

Towards Sustainable Development - Learning And Challenges Of Fishing Communities

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Abstract

The Implementation Of Actions To Achieve The Goals Of The Sustainable Development Goals Assumed By Each Nation Represents A Challenge That, To Date, Many Have Failed To Advance. Such Is The Case Of The Fishing Communities Of Colombia, That Despite Having Conditions For The Implementation Of Sustainable Fishing And Achieving The Comprehensive Quality Of Life That The Sdgs Propose, Its Achievement Is A Distant Goal. This Research Sought To Identify The Challenges Around Sustainable Development In Three Fishing Communities In The Colombian Caribbean, As Well As The Lessons Learned From Approaching Their Daily Lives. Two Semi-Structured Surveys And Direct Observation Were Used To Identify The Characteristics, Conditions, And Challenges Of The Participating Communities. The Results Show Common Aspects Within The Communities, But Also Significant Differences In Their Practices And Daily Life Despite Being In The Same Environment. The Challenges Of These Communities Are Concentrated In 12 Of The Sdgs From Which Their Situation Was Analyzed.

Keywords: Sustainable Development Goals; Sdg; Artisanal Fishing; Sustainable Fishing; Sustainable Communities.

1. Introduction

Fishing Worldwide Is One Of The Most Practiced Economic Activities And One That Makes The Greatest Economic Contribution To Developing Countries. However, The High Pressure Exerted On This Resource Is Causing Great Problems In All Fisheries (World Food Security Committee, 2014). The Overexploitation Of The Resource Caused By Large-Scale Fishing And The High Population Density In The Areas Of Influence Of This Type Of Economic Activity Hinder The Sustainability Of Fishing Resources (Ejor La, 2007).

This Has Also Affected Small Fishing Communities That Have Seen Their Workplaces Reduced Or Displaced Offshore (Rubio Echeverry & Lozano Mendoza, 2017). Salas Et Al. (2011) In Their Research, Shows That Fishermen Feel Safe If They Have Access To Fishing, As Well As Feel Vulnerable When There Are Low Catches. In This Sense, Their Living Conditions Are Severely Affected, While What These Communities Hope Is To Guarantee Their Survival, Even Though This Desire May Lead Them To Cause Negative Impacts On The Environment Such As Overfishing (Ejor La, 2007).

A Study In Indonesia Carried Out By Ayunda Et Al., (2018), Shows That Small-Scale Fishing Contributes To The Degradation Of The Fishing Resource With A Tendency To Reach The Threshold Score Of Fish Exploitation In Ten Years. For Their Part, Anh Et Al (2011), Point Out That Fishermen Living In Poverty In Vietnam Have Illegal Practices, Using Illegal Tools And Taking Fish That Should Not Be Caught. The Authors Find That, Although Fishermen Are Aware That These Activities Should Not Be Done, They Resort To Them For Survival. In Colombia, The Situation Of Fishing Communities Also Faces Problems That Hinder Their Sustainable Exercise. The Ministry Of Agriculture (2014) Defined The Fishing Problems In The Country By Categorizing Them Into 14 Factors And Their Base Problem.

Table 1

Fishing Problem In Colombia

Factor	Main Structured Problem
Sustainability Of Fishery Resources	Evidenced Decrease In Catches And Sizes Of Species Of Commercial Interest.
Planning And Management	Deficiencies In The Planning And Management Of The Fishing Sector
Infrastructure And Logistics	High Production Costs
Quality And Safety	Low Quality And Safety Of Fishery Products In The National Market
Consumption	Low Consumption Of National Fish Products
Measures And Instruments To Support The Activity	Deficiencies In The Measures And Instruments To Support The Activity
Participatory Governance	Deficiencies In Participatory Management And Management Of The Fishing Sector
Training And Protection Of Human Resources	Poor Training And Protection Of Human Resources
Technological Development And Innovation	Incipient Technological Developments And Innovation In Fishing Activity
Monitoring, Control, And Surveillance	Deficiencies In The Monitoring, Control, And Surveillance Systems
Management And Compliance With International Agreements	Deficiencies In The Management And Compliance With International Agreements
Policy And Regulations	Poor Participation Of The Fishing Sector In The National Context
Information Management	Deficiencies In Information Management In The Fishing Sector
Inter-Institutional Coordination Mechanisms	Poor Institutional And Intersectoral Coordination And Articulation. (Local, Regional And National.)

Source: Adapted From Ministry Of Agriculture (2014)

In This Same Direction, The Ministry Of Agriculture Defined A Comprehensive Policy For The Development Of Sustainable Fishing In The National Territory, Which Is Focused On Three Strategic Axes: Sustainability Of Fishing Resources, Infrastructure And Logistics, And Quality And Safety (Ministry Of Agriculture And Rural Development, 2014).

Now, The Country Has Privileged Territories Due To Its Access To Water Resources, Such As The Department Of Atlántico, Which Not Only Has Access To The Caribbean Sea, But Is Bordered By Both The Magdalena River And The Dique Channel. In The Same Sense, The Government Of The Department Of Atlántico Includes Within Its Development Plan 4 Axes: Equity, Dignity, Well-Being And Institutionality (Government Of Atlántico, 2020). These Same Axes Include Aspects Related To The Management And Care Of The Department's Beaches, Investment In Agribusiness And Guaranteeing Fundamental Rights And The Strengthening Of Institutions.

Despite This Interest, It Is Found That The Fishing Communities Of The Atlántico Department Have Not Been Studied In Relation To Their Practices And Livelihoods. Among The Existing Studies, It Has Been Identified That The Fishing Communities In This Territory Face Problems That Coincide With That Indicated By The Ministry Of Agriculture, Highlighting The Problems In The Productive Chain, Inadequate Management Of Finances, Low Educational Level Of Artisanal Fishermen, Lack Of Accompaniment Of Territorial Entities And Inadequate Solid Waste Management (Rubio Echeverry & Lozano Mendoza, 2017).

