *Support the most vulnerable communities to have increased capacities to be food and nutrition secure.*

Outcome: Reduced Coping Strategies Index score (rCSI).

Objective 3.3. Increased preparedness and response capacity against hazards which threaten people's food and nutrition security.

Outcome: # of Disaster Risk Reduction (DRR) / resilience strategies / policies / disaster preparedness / contingency response plans are being adopted or utilized by GOAL strategic partnerships. **Outputs:** # of people covered by early action/contingency plans (3.3.1) and # of people covered by a functional early warning system (3.3.2)

Following the instructions of the Terms of Reference, the program's performance was evaluated using the objectives and indicators established for 2023-2025³⁰, although the projects involved were developed before that period (2019-2023). This represented a **challenge** since the FS indicators had not been monitored before 2023 and that is why this consultancy should be consider a review and not an evaluation of how BE Program is doing in FS. It is inferred that this evaluation is generating a **baseline** for monitoring future actions on FS. Without previous data to compare³¹, this evaluation **cannot conclude to what extent** BE interventions have helped achieve the expected objectives and results, especially those related to the FS indicators prioritized for this evaluation. However, data from other countries in the LAC region on those FS indicators will be used later to make comparisons with this evaluation.

Beneficiaries' perception of achievement is mostly high. Results showed that for i) *objective 3.1:* 7% of those surveyed indicated little, 43% moderate and 50% high; ii) *objective 3.2:* 14% of those surveyed indicated little, 38% moderate and 48% high; and iii) *objective 3.3:* 24% of those surveyed indicated little, 19% moderate and 57% high. This

³⁰ These objectives, outcomes and outputs were included in the MEAL system in January 2023, following the survey of the baseline for the Ireland's Civil Society Partnership (ICSP) for a Better World 2023-2027 project.

³¹ It was possible to obtain MEAL records on GOAL 3 objectives, but they combine Green Economy and Blue Economy actions, so they were not considered.

clarifies that despite not having a previous baseline, an important impact of SA on BE is identified.

Besides the FS indicators prioritized, the following outcomes/outputs from Goal 3 were included³² in the survey: increased income, people provided with resources to protect and rebuild livelihood assets and fisherman's adopting climate smart / sustainable practices. Other outcomes/outputs, such as people accessing formal financial services and people accessing market facing skills were not included in the Terms of Reference, but there is strong evidence from MiPesca results, that these have been addressed.

For example, access to **financing** has been **limited**. As of July 2022, there are five (5) credit lines with FOGAPE for a total amount of L271,000 (US\$10,840). Intermediary Financial Institutions (IFIs) show little interest in creating a new financial product for the artisanal fishery sector, partly due to the historical mistrust that exists towards this sector and the associated risks. On the fishers' side, there are also limitations to comply with the process or requirements to access financing, especially with respect to demonstrating the origin of their income, cash flows and financial statements. **Market** facing **skills** have been addressed through training of 1,073 people (63% men and 37% women), whose associative companies **improved** their commercial **performance** between 2018 and 2021, (see Figure 1), resulting in a 29.3% increase in their sales.

³² As requested in Term of Reference.

Figure 1. MiPesca results in market facing skills.



Source: MiPesca Dashboard Report (2022)³³

Food availability

According to Colombo (2023)³⁴, seafood has plentifully provided critical nutrients for humans that are vital to our physical and mental development and health, with benefits such as neurological development and functioning, and protection against the risks of coronary heart disease and type 2 diabetes. In fact, more than 3 billion people get at least 20% of their daily animal protein from fish. However, there is serious pressure on the health of wild fish stocks. In 2017, about 24% of the world's natural fish stocks were classified as over-exploited, and most of the remaining were considered at maximum limits³⁵. This puts pressure on ocean biodiversity, but also diminishes harvest potential and limits the nutrients that can be obtained from seafood.

When consulting the beneficiaries about the availability of food from the sea and coastal ecosystems, **69% indicated that it has been satisfactory**, while the remaining 31% responded that they have not had sufficient availability. When consulting the latter about the reasons for this low availability, they indicated that it is mainly due (in order of importance): i) bad weather does not allow them to go out fishing, ii) warming waters have caused fish populations to move to greater distance from the coast (cold waters) and they cannot get there, iii) overfishing and iv) destruction of marine habitat. Regarding

³³ GOAL. 2022. MiPesca Dashboard Report. Prepared by GOAL Honduras. Internal document. Not published.

³⁴ Colombo, S.M. Climate change is impacting nutritional security from seafood. *Nat. Clim. Chang.* **13**, 1166–1167 (2023). <https://doi.org/10.1038/s41558-023-01823-0>

³⁵ Colombo, S.M. Climate change is impacting nutritional security from seafood. *Nat. Clim. Chang.* **13**, 1166–1167 (2023). <https://doi.org/10.1038/s41558-023-01823-0>

the main seafood products they consume, 99% indicated fish as their first option, while 32% responded that they consume shrimp and 23% crab as their second option.

Food access

There are key factors associated with food access. **Inflation**, which affects the **loss of purchasing power** of families (less access), has an immediate impact on the diet due to the reduction in the consumption of the most expensive foods, such as proteins (meat and dairy). Instead, people replace these products with grains, soups potatoes and cassava, which create a feeling of satisfaction due to their high percentage of carbohydrates, but which have a lower nutritional level than food with high protein content.

In Honduras, the inflation rate throughout 2022 (9.09%) has been the highest in the last decade (2012-2022)³⁶, whose average record was 4.29%³⁷. Prices of fuel and production inputs have remained above the average for the last five years, influenced by high transportation costs, as well as the impact of armed conflicts on the international economy. Floods, caused by recurrent tropical storms, have put highly vulnerable areas of the country at risk, such as the northern coast and the department of Gracias a Dios, where tropical storms caused total losses of subsistence crops, a situation that creates gaps, severe food consumption risks and require crisis or emergency coping strategies. According to the Honduras Acute Food Insecurity Report (August 2023)³⁸, during the last quarter of 2022, at least 39% of households reported disturbances or impacts that limited their ability to generate income or produce food for self-consumption. Likewise, at least 80% of households indicated that their income did not increase compared to 2021, with 42% receiving the same income and 40% with a decreased income³⁹. When contrasting the above with the increase in food prices, the purchasing power of households has been strongly affected.

In Colombia, the annual variation rate of the Consumer Price Index (CPI) as of September 2023 has been 11.44%, with an average monthly variation of 0.5% and accumulated inflation in 2023 of 8 % (Datosmacro, 2023). Inflation in Haiti averaged 25.2% in the ten years to 2022, well above the Central America and Caribbean regional average of 3.4%. The 2022 average figure was 34.0%⁴⁰

For the purposes of this evaluation, access to food was analyzed based on the following 4 criteria: Food Consumption Score (FCS), Household Dietary Diversity Score (HDDS), Reduced Coping Strategies Index (RCSI) and Livelihood Coping Strategies Index (LCSI) while stability of food offer was analyzed through monthly average income.

Food Consumption Score (FCS)

³⁶https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Honduras_AcuteFoodInsecurity_Dec2022Aug2023_Report_Spanish.pdf

³⁷ <https://www.macrotrends.net/countries/HND/honduras/inflation-rate-cpi>

³⁸https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Honduras_AcuteFoodInsecurity_Dec2022Aug2023_Report_Spanish.pdf

³⁹https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Honduras_AcuteFoodInsecurity_Dec2022Aug2023_Report_Spanish.pdf

⁴⁰ <https://www.focus-economics.com/country-indicator/haiti/inflation/#:~:text=Consumer%20price%20inflation%20in%20Haiti,information%2C%20visibility%20our%20dedicated%20page.>

The Food Consumption Score (FCS) is the most used food security indicator by the World Food Programme (WFP) and its partners. It is calculated by asking how often households consume food items from the different food groups (plus condiments) during a 7-day reference period⁴¹. For each respondent, the consumption frequency obtained for each food group was multiplied by its 'weight'⁴² and the weighed food group scores were summed, thus creating his/her food consumption score. According to the FCS's value, indicate the percentage of households with "poor" FCS (0-21 scores), "borderline" FCS (21,5 - 35 scores), and "acceptable" FCS (more than 35 scores of a total of 84).

Table 4. FCS: by country, gender, ethnicity and in total

FCS by country	FCS-Total	Colombia	Honduras	Haiti
Poor food consumption				
Borderline food consumption	2.08%		3.23%	8.33%
Acceptable food consumption	97.92%	100%	96.77%	91.67%
FCS by gender	Colombia		Honduras	
	Masculine	Feminine	Masculine	Feminine
Poor food consumption				
Borderline food consumption			4.65%	
Acceptable food consumption	100%	100%	95.35%	100%
FCS by ethnicity	Honduras			
	Afro-descendant	Indigenous	Mestizo	
Poor food consumption				
Borderline food consumption	7%		4%	
Acceptable food consumption	93%	100%	96%	

FCS survey results (Table 4), shows that for Colombia 100%, Honduras 96.7%, and Haiti 91.67% of the households are considered **acceptable** (>35), with an average FSC across the three countries of 97.92%, mainly due to the high consumption of fish, cereals, and grains (Annex 4). By eliminating the data corresponding to fish consumption, the average FCS between the three countries falls from **69 to 49**, which reflects the relevance of this food in the diet of the beneficiaries and the **vulnerability** of this result. If access to fish is restricted by weather, overfishing or other factors, the FCS decreases significantly. When comparing these results with non-beneficiaries in both countries, their FCS in 100% of the households is acceptable but slightly lower in comparison to beneficiaries.

This FCS result is similar to what has been presented in the national reports of the World Food Program, where a percent of households with acceptable food consumption of 95%

⁴¹ <https://resources.vam.wfp.org/data-analysis/quantitative/food-security/food-consumption-score>

⁴² Referred to the nutritional value of each group for calculations according to FAO.

in Colombia⁴³ (women-led smallholder farmers' organizations), 99.5% in El Salvador⁴⁴, 91% in Honduras⁴⁵ and 88% in Ecuador⁴⁶.

In Honduras, coastal communities there are cases where fishers have access to land to produce foods with high nutritional value (meat, eggs, legumes). This fact contributes positively to the FCS score obtained, although it is necessary to strengthen the capacities of families to do so. In Colombia, the consumption of meat (mainly goat) allows families to diversify their protein needs beyond fish consumption. The FSC result, despite being positive, is affected by the challenging conditions of the territory, which limit agricultural production. The temporal distribution of rainfall is irregular. Periods of up to two years have been recorded with little or no precipitation. The vegetation, adapted to these conditions, supports grazing activities. Humid conditions create areas more conducive to agricultural activities, although irrigation is necessary during droughts. During El Niño events, the recorded rainfall is less than 100 mm per year. The socioeconomic conditions of the communities are very limited too: they lack decent housing, drinking water, basic sanitation, and health infrastructure. Regarding food and nutritional aspects, it was evident that they have currently been forced to renounce their ancestral eating practices and that they lack access and availability to food. This reveals the few possibilities fishers have to guaranteeing their children and their families a stable basket of food, which allows them to have a healthy life⁴⁷.

When disaggregating the survey FSC results by **gender**, all countries show **acceptable results**. The greatest difference between genders is found in Honduras, where women, thanks to a greater consumption of dairy products, achieved a score of 100% of households with acceptable results compared to 95.3% for men. Regarding to ethnicity in Honduras, differences were found in favor of indigenous (100%), while mestizos reached 96% and Afro-descendants 93% of households with acceptable results.

To disaggregate the data by **age**, 4 age groups were defined: 18 to 30 years, 31 to 45, 46 to 65 and over 65 years (Table 8). In Colombia all age groups obtained an acceptable FCS (100%), while in Haiti a 100% of the group between 18–30-year-old is in borderline. However, this data is not conclusive since it comes from a single individual whose diet is based on grains and lacks sources of both animal and vegetable protein. In Honduras 14% of the group between 18–30-year-old and the 8% of the group >66-year-old obtained borderline results while the rest of the groups have acceptable FCSs.

Household Dietary Diversity Score (HDDS)

Household Dietary Diversity Score (HDDS) is a qualitative measure of food consumption that reflects household access to a variety of foods based on their consumption during the last 24 hours. Because **HDD generally increases as income increases**, this indicator is sometimes used as a proxy for the **access** dimension of **food insecurity** and is one of

⁴³ 2022. <https://docs.wfp.org/api/documents/WFP-0000147943/download/>

⁴⁴ 2021. <https://docs.wfp.org/api/documents/WFP-0000137909/download/>

⁴⁵ 2022. <https://docs.wfp.org/api/documents/WFP-0000147956/download/>

⁴⁶ 2020. <https://docs.wfp.org/api/documents/WFP-0000125434/download/>

⁴⁷ López-Ríos JM. Anaa Eirükü: Perspectivas y estrategias comunitarias relacionadas con la desnutrición infantil (0-7 años), en tres comunidades Wayuu del resguardo indígena Manaure, La Guajira, 2015-2016. [Trabajo de investigación Maestría en Salud Pública]. Medellín: Universidad de Antioquia. Facultad Nacional de Salud Pública; 2017.

the indicators frequently used to assess how interventions designed to increase household income have affected food consumption⁴⁸. Calculation is made by summing all food groups consumed within the last 24 hours. Considering that 12 food groups were evaluated, the highest score that can be achieved is 12. There are no established cut-off points in terms of number of food groups to indicate adequate or inadequate dietary diversity for the HDDS and WDDS. Because of this it is recommended to use the mean score or distribution of scores for analytical purposes and to set programme targets or goals⁴⁹.

Table 5. HDDS by country, gender, ethnicity, age group and in total

	Type	TOTAL	Colombia	Honduras	Haiti
	HDDS	8.11	8.75	7.45	6.9
Gender	Masculine		8.60	7.28	n/d
	Feminine		9.50	7.84	
Ethnicity	Afro-descendant			7.13	
	Indigenous		n/d	7.62	n/d
	Mestizo			7.50	
Age groups	18-30 y		8.81	7.29	6.00
	31-45 y		8.80	7.73	6.78
	46-65 y		8.73	7.00	7.00
	>66 y		8.50	7.77	

The highest HDD score was found in Colombia with 8.75, mainly due to a higher consumption of legumes (beans and lentils), other vegetables (tomato and onion) and meat (goat). In Honduras, it was 7.45 while in Haiti, it was 6.9. Non-beneficiaries achieved a slightly lower score in Colombia (8.58) and in Honduras (6).

When disaggregating data by gender, in Colombia (9.5) and in Honduras (7.84) women achieve the highest scores, while there is no comparison with Haiti due to sample size. Regarding ethnicity, HDDS is slightly higher in indigenous than in mestizos, with Afro-descendants achieving the lowest score (7.13). By age, highest scores are achieved in Colombia by the group between 18-30-years-old (8.81), in Honduras by the group >66 -years-old, while in Haiti by the group between 46-65 years-old. These results can guide future BE interventions in FS, since it allows us to identify which food groups with high nutritional value have low consumption in each country.