Considering The Above, The Results Of A Study Are Presented That Aimed To Analyze The Living Conditions Of Three Fishing Communities In The Municipality Of Tobará, Department Of Atlántico, And The Challenges They Face From The Perspective Of Achieving The Sustainable Development Goals. From The Results Obtained, Reflections Are Made On The Lessons Learned From The Approach To These Communities With The Purpose Of Contributing To Their Recognition In Terms Of Social Policies For The Populations That Live From This Economic Activity. For This, The Guiding Concepts Of The Research Are First Presented And Then The Results Of The Empirical Work Carried Out With The Communities And The Resulting Reflections Are Presented As A Conclusion.

1.1. Sustainable Communities And Fisheries

The Concept Of Sustainable Development Is Defined As One That Meets The Needs Of The Present Without Compromising The Needs Of Future Generations. This Implies A Change In The Mentality Of Societies And Including Environmental Variables Within Their Processes (Brundtland, 1987).

Under This Purpose, 193 Countries Around The World Committed To The Fulfillment Of 17 Sustainable Development Goals (Sdg) That Are Focused On Eradicating Poverty, Guaranteeing The Protection Of The Planet And Prosperity In The 15 Years Following Their Signature (Program Of United Nations Development, 2019). In This Sense, What These Objectives Seek Is Related To The Sustainability Of The Countries. Since The Socio-Economic And Environmental Conditions Of Each Member Country Are Different, These Objectives Are Adapted To Their Conditions Without Losing Sight Of The Global Goal. That Is Why Countries Like Colombia Have Begun To Formulate Policies Around Sustainability And Compliance With The Sdgs.

The Notion Of Sustainability From The Definition Of These Objectives Gives Great Relevance To Citizens And Communities As Protagonists Of These Achievements. According To Yang Fu And Weihong Ma (2020), A Sustainable Community Is One In Which People And Organizations Are "Functionally And Socially Connected" To Provide Various Services To Improve Health, Educational Conditions, And Other Material And Spiritual Well-Being. Of Community Members Through Self-Determination With Shared Collective Resources Within The Community.

This Indicates That, For A Community To Be Sustainable, There Must Be Resources (Financial, Natural, And Operational) That Cooperate With Each Other And Allow Access To These At Any Level For All Members. Likewise, Aspects Such As The Market (Product Prices) And Governance Play A Fundamental Role For The Community's Self-Regulation (Fu & Ma, 2020).

On The Other Hand, Talking About Sustainable Communities Implies Associating It With The Notion Of Resilient Communities. De La Hoz-Del Real Et Al (2019) Consider That Resilience Refers To The Community's Ability To Detect And Prevent Adversity And Recover After Damage. In This Sense, The Adversities That A Community Can Face Can Be Of Any Kind (Environmental, Social, Or Economic) And When They Are Able To Face And Overcome Them, They Become Resilient, And Enhance Their Sustainability.

Thus, Within The Fundamental Circumstances For The Resilience And Sustainability Of A Community, Will Be Its Capacity For Food Security. In This Regard, The Food And Agriculture Organization Of The United Nations (2020) Defines Sustainable Fishing As Those Fishing Activities That Do Not Cause Or Lead To Undesirable Changes In Biological And Economic Productivity, Biological Diversity Or The Structure And Functioning Of The Ecosystem From One Human Generation To The Next. This Concept Articulates Everything Related To The Sdgs And The Policies That Each Country Is Working On Focused On Sustainability, Including Fishing Communities And Their Possibilities Of Being Sustainable. Another Aspect That Integrates The Notion Of Sustainable Community Has To Do With Environmental Governance And How We Integrate Ecosystems And Their Services Within Public Development Policies (Vasseur Et Al., 2017). The Incorrect Regulation Of Activities Such As Fishing, Can Negatively Impact Ecosystems, Due To Ignorance About The Species And Their Development Within The Environment And The Extraction Of Endangered Species With The Consequent Impact On The Population That Depends On These Resources (Ramírez- Rodríguez Et Al., 2014).

The Adaptation Potential Of Fishing Communities In The Face Of Possible Adversities Lies In Their Understanding Of The Environment. Fishermen Are Very Cooperative Communities And Willing To Defend The Area In Which They Are Located (González, 2011), This Has Allowed Their Perception Of The Risks To Which They Are Subjected To Be Much Lower And Gives Them A Greater Capacity For Resilience (Ensor Et Al., 2018).

Although It Is A Great Challenge, It Is Possible To Include Fishing Communities In The Economic Dynamics Of The Country From A Sustainability Perspective (Dolorosa & Nurliza, 2017) And In Coherence With Their

Traditions And Ties With The Territory That Constitute An Opportunity For Protection Of The Ecosystem (Lunkapis, 2015).

2. Material And Methods

This Research Was Developed In The Municipality Of Tubará, Located In The Department Of Atlántico-Colombia. This Territory Is Located 27 Km From The Capital, Barranquilla. It Limits To The North With The Caribbean Sea And The Municipality Of Puerto Colombia; To The East With The City Of Barranquilla And The Municipalities Of Puerto Colombia, Galapa And Baranoa; To The South, With The Municipalities Of Baranoa And Juan De Acosta, And To The West, With Juan De Acosta And The Caribbean Sea (National Planning Department, 2020).

The Exploratory Study Was Developed Under A Mixed Approach Prioritizing Quantitative Techniques And A Comparative Approach (; Colino, 2009; Przeworski, A. & Teune, 1970; Ragin, 1987; Sampieri Et Al., 2014). The Sampling Was Non-Probabilistic, Of Voluntary Participants, In Which The Study Is Socialized With The Target Community And Works With Those Who Wish To Collaborate Voluntarily With It (Sampieri Et Al., 2014). Thus, The Study Participants Were Made Up Of Fishermen From Three Beaches In The Municipality As Described Below:

Table 2

Characterization Of The Sample

Study Group	N	Average Age	Process Description
Puerto Caimán	8	45 Years Old	This Community Was Contacted Through Aunap. Initially, A First Approach Was Made By Telephone With The Wife Of The Leader Of The Fishing Community Who Facilitated The First Meeting. During The Development Of The Day, The Fishermen Were Informed Of The Objective Of The Project, That Their Participation Was Voluntary And All For Academic Purposes. They Agreed To Participate And Signed The Survey Explaining This.
Caño Dulce	10	53.5 Years Old	The Leader Of The Puerto Cayman Community Put Us In Contact With The Leader Of This Association. A Day Was Scheduled For The Socialization And Explanation Of The Project. During The Development Of The Day, The Fishermen Were Informed Of The Objective Of The Project, That Their Participation Was Voluntary And All For Academic Purposes. They Agreed To Participate And Signed The Survey Explaining This.
Playa Tubará	6	48 Years Old	This Community Was Also Contacted With The Support Of Aunap. In The Same Way As The Previous Cases, A Day Was Scheduled To Explain The Project And Carry Out The Surveys.

Source: Authors

The Research Was Carried Out In 3 Phases.

Phase 1. To Determine The Characteristics Of The Community Through An Information Collection Instrument Structured For This Purpose, And That Considers Aspects Of Fishing Communities Established By The National Fishing Authority (Inceder, 2011) In Which It Is Intended Identify The Current Socioeconomic And Environmental Characteristics Of The Community (Rubio Echeverry & Lozano Mendoza, 2017).

The First Part Of The Questionnaire Focused On Questions Of Socioeconomic Characterization Of The Study Group Such As Age, Sex, Access And Quality Of Public Services, Access To Education And Access To Health.

In The Second Part, Questions Related To Fishing Activity And Working Conditions Such As Fishing Area, Amount Caught Per Day, Training And Monitoring By The National Fishing Authority, Access To Boats And Problems That Affect Them During The Activity Were Concentrated.

In Parallel To The Above, A Log Was Used In Which Field Annotations Related To The Environment, Behavior Of The Respondents, Site Conditions Among Other Relevant Information Were Taken (Hernández Sampieri Et Al., 2014).

Phase 2. Based On Community Conditions, The Sdgs Most Related To The Livelihoods Of These Communities Were Identified And Comparative Analyzes Of The Groups Were Carried Out, Considering That The Community's Social, Environmental, And Economic Conditions May Vary. According To Aspects Related To Their Imaginaries And The Specific Conditions Of The Area (Woldie & Tadesse, 2019). The Sdgs Targeted For The Analysis Were The Following:

1. End Of Poverty; 2. Zero Hunger; 3. Health And Wellbeing; 4. Quality Education; 5. Gender Equality; 6. Clean Water And Sanitation; 8. Decent Work And Economic Growth; 10. Reduction Of Inequalities; 11. Sustainable Cities And Communities; 12. Responsible Consumption And Production; 14. Life Underwater, And 16. Peace, Justice, And Strong Institutions.

Phase 3. After Analyzing The Common Points And Differences Between The Participating Communities, The Challenges That Can Be Identified Around The Achievement Of The Sdgs Were Defined And Reflections Were Generated On The Lessons Learned From These Communities That Can Contribute To The Generation Of Public Policies

3. Results

3.1. Characteristics And Demographics Of The Participating Communities

The Results Show That The Participating Groups Representing The Fishing Community Are Mostly Made Up Of Men (92%) And Their Average Age Was 49 Years. We Find That The Entire Population (Regardless Of The Community) Belongs To Stratum 1 And On Average Each Fisherman Has 3 Children.

The Study Group Has Been Fishing On Average For 22 Years. However, 36.4% Of Them Have More Than 40 Years In This Work. Mainly They Exercise It For Taste Or Tradition, Although Others Say That It Is The Only Job They Know.

79% Of Those Surveyed Are Dedicated Solely To Fishing, This Being Their Only Source Of Income. Most Of The Fishing Is Carried Out Deep (Offshore) And On A Small Scale.

The Boat Is The Most Used Type Of Boat (91%), But Almost A Quarter Of The Participants (23%) Do Not Have Their Own Boat. The Fishing Area Of All Those Surveyed Is Offshore.

Among The Problems That The Respondents Showed The Most, Is Pollution And 45.45% Consider That Indiscriminate Fishing Is An Aspect That Has Negatively Influenced Their Activity.

3.2. Comparison Of Livelihoods From The Perspective Of The Sustainable Development Goals.

3.2.1. Sdg 1. End Of Poverty

All Members Of These Communities Are Affiliated With The Identification System Of Potential Beneficiaries Of Social Programs - Sisbén. When Analyzing The Income Level Reported By Fishermen, We Find That Those With The Best Income Are Those From Playa Tubará, Followed By Caño Dulce And To A Lesser Extent Those From Puerto Caimán. As Complementary Data, In The First Phase It Was Evidenced That The Perception Of The Participants About The State Of Their Homes Is That The Majority Consider That They Are In Good Condition (75%) And A Smaller Percentage Consider That They Are In Fair Condition (25 %).