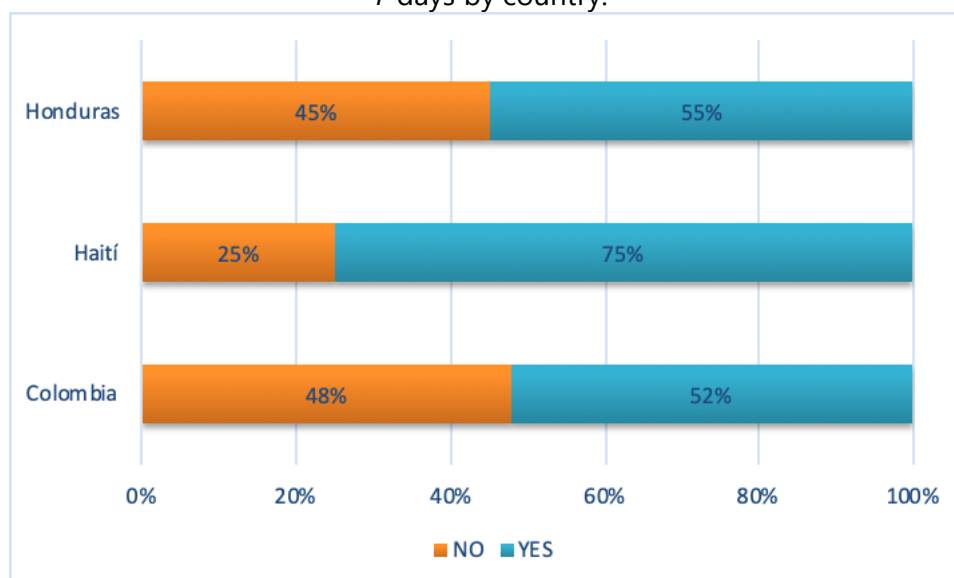
Reduced Coping Strategies Index (rCSI)

Beneficiaries were asked if in the last 7 days there had been times in which they did **not have enough food** or money to buy food for their home. 75% of those interviewed in Haiti, 54.8% in Honduras and 52.17% in Colombia (Figure 2) answered **affirmatively**, reflecting the difficulty that these families face in achieving the expected portion size and frequency of meals.

⁴⁸ https://www.fantaproject.org/sites/default/files/resources/HDDS_v2_Sep06_0.pdf

⁴⁹ [file:///C:/Users/odp/Downloads/fao-dietary-diversity-guidelines%20\(1\).pdf](file:///C:/Users/odp/Downloads/fao-dietary-diversity-guidelines%20(1).pdf)

Figure 2. Availability of food or enough financial resources to purchase food in the last 7 days by country.



The frequency of grocery purchases by households depends mainly on the availability of the economic resources. In some cases, the purchase is made weekly, while in the case of others with greater money availability, it can be biweekly. Sometimes, there is no food available to satisfy the basic nutritional needs of households, which directly affects the size of the portions and the number of meals per day, always giving priority in consumption to children. When there is not enough food available, it can vary between one and two meals per day and even no meal consumption in a day.

"Last year, shopping at the market lasted up to 2 weeks and we spent 400.000 pesos, while now, with that same money, what we bought lasts 10 days. Now we buy less food and eat less vegetables, meat, chicken, and milk."

Colombian fisher

The Reduced Coping Strategies Index (rCSI) is a proxy indicator of household **food insecurity**. It considers both the frequency and severity of five pre-selected coping strategies that the household used in the seven days prior to the survey: i) Rely on less preferred and less expensive foods, ii) Borrow food or rely on help from friends or relatives, iii) Limit portion size at mealtime, iv) Restrict consumption by adults in order for small children to eat and v) Reduce the number of meals eaten in a day. A high score means an extensive use of negative coping strategies and hence increased food insecurity (the maximum score for the rCSI is 56; this would happen if a household used all five strategies every day for the last 7 days). Based on the country's context, the total rCSI score is the basis to determine and classify the level of coping: into three categories: Food secure (rCSI= 0-3), marginally food secure (rCSI = 4-18, food insecure (rCSI \geq 19)⁵⁰.

Results showed that Haiti (37) and Colombia's (21.85) rCSI indicates food insecurity, Haiti having the highest levels of food insecurity, whereas respondents in Honduras (15.24) had low use of coping strategies and are classified as marginally food secure (Annex 5).

⁵⁰ <https://www.ipcinfo.org/ipc-manual-interactive/ipc-acute-food-insecurity-protocols/function-2-classify-severity-and-identify-key-drivers/protocol-22-compare-evidence-against-the-ipc-acute-food-insecurity-reference-table/en/>

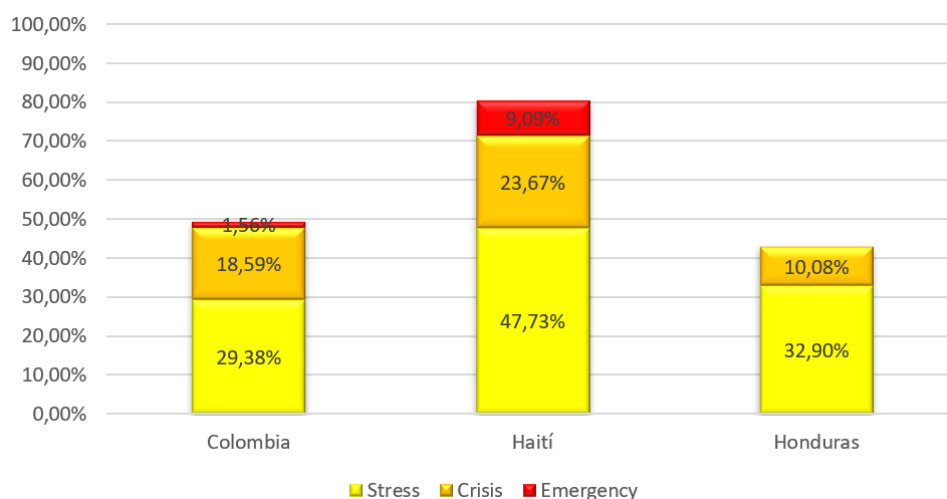
Non-beneficiaries in Colombia implement fewer coping strategies (19,37) than beneficiaries, while in Honduras (17,5) it, thus the opposite. When analyzing results by gender, women registered higher scores than men in both Honduras (24.36 versus 20.36) and Colombia (24.22 versus 21.22). The breakdown by ethnicity indicates that in Honduras, mestizos are the ones who resort the most to coping strategies (24.5), followed by Afro-descendants (21.13) and indigenous people (17.5) which are marginally food secure. In Colombia, the rCSI ranges between 21 and 23 for ages between 18-65 years, increasing to 31.50 for those over 65 years of age. In Haiti, most of the sample is in the range of 31-45 years old and reaches a rCSI of 43.57 in average. In Honduras, groups between 18-45 years old have a rCSI of 26, while the older groups (from 45 to over 65) reach 20.5.

This result shows that despite having a high percentage of the interviewed population with acceptable FCS, there is a significant use of strategies to cope with the lack of money to buy food, evidencing **income instability**.

Livelihood Coping Strategies Index -LCSI

The Livelihood Coping Strategies (LCSI) is a household-level indicator defined as the share of the population who adopted coping strategies of different severity levels (emergency, crisis, stress or none) in the past 30 days. They are based on a group of 10 questions about how households manage to cope with shocks that stress their livelihoods.

Figure 3. Proportion of households (%) relying on LCSI for food security by country.



As shown in Figure 3, Haiti is where there is a greater use of livelihood coping strategies (9% emergency, 23.67% crisis and 47.73% stress) for a total of 80.49% of those interviewed implementing one or more of these strategies. In Colombia, 49.53% of those interviewed implement some strategy (1.56% emergency, 18.59% crisis and 29.38% stress), while in Honduras, the country with the least use of LCS, 43% of the beneficiaries do so (10.08% crisis and 32.9% stress) (Annex 6).

Table 6. LCS comparison between beneficiaries and non-beneficiaries

Beneficiaries		
Stress	Crisis	Emergency

Colombia	29,38%	18,59%	1,56%
Honduras	32,90%	10,08%	
Non-beneficiaries			
	Stress	Crisis	Emergency
Colombia	56,67%	42,05%	18,18%
Honduras	28,57%	3,57%	0,00%

As presented in Table 6, non-beneficiaries implement more livelihood coping strategies than beneficiaries in Colombia for the three categories while in Honduras beneficiaries have the highest implementation.

Table 7. LCSi by gender⁵¹.

Country	Gender	Stress	Crisis	Emergency
Colombia	Female	35.00%	27.08%	0.00%
	Male	28.19%	16.78%	1.92%
Haiti	Male	53.78%	28.61%	11.11%
Honduras	Female	38.95%	6.58%	0.00%
	Male	30.23%	11.63%	0.00%

Disaggregating data by gender, emergency strategies only affect men. In Honduras and Colombia stress strategies affect women more than men (Table 7). Regarding the differences by ethnicity, in Honduras indigenous (40.95%), mestizos (31.54%) and Afro-descendants (24%) apply stress strategies to a greater extent than crisis strategies (between 9.5% and 10.5%). By age, emergency strategies are used in Haiti and Honduras by those who are in the range of 31-45 years, which coincides with the age at which most families have their children in dependent ages (minors without income). Crisis strategies in Colombia mainly affect the population between 18-30 years and in Honduras those between 31-65. Stress strategies are the most used in the three countries regardless of age, affecting equally those between 18-65 years old in Colombia, those between 31-45 years old in Haiti, and those between 31-65 years old in Honduras.