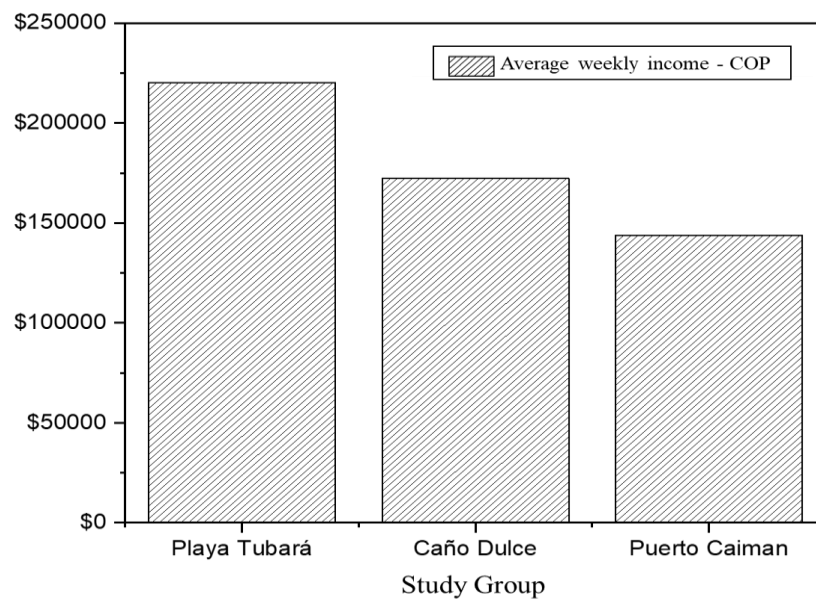


Fig 1: Average Weekly Income Of The Communities. Source: Authors

3.2.2. Sdg 2. Zero Hunger

Of The Population Of Puerto Caimán, 87.5% Of The Participants Indicated That They Have Some Type Of Cultivation In Their Homes Or Raise Some Type Of Farm Animal Such As Pigs Or Chickens, While In The Other Communities This Percentage Is Much Lower, Especially In Caño Dulce. It Is Noted That In The Three Communities A Significant Proportion Of Participants Indicate That They Have Some Land To Have Some Type Of Planting Or Home Garden, Which Constitutes An Opportunity. The Three Participating Communities Reported That On Average They Have 2 Meals A Day, Even Though Their Economic Activity Directly Provides Them With Access To Food.

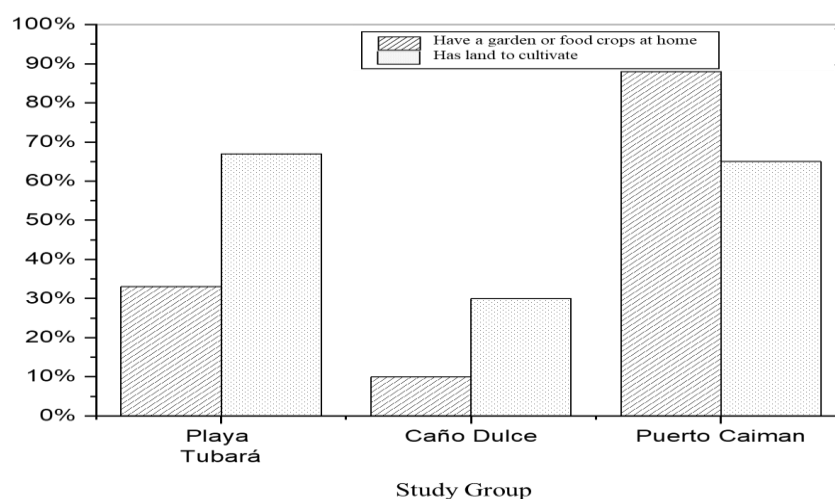


Figure 2: Options For Gardens And / Or Home Crops. Source: Authors

3.2.3. Sdg 3. Health And Well-Being

As Sisbén Beneficiaries, Participants And Their Families Have Access To Health Services In Accordance With The Subsidized Regime Established In Colombia. The Perception Of Their Health Status Is Good In 37.5% Of The Puerto Caimán Study Group, 90% For Caño Dulce And 83.3% For Playa Tobará. The Rest Of The Sample Considers Their State Of Regular Health. If They Require Specialized Attention, They Must Travel To The Capital City Of The Department, Barranquilla, Which Implies The Need To Take 1 Or 2 Buses To Reach Their Destination, Which Represents Approximately 2 Hours Of Travel.

3.2.4. Sdg 4. Quality Education

At The Level Of Education, We Find That A Large Part Of The Sample Has Not Finished Their Studies, Some Have Only Reached Primary School. There Are Multiple Reasons Why They Could Not Continue With Their Studies, However, When Asked If They Wanted To Continue, They Stated That There Is A Difficulty Because The Educational Institutes Where They Could Continue Their Studies Are Far From Their Community (In The Urban Area Or In The Capital). In The Case Of The Caño Dulce Group, It Is Where The Greatest Lag At The Educational Level Is Evident, Since Most Of The Participants Only Reached The Elementary School Level Or Did Not Finish Any Study. In Puerto Caimán, Some Participants Who Finished A Technical Study Were Observed, As Well As Secondary School, And In Playa Tobará The Majority Finished Primary And Secondary School.

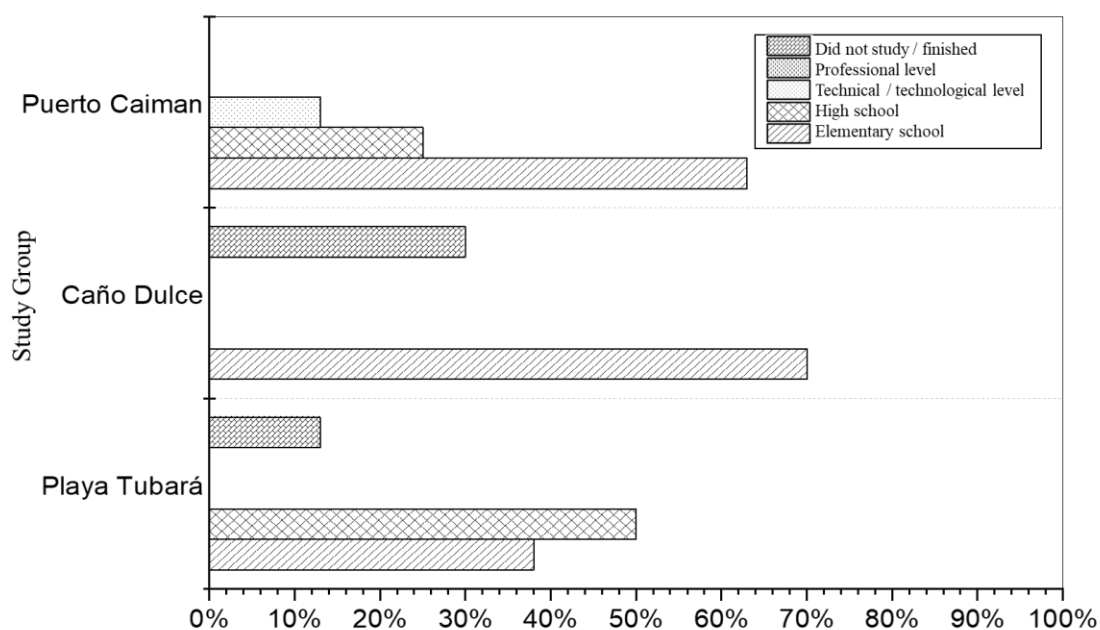


Figure 3: Education Level Of The Study Group. Source: Authors

3.2.5. Sdg 5. Gender Equity

In This Community, Those Who Carry Out The Fishing Activity Are Male And Consider That The Contribution Of Women Is Not Significant And Is Limited To The Preparation And Marketing Of Fish. However, When Analyzing In Detail The Different Activities In Which Women Intervene, It Can Be Seen That In Caño Dulce Female Participation Is Recognized In At Least 7 Moments, While In Puerto Caimán They Are Recognized In 5 And In Playa Tobará In 3 If Playa Tobará Is Considered To Be The Place With The Best Income, This Could Imply That Women Have A Greater Economic Dependence On Their Male Partners In This Community And A

Greater Presence Of Gender Stereotypes Associated With Economic Activity.

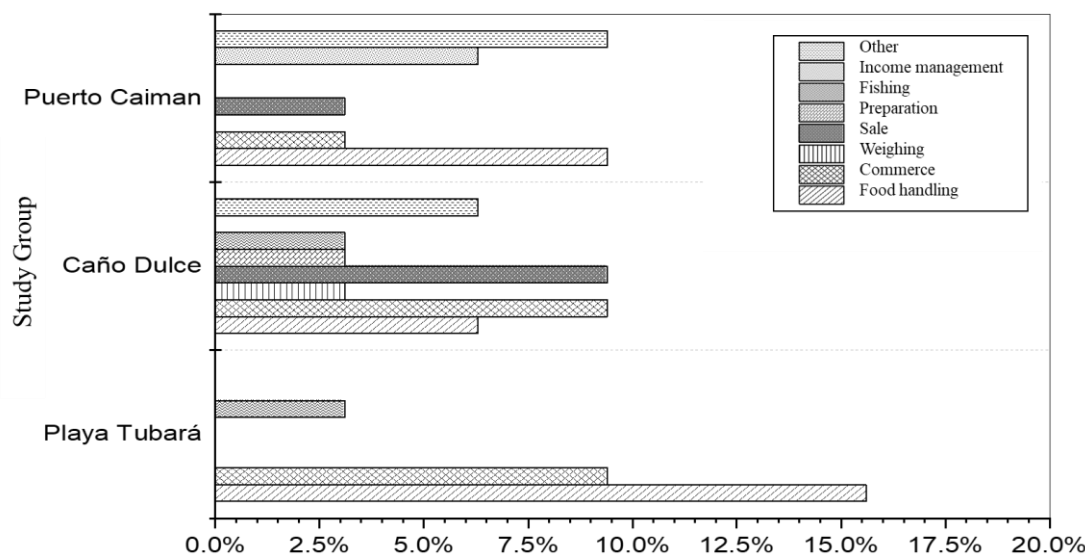


Figure 4: Contribution Of Women In Fishing Activity. Source: Authors

3.2.6. Sdg 6. Clean Water And Sanitation

Being Part Of The Rural Area Of The Country, It Is Evident That There Is Little Investment In Sanitation Infrastructure As There Is No Sewerage In Any Of The Participating Communities. However, The Participants Reported That Their Homes Have Septic Tanks Built By The Same Community. The Cleaning Service Is Provided By The Provider Company And Its Waste Is Collected At Defined Points On The Road Or In Areas Of The Beach Where The Releasing Truck Can Enter. Fishermen Contribute To The Correct Disposal Of Waste, By Removing Waste Material From The Bottom Of The Sea That They Find During Their Fishing Work.