Households are normally exposed to various shocks (climatic, economic, environmental, and conflict-related stressors) with direct impact on livelihoods and are associated with possible disruptions in production, supply, markets, and household income generation. At an early stage of a shock, households tend to resort to shorter-term consumption-based coping strategies (stress) to overcome immediate challenges in food shortages. If the situation persists, households begin seeking other outlets to meet their basic food or other essential needs (crisis strategies) and if the situation persists or worsens, emergency strategies emerge as a solution. From the comments of the interviewees, it is evident that in the case of Haiti, Colombia and Honduras to a lesser extent, **the impact of the shocks has been worsening.**

Food supply stability

Perspective on economic security -PES

⁵¹ Sample from Haiti's wasn't considered as is only 1 female.

To better understand the stability of the food supply based on the Perspective on Economic Security (PES), the evaluation team, together with the GOAL Headquarters team, developed a set of complementary questions. The first item considered was the **capacity of families to satisfy other needs besides from food** in their homes, such as medicine, education or clothing. In Colombia, 42% indicated having had difficulties in the last 7 days to satisfy these needs, while in Haiti and Honduras, it was 33%. In the three countries more than 50% of monthly income is used to buy food. Although unmet needs vary among countries, the issue of **health care** is the most challenging for a considerable part of the population, being the main cause the **lack of money**. On average, in the coastal/artisanal fishery communities there are 7 **household members** in Colombia, 6 in Haiti and 5 in Honduras with an average of 3.6, 4 and 3.5 working members per family, respectively.

Table 8. Categories: monthly income of each working person in the household.

Colombia ⁵²	US\$	Haiti ⁵³	US\$	Honduras ⁵⁴	US\$
COP1,200,000-1,700,000	\$300-\$425	G22,000-30,000	\$165-\$225	L15,000-30,000	\$600-1200
COP700,000-1,199,999	\$175-\$299	G17,000-21,999	\$127-\$224	L7,000-14,999	\$280-\$599
COP200,000-699,000	\$50-\$174	G8,000-16,999	\$60-\$126	L2,000-6,999	\$80-\$279
<COP200,000	<\$50	<G8,000	<\$60	<L2,000	<\$80

Considering the high variability in the income of the people surveyed, it was decided to establish 4 analysis groups that included the upper-income range, moderate-income, low-income, and lower-income ranges. The income ranges (according to Table 8) corresponding to each group varies between countries but allows individuals to be grouped based on reported monthly income.

Table 9. Average monthly income of each working person in the households of the people interviewed by country.

	Colombia	Haiti	Honduras
Number of Households	69	12	62
Average Monthly Income (US\$)	\$290.39	\$211.78	\$415.34
Average Monthly Income (local currency)	COP1,161,550.72	G28,166.67	L 10,383.40
National minimum wage	COP1,160,000	G17,810	L 10,457.29

When comparing the monthly income results between countries, Honduras significantly surpasses Haiti and Colombia (Table 9). However, when compared with the different outcome categories by country (Table 8), Haiti's average income is in the upper category, while Honduras and Colombia are in a lower category. Average income in Honduras and Colombia are close to the national minimum wage, while in Haiti is 65% higher.

Table 10. Average monthly income of each working person in the household by gender.

Colombia		Haití		Honduras	
Female	Male	Female	Male	Female	Male

⁵² Exchange rate 4000 pesos colombianos (COP) per US\$ (Novembre 15, 2023).

⁵³ Exchange rate 133 gourdes (G) per US\$ (Novembre 15, 2023).

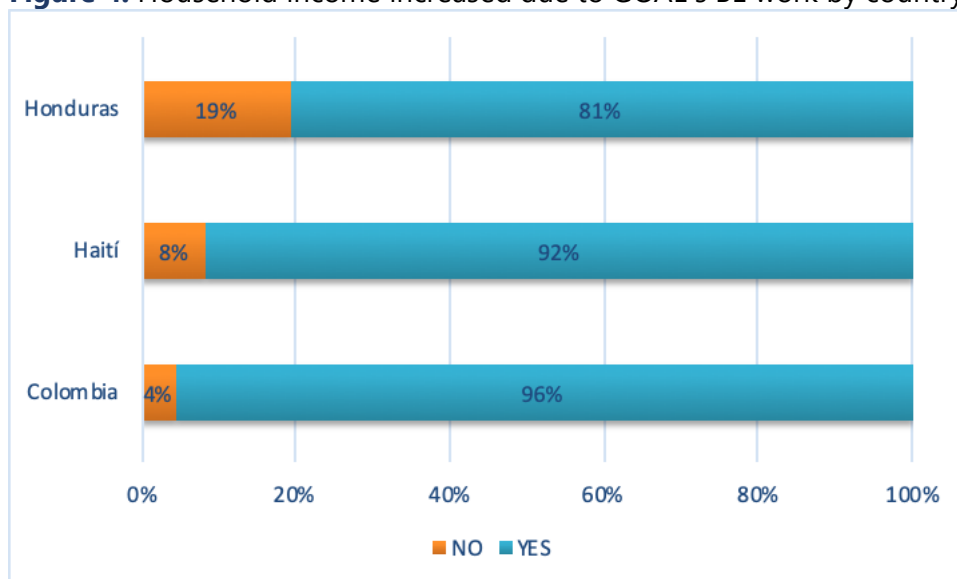
⁵⁴ Exchange rate 25 lempiras (L) per US\$ (Novembre 15, 2023).

Households	12	57	2	10	19	43
Average Monthly Income (local currency)	COP937,500.00	COP1,208,719.30	G36,750.00	G26,450.00	L 5,989.47	L 12,324.91
Average Monthly Income (US\$)	\$234.37	\$302.17	\$276.31	\$198.87	\$239.58	\$493

By gender, there is no major difference between women by country (Table 10). In Colombia there is a difference in income of +\$67.80 in men's favor and in Honduras men have more than double the income earned by women (Table 8), thus evidencing the **urgency of continue incorporating women** in activities that allow them to empower themselves and generate income for their homes. Only in Haiti, females earn more than males in the households and the females have a higher income than the females in Honduras and Colombia. However, the males in Colombia and especially in Honduras earn more money than those in Haiti. This finding, although revealing, is not conclusive due to the small size of the participating sample in Haiti.

The data by ethnicity, analyzed only for Honduras, show that the highest income is for mestizos (L 13,173.23), followed by Afro-descendants (L 10,072) and finally indigenous people (L7,151.76), inferring that there is a relationship between **income and proximity to markets (access)**, since mestizos have greater proximity than the other two ethnicities. By age, in Colombia the highest incomes are earned by those between 18-30 years old, while in Honduras, those who are 66 years old and older have the highest incomes. When asked if family **income has increased** since GOAL's BE work began, 95.65% of the responses in Colombia, 91.7% in Haiti, and 80.6% in Honduras were affirmative thus, confirming both the MEAL data and the evaluations of projects such as MiPesca (Figure 4). The result has been 103% of income increased in Colombia, 35% in Haiti and 31.9% in Honduras.

Figure 4. Household income increased due to GOAL's BE work by country.

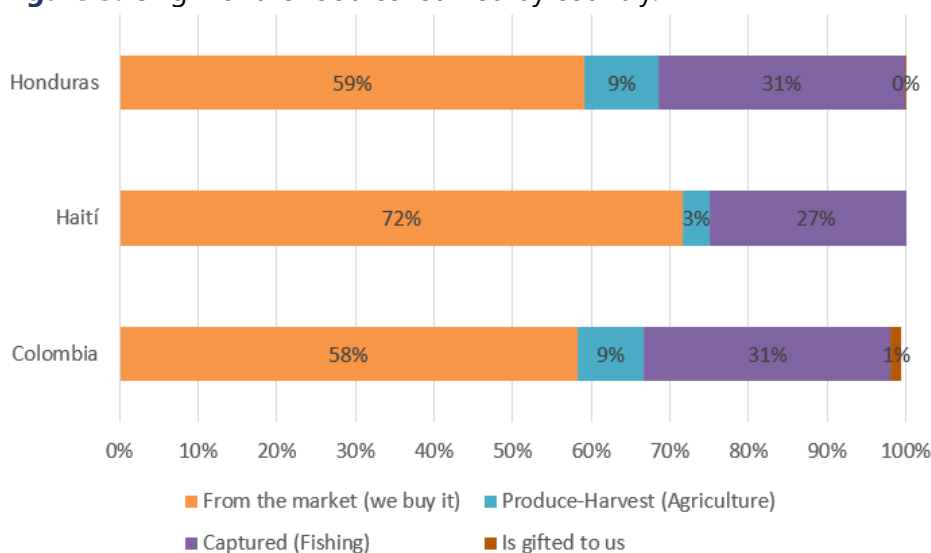


In Honduras, 57.38% of the people from coastal communities interviewed indicated that more than 75% of their income comes from fishing, which demonstrates the **high dependence** that these populations have on adequate management of the marine-

fishery resource. In Colombia and Haiti, it is lower but still high (41.6% and 31.8% respectively). In the testimonies collected the recognition of additional income from the sale of fish leather, crafts and tourism stands out, while others such as ice cream/ice sales, repair services or baking were considered not relevant yet. In times of difficulty or stress (economic, climatic), the income of the vast majority of those interviewed is reduced by more than 50%.

When asked about the origin of the food they consume, between 58-72% is purchased in the market, between 27-31% are caught (fishing) and less than 10% are grown by the beneficiaries (Figure 5). This confirms the importance of **strengthening the artisanal fishing value chain**, so that fishermen generate the income they require to buy food and have access to fishing products and their high nutritional value. However, these efforts should also be **complemented with agricultural** production initiatives and other activities, so that they can diversify their income and the food groups they consume.

Figure 5. Origin of the food consumed by country.



GOAL's BE has improved beneficiaries capacities to manage and preserve food, mainly in Haiti and Honduras (97-100%), and to a lesser extent in Colombia (61%), overcoming issues such as drying of fish, cooling, personal hygiene and cleaning of food preparation areas.

Factors that have facilitated or inhibited the results of GOAL's BE Program.

Among the aspects that have facilitated the achievement of these results, the "non-politization" of the aid granted stands out, the continuous and permanent monitoring of the technicians (3 times a month), as well as their strategic approach of building material and human capacities that allow income generation in the short term. This is how boats have been rehabilitated instead of buying new ones (reaching more beneficiaries), motors have been delivered that allow to fish further in the ocean and have larger catches, and diving kits have been provided so that fishermen can capture species of greater value in the area.

"We used to spend half the time getting water out of the boat and half trying to catch something. With the repair of the boats, we have more security, and we can capture more fish".

Fisher in Colombia

According to GOAL's R4S, which was undertaken prior to BE's projects, an adequate analysis of the local context has made it possible to understand that hunger must be resolved before thinking about markets, that supporting the family unit allows a better understanding of the multi-dimensional problems faced by fishermen (Colombia), that a strengthened cold chain network would improve the access to markets, that associativity reduces vulnerability, and that capabilities are adopted when there is equipment and materials to put them into operation. These, added to the promotion of productive chains around fishing such as: subproducts, boat repairing services, tourism, crafts, fish leather, refrigeration technical services, ice packaging, sale of cellular charging services, supplies sale (oil), repair and maintenance of outboard motors, cell phone repair, shoe repair, jewelry making, confectionery, and ice cream and baking, have made it possible to diversify income and reduce the vulnerability of these populations. Although all of them require consolidation, they have proven in a short time to be **catalyst initiatives in highly vulnerable economies and ecosystems**.

Among the aspects that have inhibited a greater scope of the achieved results are the low educational level of these populations, the difficulties in accessing the territories due to climate limitations or insecurity, the fact that there are leaders that have appropriated a lot of the organization and do not give participation to other partners, as well as the climatic and social vulnerability of the territories. In the specific case of Colombia, limited access to water, productive land for cultivation, and technologies that allow planting in drought conditions make it difficult to obtain better food security conditions. Also, there is a lack of greater commitment from national authorities to build regulations that allow local residents the access, use and sustainable management of marine fishing resources.

III.4 Impact

A vast majority of those interviewed (98%) indicated that **GOAL's BE interventions have generated positive changes**. In terms of increased income 90% of the people responded affirmatively while 61% of the interviewees have improved their food security. Additionally, in Honduras, the access to financial services (42%) and markets (38%). However, actions that allow connecting additional income with food security must be reinforced to achieve higher-level effects.

"The money we earn is mainly for food and the house maintenance, improving fishing equipment and, if possible, we save some; although there are also those who spend it on other things that aren't priorities."

Colombian fisher

Awareness campaigns, training, and development of teaching materials with information on family finances, child development, nutritional content of food, ration management and food safety in preparation and storage, are some of the issues that must be

addressed. In Colombia, food security is more difficult to achieve due to the enormous difficulties they have in producing their own food.

The main change found during this evaluation has been the **livelihoods improvement** since new jobs and higher income have been generated. Also, there is better access to fishing resources both for consumption (food and nutritional security) and for sale. This improvement was visible in the traditional Wayuu home at the Jopotulumina community (Colombia), which is built mostly with yotojoro and trupillo sticks (local plant species) mixed with mud, and which has recently begun to incorporate more protective materials such as zinc (Image 1).

Image 1. Use of more protective materials in the traditional wuayuu home.



Associativity has been strengthened by improving relationships within the community members (Colombia) and promoting successful collective trade of artisanal fishing products (REDPESCAH in Honduras) (Image 2).

Now we have more negotiating power for our products because we can preserve them thanks to the cold network. Before, we had to sell it at any price because we had no way to preserve it.

Honduran fisher

Image 2. Product preparation for REDPESCAH



Empowerment is also perceived in the beneficiary communities due to BE interventions. The pride of the fishermen is perceived when describing the improvements, they have incorporated to their equipment and processes, greater integration between members of the communities/organizations, as well as the appropriation of issues related to responsible fishing.

"We are pioneers in multiple actions. We use fish skin, we have an adequate supply of ice, we have a photovoltaic system for access to electricity, we have fishery management plans, we implement good responsible fishing practices, and we know better the state of the marine-fishery resources of our territory, which allows us to defend them and inform the Governance Committee if there is mismanagement.

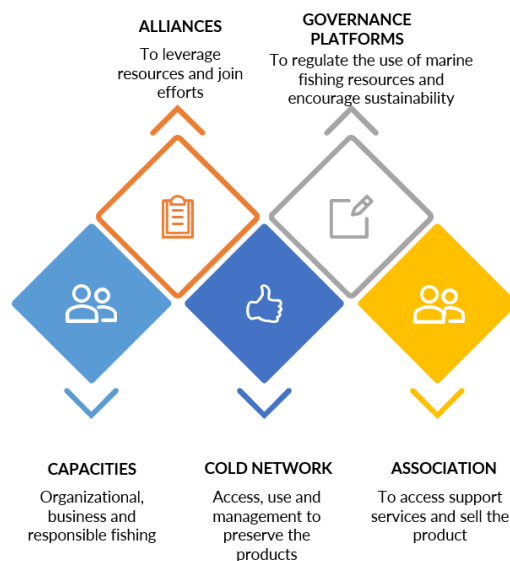
Honduran fisher

Better governance of marine-fishery resources has also been evidenced in Honduras, where the capacities created for the biological monitoring of species have allowed the development of territorial plans that promote their responsible management and the union of efforts between the different key actors to achieve it. Community scientists have been trained to carry out biological monitoring activities. In Colombia, biological monitoring activities have begun a few months ago.