3.2.7. Sdg 8. Decent Work And Economic Growth

The Average Hours Used In Fishing Are 4.8 For Playa Tobará, 5.3 For Caño Dulce And 6.8 For Puerto Caimán. Participants Report That They Sell All The Fish Taken. Many Do It Through Street Vending Within Their Community And In Some Cases, Transport The Fish And Sell It In Nearby Communities. Apart From Fishing, Some Fishermen Carry Out Other Types Of Activities Such As Masonry, Cabinetmaking And Various Trades That They Carry Out Before Engaging In Fishing Activity. Many Fishermen Do Not Have Their Own Boats And / Or Equipment That Allows Them To Carry Out Their Activity More Efficiently.

3.2.8. Sdg 10. Reduction Of Inequalities

Most Of The Population Has Access To Public Services Of Electricity (77%), Water (91%) And Gas (68%). Although Some Of These Present A Service With Regular Quality, As Is The Case Of The Electricity Service (61%).

Additionally, The Entire Population States That The Health Centers Of The Sector Oversee Providing Basic First-Level Health Services, But They Do Not Have Specialized Health Services.

It Is Also Evident That Access To Education Is Limited. Within The Rural Area, 100% Of The Playa Tobará Sample States That Educational Institutions For Their Children To Study Are Far Away, Specifically In The

Municipal Seat. This Situation Is Less Critical In Caño Dulce And Puerto Caimán Where 40% And 37.5% Respectively Are Close To Educational Institutions.

3.2.9. Sdg 11. Sustainable Cities And Communities And Sdg 16. Peace, Justice, And Strong Institutions

We Find That Each Of These Communities Have A Different Relationship With The National Fishing Authority - Aunap. The Puerto Caimán Community Is Not Part Of A Fishing Association. The Fishermen Continue To Work In Groups Despite Having Dissolved The Association. While In The Towns Of Caño Dulce And Playa Tubará There Are Associations.

This Is Due To The Perceived Neglect Of Aunap In All Fishing Processes In The Case Of The First Community. The Relationship Of This Group Of Fishermen With The National Fisheries Authority Is Not Favorable Since They State That They Are Not Considered. Aspect That Varies In The Other Two Communities That State That Aunap Carries Out Multiple Activities, Monitoring And Continuous Accompaniment Of Its Work.

3.2.10. Sdg 12. Responsible Consumption And Production

Trammel Is The Fishing Gear That All Respondents Use And Combine On A Smaller Scale With Others Such As Trawl, Line, Cast Net And Longline.

The Participants Reported That, During The Fishing Activity, In Some Moments When Using Trammel, Species Such As Turtles Or Small Fish End Up Trapped Or Die During The Process. According To The Fishermen, This Situation Is Rare.

3.2.11. Sdg 14. Underwater Life

One Of The Main Problems That Fishermen Encounter When Starting Their Work Is Solid Waste. During Their Activity, They Report That They Fish A Lot Of Garbage, Which They Remove From The Sea And Store In The Boats To Be Deposited In A Container On The Beach So That The Collection Truck Of The Cleaning Service Company Can Transport It To The Sanitary Landfill. Fish Waste (Scales, Guts, Among Others) Are Returned To The Sea, As They Consider That Being Organic, They Serve As Food For Other Species.

3.3. Challenges For The Achievement Of The Sdgs From The Daily Life Of Fishing Communities

After Analyzing The Information From The Perspective Of Each Sdg, The Following Challenges Are Identified To Achieve These Purposes:

Regarding The Sdg - End Of Poverty, The Little Income Obtained By Fishermen Is Evident And Its Use Is Destined For Their Own Subsistence And That Of Their Families. From The Territorial Entities, Training Must Be Designed And Executed That Allow Fishermen To Obtain Products In The Different Activities Of The Value Chain Associated With The Fishing Activity And In A Sustainable Way, Aiming To Improve Their Income, As Well As Designing And Executing Training. Fishermen To Help Them Manage Their Income More Effectively And Make Better Investments. Also Include The Development Of Business Ideas Related To Fishing Activity That Allow Them To Improve Income That Allows Them To Have Better Opportunities To Access Services And Improve Their Quality Of Life.

Regarding The Sdg - Zero Hunger, It Is Appreciated That The Participating Communities Reported An Average Of 2 Meals A Day, Which May Have Repercussions For Their Health And That Of Their Families. Encouraging Food At Home From The Breeding Of Domestic Animals For Consumption And / Or Home Gardens That Guarantee Their Adequate Nutrition Can Be A Solution To This Challenge. From The Territorial Entities, Develop An Investment Plan That Allows Members Of The Fishing Community To Access Capital That Allows Them To Create Home Gardens.

Faced With The Ods - Health And Well-Being, The Fact That Access To Specialized Health For These Communities Is Centralized In The Capital Of The Department, The Investment Of Time And Money For Access Is High. Therefore, Improving Access To Health In Fishing Communities Will Give Them Greater Opportunities And Help Reduce Inequality, So The Challenge Is To Train Community Members And Their Families In The Use

Of The Health System, Nearby Points Of Care. According To Each Situation And Hold Periodic Health Days Within The Community.

Many Of The Members Of The Fishing Community Were Unable To Complete Their Studies Due To Various Factors. The Challenge Related To The Quality Education Sdg Implies The Possibility Of Creating Conditions That Allow Community Members To Complete Their Studies. Even Though The Study And Technification Could Potentiate Their Work And Improve Their Quality Of Life In Comprehensive Terms, There Is Little Interest In The Study, Which May Be Associated With A Lack Of Implementation Of A Contextualized Education Linked To The Economic Activities Of The Population. It Is Important To Encourage Community Members To Return To School And To Be Able To Complete Their Baccalaureate Studies And At The Same Time Continue With Their Training Process. In Support Of The National Learning Service - Sena, An Entity In Colombia That Oversees Offering Free Training Programs And Is Attached To The Ministry Of Labor, Generate Programs That Allow Community Members To Access Titles As Professional Fishermen In Favor Of Formalize The Profession And Improve Their Quality Of Life.