III.5 Sustainability

The likelihood that the BE benefits in food security will continue depend on whether beneficiaries manage to maintain and, ideally increase their access to market and better income. Allocation of a significant part of the captures to improve the nutritional quality of the diet, ensuring an adequate size of the portions consumed and the proper frequency of consumption are issues that must be reinforced to ensure that the livelihoods of fishers are sustainable. Other benefits, such as biological monitoring of species, responsible fishing, traceability, resilience to climate change, business management, access to markets, and increase and diversification of incomes, may continue if the following strategies remains (Figure 6):

Figure 6. Recommended strategies to continue BE results.



Alliances between the communities and fishing organizations with key stakeholders in the territory, who know the artisanal fishermen's sector well and have resources and personnel to continue strengthening them on key issues. These partners must have the

ability to work in a coordinated manner, in full recognition of their capabilities and experience, and to gather resources to develop activities together.

Governance platforms, technically strengthened, to carry out monitoring tasks based on the local Fisheries and Aquaculture Management Plan, recognized by the community and with self-management capabilities of both regulations as well as incentives. These platforms must have access to support and resources to develop their activities.

Strengthened capacities to apply the GFP⁵⁵s both in fishermen, their associative companies and collection centers, supported with investments in seed capital for the purchase of fishing equipment/materials, must remain to improve market access, management of the populations of fish, quantity and quality of the captured product, as well as the safety with which it must be handled.

“What we have achieved has to remain with or without a project. It is our responsibility. We are still very vulnerable, but when we manage to have food and start selling fish, the rest must follow on our own, because no one can take knowledge away from us”.

Colombian fisher

Cold network based on equipment and resources to cool the captured products may strengthen competitiveness of artisanal fishermen, increasing their possibilities of accessing higher value markets, and reducing losses and vulnerability of these populations. It is essential for additional income to be maintained and increased.

Associativity. Organizations have been trained to be self-managed, obtaining results at both the organizational and business levels (Honduras) and community levels (Colombia). The role of these structures is strategic to provide continuity to BE's actions since through them, alliances, and access to support services, among others, can be managed.

III.6 Innovations and learnings

GOAL's BE is based on the **Golden Circle approach**, which provides compelling evidence of how much more programs can achieve by starting everything first by asking “Why?”, “How” and “What”. It allows to build a systemic model to transform the BE.

GOAL's BE seeks the **origin of the causes to face the consequences**. That is, when at first glance it is observed that access to the market is difficult, the solution is not only based on looking for new clients, but also on understanding the limitations that fishermen face to have greater bargaining power in the sale of the product. This is how topics emerge, such as the cold network to prolong useful life and ensure safety, and the need to increase the volume collected through associative efforts.

The application in Honduras of a **territorial strategy**, with dialogues between community actors, has made it possible to raise awareness among fishermen about the

⁵⁵ Good fishing practices (GFP)

importance of complying with regulations, and has also allowed authorities to have a better understanding about the need for fishing communities to use their natural resources for their livelihoods. An adequate balance between both interests is essential to achieve the governance required for integrated management of marine-fishery resources.

The **direct investment** in the purchase of materials and equipment has allowed the implementation of the acquired knowledge, obtaining benefits in the short term. Also, the use of **low-cost solutions** (such as the construction of artisanal coolers – cellars, or the repair of boats) to improve the quality and quantity of catches, as well as their management and safety, has allowed to reach a greater number of beneficiaries.

“Even though these colleagues had been trained, it would have taken us a long time to implement the knowledge without the equipment. It helps us to put what we have learned into practice more quickly and begin to receive the benefits of the training.”

Honduran fisher

Although the **BE approach** is broad, diverse, dynamic, integrative and to some extent idealistic, it also **allows actions to be adapted** according to convenience for the environment where it will be applied. For example, if the aim is to restore livelihoods and contribute directly to improving families' access to marine-fishery resources to eat (Colombia), the investments with the greatest impact are those made in family units. On the other hand, in Honduras it was decided to apply actions aimed at benefiting fisher's organizations to improve their access to the market and obtain better prices. These populations, mainly those in the Departments of Colón, Atlántida and Cortés, have greater access to land for cultivation, which allows them to have various food alternatives for their diet.

The incorporation of **traceability** as a strategy to ensure the origin and transfer of the product, as well as the application of good fishing practices, increases the commercial opportunities of fishermen's organizations. This allows them to position themselves in the market in a differentiated way and promote the favorable socio-environmental impact of the activity, key elements for building long-term business relationships.

Lessons learnt from de BE Program

This section has been built from the testimonies of the people interviewed during this evaluation. As a result of the process, it was evident that there are at least two categories of learning:

- a) those indicated by the team that has been working on the approach since 2011.
- b) those mentioned by those who execute the project at the local level and the beneficiaries.

Both learnings, different in their focus and scope, are valid for the objectives of this evaluation.

Lessons from the local teams and beneficiaries

Lesson 1: The BE program, through its 12 essentials, provides a roadmap that allows different projects to contribute to the achievement of BE's objectives, even if they have different strategies.

Lesson 2: BE actions must be aimed to build fishers connectivity within a food secure, productive, resilient, and inclusive system.

Lesson 3: Productive activity must be successful in the three dimensions of sustainability: environmental, social, and economic. This is something that is not always understood at the local level, mainly when government programs have a strong protection and conservation components. It is important to highlight this with the different actors in the chain, to harmonize criteria and move forward in the same direction.

Lesson 4: The permanent adoption of new knowledge will depend on the level of awareness of the fishermen and the demands of the market. That is why the traceability system is so important.

Lesson 5: Even if the work is in remote areas with difficult access and communication, programs should not be afraid to innovate, without losing sight of the particularities of the territory.

Lesson 6: The marine-fishery products chain is possibly the most resilient chain in our region, as it can provide food with high nutritional value immediately, even with few resources.

Lesson 7: Private companies' participation in the training and coaching processes at fishermen's organizations will raise their awareness and thus improve their access to markets.

Lesson 8: BE has huge benefits in Food Security even when the focus of donor funding is on environmental and economic outcomes.

Lesson 9: Governance platforms, which bring together the key actors of the territories, are spaces that go beyond planning and control over coastal marine resources. These spaces also allow the recognition of the capabilities of each actor, their interests, and limitations, establishing public commitments regarding responsible management of the resources.

Lessons from the team working in the approach since 2011⁵⁶

1. Systems Approach is a hugely impactful way to engage local actors to collaborate and achieve change at scale.
2. The BE pieced together over 15 projects to create a regional blue economy programme. However, no GOAL flexible funds were made available for most of that period to allow for strategic interventions in Food security. Now with ICSP finally allocated and greater organization support for the BE, this is finally possible.

⁵⁶ Provided by Bernard McCaul during the report review.

3. Despite of not having donor or GOAL funds for Food security, the programme has demonstrated that BE can have hugely important impact on food security as well as economy security and climate resilience.
4. Critical to attract responsible investment in the BE to further scale and sustain outcomes.
5. Integrated programming applying systems thinking is highlight effectively in empowering crisis affected populations move beyond crisis to resilience.
6. Huge potential for GOAL to package and transfer the BE approach successfully to other contexts. This is demonstrated by how BE was transferred to Haiti and Colombia from Honduras.

GOAL's framework of 12 Essentials Effectiveness

In general terms, the 12 essential framework has been effective in achieving the objectives of improved livelihoods and increased incomes, inclusion, and market access. However, it is necessary to strengthen institutional indicators to measure governance, capacity to adapt to climate change, protection of biodiversity, and food security. Until now, the focus has primarily been on the evolution of income, assuming that this will improve food security. The development of biological monitoring protocols and their implementation have also been assessed, but the behavior of species has not. For example, a group of indicators for climate change adaptation would enhance our understanding of its impact on food security, particularly concerning access to water and fishery products. It is important to consider the disaggregation of some essentials and the development of standardized methodologies for their implementation, considering the variables that the environment may present. The ability to record change must be improved, with periodical measurements. Currently, assets are delivered, but data on their use is not recorded, creating a risk of turning the program into merely an "asset donor."