The Challenge For The Sdg - Gender Equality, Must Be Focused On The Fact That Women Could Make Great Contributions To This Economic Activity, So It Is Important To Integrate Them In A Systematic And Organized Way In Different Activities Of The Fishing Production Chain. Awareness-Raising Workshops And Training Activities Should Be Carried Out Leading To The Modernization Of Men And Women At Different Times In The Value Chain Of Artisanal Fishing, Which Will Allow The Empowerment Of Women In These Communities And Advance In The Transformation Of Stereotypes That Maintain Inequities Due To This Cause And That May Be Related To Forms Of Violence.

Regarding The Sdg - Clean Water And Sanitation, The Environmental Impact That Artisanal Septic Tanks Can Generate On The Health Of The Community Is Clear. It Is Necessary To Generate Strategies That Allow The Mitigation, Reduction And / Or Compensation Of These Impacts. In This Sense, An Investment Is Required By The Territorial Entities For The Design And Installation Of New Ponds That Comply With The Technical Specifications, As An Alternative While The Territorial Planning Department Includes The Area In The Design And Construction Of The Networks. Sewerage, Which Requires The Articulation Of Local And Departmental Authorities.

Regarding The Sdg - Decent Work And Economic Growth, It Is Found That It Must Be Focused On Guaranteeing Access To Work Tools That Allow Artisanal Fishermen To Carry Out Their Activity With Dignity, Obtaining Better Results.

This Situation Creates Challenges For Us Focused On Two Sdgs - Sustainable Cities And Communities And The Sdg - Peace, Justice And Strong Institutions. As We Show That The Fishermen's Associations Are Not Currently Working Hand In Hand With The Territorial Entities, Synergy Must Be Generated Between These Actors And The Fishing Communities That Allows To Potentiate The Development Of This Sector. Aunap And The Fishermen's Associations Must Maintain Close Contact Based On Trust To Create Common Activities, Objectives And Goals That Allow Them To Develop A Greater Sense Of Belonging With The Associations.

Regarding The Challenge For The Sdg - Responsible Production And Consumption, It Is Related To The Trammel Technique, Since On Some Occasions It Causes Endangered Species To Be Trapped And Captured And Potentially Commercialized. Additionally, It Affects Hydrobiological Resources. To Guarantee The Fishing Of Commercial Species And Promote The Sustainability Of The Fishing Activity, They Should Be Developed Through Entities Such As The Seine, Create Short Programs Or Trainings On Sustainable Fishing, Based On The Previous Knowledge Of The Fishermen.

Importantly, Fishermen Take Much Of Their Time To Remove Solid Waste From The Sea, Reducing The Number Of Fish They Could Catch Or Increasing The Amount Of Labor Time To Get What Is Needed. The Challenge For The Sdg - Underwater Life Focuses On Promoting A Culture Of Caring For Beaches, Considering That This Would Positively Impact Fishing Activity. It Is Important To Maintain This Good Practice That Makes Them Take Care Of The Beach Themselves And Transmit It To Tourists And Other Members Of The Area. Likewise, Many Fishing Residues Are Potentially Usable, So Programs Can Be Generated That Allow Fishing Communities

To Develop Artisanal Products With These Residues. Periodic Cleaning Days Should Also Be Developed To Improve The Quality Of The Beach Carried Out By The Fishermen Themselves.

The Articulation Of These Different Challenges And Their Possible Approach Will Allow A Comprehensive Aim To Achieve The Sdg - Reduction Of Inequalities And Will Allow Experiences Of Sustainable Local Development To Be Lived With A Positive Impact On The Quality Of Life Of The Communities.

4. Discussion

Based On The Concept Of Yang Fu And Weihong Ma (2020) On Sustainable Communities, It Is Observed That There Is No Articulation Between The Community, The Territorial Entities And The Corresponding Authorities, A Situation That May Mean A Limitation For Access To Resources, Care, And Achievement Of Benefits For The Community. In This Regard, Vasseur Et Al. (2017) Affirms That State Intervention Is Linked To The Management Of Resources, In This Case, Of Fishing Resources In A Sustainable Way. There Are Policies Such As The Sustainable Fishing Policy Of The Ministry Of Agriculture Or The Aunap Fishing Protocol, Which Have Been Created By The Territorial Entities, But The Monitoring And Implementation Are Not Properly Articulated With The Communities. The Appropriation Of The Regulations And Their Implementation Requires The Development Of Trust In The Institutions And Their Articulation With The Communities.

Within Small-Scale Fishing Processes, Ayunda Et Al. (2018) And González (2011) Show Us That There Is An Impact On Resources By This Activity, However, In Our Scenario There Do Not Seem To Be Signs Of Resource Degradation Hydrobiological As Stated By The Authors. At The Same Time, There Is No Problem With Large-Scale Fishing. However, Fishermen Affirm That They Must Go Deeper And Deeper Into The Sea To Be Able To Guarantee Fishing, Which Is Related To What Was Stated By Salas Et Al. (2011). This Need To Go Offshore May Be Related To The Shortage Of Fish Near The Coast, As Well As The Problem Of Solid Waste Pollution Identified By Fishermen.

The Problem Of Solid Waste Seems To Be A Generalized Issue In The Colombian Caribbean Sector. The Investigations Of González Pareja (2012); Luque Berkowitz & Rúa (2014) And Rodríguez Salas (2020) Show That, In Places Like Santa Marta, San Andrés And La Guajira, They Are Territories That Present Cases Like These. However, We Must Consider What Ensor Et Al. (2018) And De La Hoz-Del Real Et Al., (2019) On The Resilient Capacity Of A Population. These Populations Are Adapting To Changes In Their Environment And Promoting Strategies That Allow Them To Guarantee Their Subsistence, Which Is An Indication Of A Resilient Population. This Can Also Be Evidenced In The Adaptations They Have Had In Their Fishing Methodologies. One Of The Stages Includes Cleaning The Fishing Area Prior To Starting The Activity As Such And The Proper Final Disposal Of This Waste.

In Our Context, Fishermen Avoid Carrying Out Activities That Are Considered Illegal, Contrary To What Is Stated By Anh Et Al (2011). In This Sense, It Is Directly Related To The Fishing Of Non-Permitted Species. It Is Possible That The Activities Carried Out By The Fisheries Authorities Have Yielded Positive Results In This Area.

Faced With The Role Of Women, We Show That They Play An Important Role Within The Fishing Activity Of The Sector, Since They Oversee The Preparation And Sale Of The Product. This Type Of Participation Has Also Been Found By Arenas González (2004) And Luque Berkowitz & Rúa (2014) In Fishing Communities Where The Role Of Women Focuses On The Handling And Preparation Of Fish In Restaurants Local To The Fishing Sectors.

This Is Related To What Lunkapis (2015) Pointed Out About The Customs Of These Communities. Machismo Is Ingrained In Fishermen To The Point That Some Consider That Their Contribution Is Not Significant. However, Dolorosa And Nurliza, (2017) Show That In Other Contexts Progress Has Been Made In Gender Equity In This Activity, Showing That The Actions Carried Out By Them Are Also Important Because It Complements And Supports The Fishing Activity.

5. Conclusions

At The Colombian Level, There Is A Whole Protocol Focused On The Development Of Sustainable Fishing, A Large Part Of The Strategies That Are Being Generated For This Sector Are Focused On Large-Scale Fisheries, Neglecting The Small Artisanal Fisherman. We Can Evidence This In The Issues Listed By The Ministry Of Agriculture Itself. Some, Such As The Low Technological Development, Are More Related To Large-Scale Fishing. However, Many Of These Problems Were Evidenced During The Investigation: Lack Of Safety, Reduction In The Number Of Fish, Deficiencies In Community Participation, Monitoring And Control, Among Others.

These Communities Have Some Practices That We Could Consider Sustainable. Within These We Have That The Fishermen Collect The Garbage They Find In The Sea And Then Dispose Of It Correctly. The Above Is A Clear Example That We Cannot Say That Rural Communities Are Not Sustainable Or Are Not Aware Of The Resource They Exploit, Since It Is Based On A Stereotypical And False Position About Their Activity And Their Community.

Much Of The Challenges That Fishing Communities Have Around Sustainable Development Are Related To Inequality Of Opportunities And Governance. Although It Is Evident That Fishermen Are Empowered In Their Sector And Work, Current Public Policies Do Not Seem To Be Sufficient, Or Their Implementation Has Not Been Adequate. This Type Of Trend May Reflect The Centralization In Large Cities Of Most Activities And The Impoverishment Of Rural And Artisanal Activities Such As Fishing. At Some Point, The Monitoring And Work With The Communities In These Rural Areas Becomes Complex, Distant, And Infrequent By The Authorities, Which Only Widens The Gap Between Them And The Communities.

Within The Socioeconomic Conditions, Many Of The Members Are Satisfied With The Access To Public Services, The Conditions Of Their Homes And The Relationship With The Community. However, There Are Critical Factors Within These Communities Such As Access To Education In Which We Show That Many Fishermen Do Not Finish The Basic School Cycle. In The Same Way, Access To Specialized Health Services Is Sectorized In The Capital Of The Department, Which Takes Them More Time And A Greater Investment Of Money To Access Them. This Type Of Situation Puts Them At A Disadvantage Compared To Other Communities And Widens The Inequality Gap.

Another Important Aspect Of Inequality Is Based On The Role Of Women Within These Communities. All The Active Members Of The Community Are Men And These In Turn Consider That The Contribution That They Can Make Is Null Or Little Based On Activities Of Preparing The Fish And Selling It.

Within The Fishing Activity, One Of The Most Obvious Challenges Has To Do With The Control Of The Animals Caught. This, To Avoid Accidents Of Animals Trapped Inside The Nets. In This Sense, It Is Necessary To Evaluate The Techniques Used. At The Same Time, The Generation Of Fishing Waste That Can Be Used.

There Are Some Aspects That Need To Be Addressed In More Depth. For Example, Evaluating The Potential For Making Use Of The Waste Generated By Fishing Activity Or Delving Into The Role Of Governance Within The Sustainability Of These Populations.

Finally, We See That Small Artisanal Fishmongers Have Very Valuable Empirical Knowledge Related To The Activity That Must Be Considered. With The Country's Tendency To Bet On Sustainable Fishing, These Populations Have The Potential To Become Pioneers Of Sustainable Fishing In Colombia, Because They Have The Potential And The Knowledge, But They Require Support And Monitoring By The Entities In Charge (Aunap, Ministry Of Agriculture, Among Others) To Give Them A Voice And Participation In Decision-Making Related To The Fishing Sector.

Credit Authorship Contribution Statement

Calderón-Madero, Jorge E: Conceptualization, Field Work, Formal Analysis, Research, Project Management, Validation, Visualization, Writing - Original Draft.

Marina Begoña Martínez-González: Conceptualization, Formal Analysis, Methodology, Supervision, Visualization, Drafting - Revision And Edition.

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The Authors Declare That They Have No Known Competing Financial Interests Or Personal Relationships That Could Have Appeared To Influence The Work Reported In This Paper.

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