IV. CONCLUSIONS

- Although it was not conceived as a program aimed at address food insecurity, GOAL's BE has demonstrated to be a suitable approach for the recovery of livelihoods, the improvement of economic and food security, and the enhancement of resilience to climate change in fishing communities.
- The system approach (causes and consequences) has been applied to BE since the very beginning in 2011. This led to the development of the R4S methodology which has enabled to adapting solutions to different challenging environments in an agile way, with low-cost solutions, self-manageable and with short-term results, making them scalable.
- GOAL's BE has responded to the FS needs of beneficiaries, partners and countries by increase the physical presence of marine products in both local and national markets (availability), providing fishing equipment and materials, the capacity of fishermen to obtain and/or acquire food in the desired quantity and quality (access) and facilitating the connection with the markets, promoting the sale of species that were not previously offered, to ensure the supply of the product throughout the year (stability)
- Food security must be seen not only from an individual perspective but also from the availability of marine fishing resources at the local level and for national consumption. GOAL's BE has contributed to the 4 pillars of food security (access, availability, use and stability of the food supply), but results have not been made visible through measurements or priority in project investments.
- Food security indicators yielded challenging results. While FSC is acceptable, there is still much room for improvement in terms of dietary diversity and use of coping strategies.
- Positive impacts were found in terms of governance, market access, traceability, increase in income, food security, community resilience and management of marine coastal resources.
- The sustainability of GOAL's BE is based on the maintenance of strategic alliances, governance platforms, associative efforts, the adoption of the knowledge acquired and the maintenance that can be given to the investments made in equipment and materials to ensure the good management of the fishery product.
- Lessons and innovations are abundant and must be systematized and socialized to support future scaling processes.
- GOAL has become a leading agency in the Blue Economy. The concept was only first conceived in the 2012 Rio Climate Conference and GOAL has become a leading early adopter of this innovative vision for ensuring sustainable food and economy security for a future population of 10Billion people on the planet.

V. RECOMENDATIONS

This section includes the valuable contributions provided by the different audiences interviewed throughout this evaluation. Some recommendations have been proposed from the perspective of the beneficiaries and local partners (actions carried out that must be reinforced) and others contain a more strategic and global vision on how BE should be addressed.

Recommendations for improvement in FS

- Raise awareness in general BE approach, its feasibility and demonstrated impact.
- Attract impact invest⁵⁷ to the BE.
- Redefine essentials related to Food Security to manage the response to different instances on issues associated with Food and Nutritional Security (FNS).
- Each essential must have criteria and indicators for monitoring. From this, it will be possible to define the type of actions that should be developed through projects and the profile of the populations where these actions will have the greatest impact. In this way, future partners and allies will be able to invest in essential assets that have an impact on indicators of their interest through short, medium or long-term actions.
- Create/strengthen the relationship with national authorities that oversee the issue of food safety, such as ministries of health, to be able to coordinate actions and unite knowledge.
- To further strengthen the impact of the BE programme on economic and food and nutrition security social and gender norms should be addressed through gender transformative approaches and financial inclusion to increase women's economic empowerment. Financial inclusion and women's economic empowerment are critical for achieving food and nutrition security.
- Integrate Food and Nutrition Security Early Warning and Response Systems into the related Essential and programme planning / interventions.
- Incorporate Food and Nutrition Security as one of the Pillars of the Resilience of the Blue Economy
- Strengthen efforts already made related to the role of women within the family and organizational nucleus, recognizing their contribution, empowering them and strengthening their capacities to insert themselves into the local economy and to influence family well-being.
- Strengthening ancestral methods of water harvesting (such as jagüey) and

⁵⁷ Referred to as investments made in companies, organizations and funds with the intention of generating a measurable and beneficial social or environmental impact along with a financial return.

promoting the production of traditional foods with high nutritional value are strategies that can contribute to improving FS.

- Gather both blue and green economy efforts since they are complementary, especially when you have climate risks affecting the land and sea e.g. in La Guajira the salination and lack of water is a major issue contributing to food and nutrition insecurity of the fishing communities.
- Carry out a KAPB⁵⁸ assessment to understand the behaviors that contribute to food and nutrition insecurity and the barriers preventing positive behaviors and strengthen the Social and Behaviour Change Communication component of the BE to address these behavioral determinants. This could include behaviors around diet diversity if this was a major contributing factor, which could include practical skills in kitchen gardening using agroecological approaches to increase food production but ideally should not need seed capital or provision of inputs considering GOAL's MSD focus.
- Incorporate in the monitoring of the GOAL Strategic Plan Objective 3, FS indicators such as Food Consumption Score, Household Diet Diversification and Livelihoods Coping Strategies; as Food Security indicators have been recently introduced.
- Expand access to financial services that respond to the particular conditions of vulnerability faced by this sector is strategic for the growth of fishermen's organizations and their members. Instruments such as Savings and Credit Banks or Savings-Led Microfinance⁵⁹ provide fishermen with the opportunity to access soft loans, while progress is made in the development of Impact Invest⁶⁰ mechanisms that recognize the socio-environmental impacts of fishing activity, as part of their investment.
- Continue strengthen strategies aimed at the adoption of the knowledge on responsible fishing acquired through BE's actions. The full operation of the traceability system in Honduras will contribute to achieve this objective.
- Investments in technologies for innovation such as aquaculture, marine farms with artificial reefs⁶¹, deeper fishing, transformation of raw materials, use of waste for the production of animal food and fish leather must continue and expand.
- Improve knowledge management related to BE projects and the custody of project information (design, results), to ensure that reliable information about them is permanently available.

Recommendations for upscaling

⁵⁸ Knowledge, Attitude, Practices & Behavior

⁵⁹ <https://www.crs.org/our-work-overseas/program-areas/savings-led-microfinance>

⁶⁰ <https://thegiin.org/impact-investing/need-to-know/>

⁶¹ El avance en estos temas está condicionado al debate que existe sobre su viabilidad, considerando el marco regulatorio que actualmente existe en los países.

- Apply R4S to define the strategy for BE in each country or region.
- Establish spaces for concerted dialogue with local actors to define the strategy, the beneficiaries and the type of support that will be given by BE.
- Implement accountability actions that allow the beneficiaries and strategic partners to be empowered.
- Scale global and regional strategic alliances with major environmental agencies.
- Update system maps/ changes and use these to advocate for wider change.
- Development of major publications on BE to confirm GOALs leadership in this area.
- Development of new pilots in Aqua and Mari-culture.
- Pursue leadership on larger strategic impact funding opportunities.
- Engagement more in regional programmes and strengthen learning within and across regions.

Annex 1. Assessment Tool

Questions
Relevance
Do you know the meaning of the Blue Economy
Have the objectives, design and implementation of the Blue Economy/GOAL interventions responded to food security needs of beneficiaries, country(ies), and partners
Have the objectives, design and implementation of the Blue Economy/GOAL interventions responded to food security policies and national /local priorities , and have they continued to do so if/when circumstances changed?
Effectiveness
<i>Objectives</i>
Have the blue economy/GOAL interventions achieved (food security objectives)?
Strengthen local economic systems that enable people to produce sustainably, and in a climate resilient manner
Support the most vulnerable communities to have increased capacities to be food and nutrition secure
Increased preparedness and response capacity against hazards which threaten people's food and nutrition security
In which of the following activities carried out by GOAL to achieve these objectives, have you participated?
<i>Availability</i>
During the last year your household has had availability of sufficient quantities of quality food from marine ecosystems.
<i>If no/somewhat, what are the reasons for having less availability of these foods?</i>
Which of the following foods from the sea/marine ecosystem are the most consumed by your household?
% of targeted participants that increased their income as a result of GOAL assistance
Have your household improved your knowledge and practice of food processing, preservation and storage techniques to increase resilience to food insecurity and malnutrition due to GOAL project activities
If yes, indicate the main practices you have learned and adopted (multiple selection)
<i>Cleaning the kitchen and all areas, surfaces and utensils used for food preparation</i>
<i>Personal Hygiene (wash hands, do not cough or sneeze over food, etc)</i>
<i>Wash fruits and raw vegetables before eating</i>
<i>Prior to consumption, rinse fresh fruits and vegetables to remove possible pesticide residues, soil, and/or bacteria</i>
<i>Cook eggs, meat, fish and poultry thoroughly to kill bacteria</i>
<i>Freezing food</i>
<i>Food dehydration</i>
<i>Others</i>
How have these actions benefited fishers and their families?
What factors have facilitated or inhibited the results?
Are there key learnings that GOAL has made over the course of the establishment of this program?
3. Impact

GOAL's blue economy geographic spread, number of projects, interventions type, sectors covered, expenditure and reach.

Have the blue economy interventions generated significant effects in food security among participating coastal communities?

How are these effects (positive or negative, intended or unintended)

What changes the Blue Economy approach have caused in beneficiaries and their families?

4. Sustainability

What is the likelihood that net benefits of the blue economy interventions in food security for fishers and their families will continue?

What will it depend on?

What other areas (e.g., on economic security and climate resilience) may continue also?

Are there key innovations and/or added value of GOAL interventions in the blue economy?

How the Blue Economy approach can be improved and scaled regarding food security, or other areas (e.g., economic security, climate resilience), in the current and other geographical locations?

Annex 2. GOAL team members and key stakeholders participating in evaluation surveys.

Name	Organization
Luigi Loddo	Director - GOAL Honduras
Bernard McCaul	Director of International Programs – GOAL Global
Mario Argeñal	BE Specialist - Colombia
Daniela Torrez	Regional Coastal Biodiversity Project – RCBP project Manager
Virginia Manjarres	GOAL Colombia (Guajira offices)
Celeste Amador	MEAL – GOAL Honduras
Ricardo Gil	GOAL Honduras
Roberto Toro	Business Specialist - GOAL Colombia (Guajira offices)
María de los Ángeles Mendoza	Local team member – GOAL Colombia
Gabriela Padilla	Program Director - GOAL Honduras
María del Rosario Guzmán Vivas	CORPOGUAJIRA – Grupo Marino Costero
Ruber Fragozo	Coordinator at La Guajira - Autoridad Nacional de Acuicultura y Pesca (AUNAP)
Carmen Paulina Fuentes	Entreprenur Unit Coordinator - Servicio Nacional de Aprendizaje (SENA)
Oscar Narváez (*)	Traceability Coordinator - Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA)
Miguel Suazo (*)	Director of the Department of Maritime Fisheries - Dirección General de Pesca y Acuicultura (DIGEPESCA)
Darlene Flores (*)	DiBiiio-MiAmbiente
Marcio Rivera (*)	LARECOTURH
Héctor Mendoza (*)	Municipio de Trujillo Major
Elsa Sanchez (*)	Comité Interinstitucional de Trujillo y Santa Fé
Betina Salgado (*)	ICF- Manejo Forestal
Antonella Rivera (*)	Coral Reff Alliance
Julio San Martin (*)	Coral Reff Alliance

(*) Stakeholders interviewed during the final evaluation of the Mi Pesca project in July, 2022.

Annex 3. Fisher’s organizations and communities participating in evaluation surveys.

Organization/Community	Country
Jopotulumina	La Guajira, Colombia
Popoya Playa	La Guajira, Colombia
Puerto Chentico	La Guajira, Colombia
Tocoromana	La Guajira, Colombia
Sirapurama	La Guajira, Colombia
Asociación de Pescadores Delfines del Caribe	Colón, Honduras
APMEC	La Mosquitia, Honduras
EPMY	La Mosquitia, Honduras
APEARCE	La Ceiba, Honduras
REDPESCAH	La Ceiba, Honduras
Asociación de pescadores artesanales de Triunfo de la Cruz (Tonina Blanca)	Tela, Honduras
APAPC	Puerto Cortés, Honduras
SOPESCOL	Puerto Cortés, Honduras
ESM - KAUMA	La Mosquitia, Honduras
KRUTA	La Mosquitia, Honduras

Annex 4. FCS by country: average frequency consumption of food groups⁶².

Food groups	Nutritional Weight	Colombia		Haiti		Honduras	
		Frequency of consumption	Score	Frequency of consumption	Score	Frequency of consumption	Score
a) Cereals and grains	2	6,67	13,33	5,33	10,67	5,31	10,61
b) Roots and Tubers	2	2,64	5,28	0,75	1,50	3,15	6,29
c) Legumes/nut	3	2,51	7,52	2,75	8,25	3,84	11,52
d) Orange vegetables (rich in Vitamin A)	1	1,04	1,04	1,83	1,83	1,40	1,40
e) Green Leafy vegetables	1	1,38	1,38	1,83	1,83	1,59	1,59
f) Other vegetables	1	6,26	6,26	1,50	1,50	4,81	4,81
g) Orange fruits (rich in Vitamin A)	1	1,59	1,59	0,17	0,17	1,18	1,18
h) Other Fruits	1	2,10	2,10	2,08	2,08	1,65	1,65
i) Meat	4	2,32	9,29	0,92	3,67	2,42	9,68
j) Fish/shellfish	4	6,12	24,46	6,08	24,33	4,44	17,74
k) Eggs	4	2,38	9,51	0,20	0,80	5,18	20,71
l) Milk and other dairy products	4	2,00	8,00	1,45	5,82	3,15	12,59
m) Oil/fat/butter	0,5	6,55	3,28	7,00	3,50	4,24	2,12
n) Sugar, or sweet	0,5	6,43	3,21	6,58	3,29	4,89	2,44
o) Condiments/Spices	0	6,01	0,00	6,92	0,00	4,15	0,00
		SUM	96,26	SUM	69,24	SUM	104,33

⁶² Despite results of FCS are presented based on % of households with 35 or more, this data was generated to analyze which food groups are affecting the result.

Annex 5. SCI by country

In the previous 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to...

Coping Strategy	Colombia			Haití		Honduras	
	Weight	Frequency	Weighted	Frequency*	Weighted	Frequency	Weighted
	t	*	Score		Score	*	Score
a) Rely on less preferred and less expensive foods?	1	3,33	3,33	4,11	4,11	5,06	5,06
b) Borrow food or rely on help from friends or relatives?	2	1,81	3,61	2,78	5,56	1,12	1,12
c) Limit portion size at mealtime?	1	3,25	3,25	5,44	5,44	4,09	4,09
d) Restrict consumption by adults in order for small children to eat?	3	2,89	8,66	5,56	16,67	2,65	2,65
e) Reduce the number of meals eaten in a day?	1	3,00	3,00	5,22	5,22	2,32	2,32
Total household score			21,85		37,00		15,24

* (0-7 number of days per week)

Based on the country's context, the total CSI score is the basis to determine and classify the level of coping: into three categories: Food secure (CSI= 0-3), marginally food secure (CSI = 4-18, food insecure (CSI ≥19)

Country	CSI Score	Results
Colombia	21,85	Food Insecure
Haiti	37,00	Food Insecure
Honduras	15,24	Marginally Food Insecure

Annex 6. LCI by country

During the past 30 days, did anyone in your household have to engage in any following behaviors due to a lack of food or a lack of money to buy food?

Type of Strategy	Colombia	Haiti	Honduras	Not
	YES	YES	YES	
a) Sold household assets/goods (radio, furniture, refrigerator, television, jewelry etc..)	15,94%	27,27%	1,61%	
b) Reduced non-food expenses on health (including drugs) and education	30,43%	18,18%	56,45%	
c) Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc..)	1,45%	27,27%	3,23%	
d) Spent savings	35,29%	75,00%	35,48%	
e) Purchased smaller quantities of food	63,77%	90,91%	67,74%	
f) Selling, sharing and exchanging food rations	30,88%	27,27%	16,13%	
g) Borrowed money / food from a formal lender / bank	43,48%	58,33%	24,19%	
h) Sold house or land	0,00%	0,00%	0,00%	
i) Withdrew children from school	0,00%	9,09%	0,00%	
j) Begging	1,56%	9,09%	0,00%	
	Stress	Crisis	Emergency	
Colombia	29,38%	18,59%	1,56%	50,47%
Haiti	47,73%	23,67%	9,09%	19,51%
Honduras	32,90%	10,08%		57,02%