



Community Action on Zika (CAZ)

Project Systematization — 2016 to 2019

October 4, 2019



CONTENT

Content	3
Acronyms and abbreviations	5
Index of Tables and Figures	7
CAZ Project Profile	8
Executive Summary	9
I. CAZ Project Description	12
A. Results Framework	12
B. Implementing Partners.....	14
C. Coverage Area	15
D. Implementation Schedule	17
E. Funding.....	19
II. Background: Zika and other VBD	20
III. CAZ Strategies and Achievements	21
A. <i>What did we do?</i> Description of Key Strategies	22
Community Vector Control	22
School Vector Control	28
Social and Behavior Change (SBC)	32
Community-based Vector Surveillance.....	41
Care and support	47
B. <i>How did we do it?</i> Tools and Materials developed	54
C. <i>Who did we work with?</i> Key Actors and Partners	62
Community Actors	66
Local NGOs	66
Government	67
Academic Institutions	67
International Organizations	68
D. <i>What was accomplished?</i> Project Achievements.....	68
CAZ Implementation Highlights	68
Advances and delays in project achievements	71
Changes Reported by Project Participants	73
KAP Study Results	76

E.	<i>What did we learn? Lessons Learned</i>	79
	Community and School Vector Control	80
	SBC	80
	Community-based Vector Surveillance.....	81
	Care and Support	81
	Monitoring, Evaluation, Learning and Accountability	82
F.	<i>What is the way forward? Sustainability</i>	82
	Sustained Resources	83
	Sustained Partnerships	83
	Sustained Capacities/Knowledge.....	84
	Sustained Motivations	85
IV.	Conclusions and Recommendations	85
	Community Vector Control.....	85
	Vector Control in Schools	86
	SBC	87
	Community-based Vector Surveillance	88
	Care and Support	88
	Administration/Operations	89
	Monitoring, evaluation, accountability and learning.....	89
V.	Final Note	90
VI.	References	91
VII.	Annexes	91
A.	Reports on results from the reflection and learning workshops	91
B.	Presentations of project result summaries per country and per project component....	92
C.	List of key CAZ team contacts and representatives interviewed	92
D.	List of educational materials developed	92

ACRONYMS AND ABBREVIATIONS

ADIC	<i>Asociación para el Desarrollo Integral Comunitario</i>
ASHONPLAFA	<i>Asociación Hondureña de Planificación de Familia</i>
ASSIST	Applying Science to Strengthen and Improve Systems
CAZ	Community Action on Zika
CB-VESCO	Community-based vector surveillance and control
CDC	Center for Disease Control
CEA	Community Engagement & Accountability
CENCET	<i>Centro Nacional para el Control de las Enfermedades Tropicales</i>
COMISCA	<i>Consejo de Ministros de Salud de Centroamérica</i>
COMUPRED	<i>Comités Municipales para la Prevención, Mitigación y Atención a Desastres</i>
CONNA	<i>Consejo Nacional de la Niñez y de la Adolescencia</i>
COPECO	<i>Comisión Permanente de Contingencias</i>
CZS	Congenital Zika Syndrome
DECOAS	<i>Departamento de Educación, Comunicación Ambiente y Salud</i>
DIGPRES	<i>Dirección General de Promoción y Educación de la Salud</i>
DPS	<i>Dirección Provincial de Salud</i>
FISDL	<i>Fondo de Inversión Social para el Desarrollo Local</i>
HC3	Communication Capacity Collaborative
IFRC	International Federation of Red Cross and Red Crescent Societies
INAFOR	<i>Instituto Nacional Forestal</i>
INAIPI	<i>Instituto Nacional de Atención Integral a la Primera Infancia</i>
IPC	Interpersonal Communication
IPPF	International Planned Parenthood Federation
KAP	Knowledge, attitudes and practices
MARENA	<i>Ministerio del Ambiente y los Recursos Naturales</i>
MCDI	Medical Care Development International
MCSP	Maternal and Child Survival Program
MINED/MINERD	<i>Ministerio de Educación/Ministerio de Educación de la República Dominicana</i>
MINSAL/MINSA	Ministries of Health
MUDE	<i>Mujeres en Desarrollo Dominicana, Inc.</i>
ODK	Open Data Kit
NGO	Non-governmental organization
PADF	Pan American Development Foundation
PAHO	Pan American Health Organization
PMP	Performance Monitoring Plan

PSI/PASMO	Population Services International/Pan American Social Marketing Organization
RC	Red Cross
SARAR	Self-confidence, associate forces, planning the action, responsibility
SBCC	Social and Behavior Change Communication
SC	Save the Children
SIBASI	<i>Sistemas Básicos de Salud Integral</i>
SILAIS	<i>Sistema Local de Atención Integral en Salud</i>
CHFA	Community Health First Aid
SRH	Sexual and Reproductive Health
SSI	Sustainable Science Institute
ToT	Training of Trainers
WHO	World Health Organization
VBD	Vector-borne diseases
UNAP	<i>Unidades de Atención Primaria</i>
UNICEF	United Nations International Children's Emergency Fund
URC	University Research Co., LLC
USAID	United States Agency for International Development
ZAP	Zika AIRS Project
ZIKV	Zika virus

INDEX OF TABLES AND FIGURES

Table 1. CAZ project coverage area and beneficiaries by Country	15
Table 2. Key actions per category, identified for each audience segment, as found in the CAZ SBC Strategy	33
Table 3. Tools and materials developed and used throughout the region.....	55
Table 4. Tools and materials developed in Colombia	56
Table 5. Tools and materials developed in El Salvador	57
Table 6. Tools and materials developed in Honduras.....	59
Table 7. Tools and materials developed in Nicaragua	60
Table 8. Tools and materials developed in the Dominican Republic	61
Table 9. CAZ partners and key actors.....	62
Table 10. CAZ implementation highlights	68
Table 11. Demographics of CAZ project participants interviewed	73
Figure 1. CAZ project results framework.....	13
Figure 2. CAZ geographic area.....	16
Figure 3. CAZ timeline of project milestone by year and quarter (3)	17
Figure 4. Distribution of suspected and confirmed cases of Zika by EW and sub-region. Region of the Americas, 2015-2017	20
Figure 5. CAZ key strategies' conceptual framework.....	22
Figure 6. Changes in the home reported by participants	74
Figure 7. Changes in the community reported by participants	75
Figure 8. The most impactful/important changes mentioned.....	75
Figure 9. Changes in knowledge about mosquito borne transmission between base line and final evaluation (12)	77
Figure 10. Changes in knowledge about sexual transmission between base line and final evaluation (12)	77
Figure 11. Changes in Zika risk recognition among women of reproductive age.....	78
Figure 12. Percentage of women of reproductive age who reported practices behaviors, to reduce Zika transmission at baseline and final evaluations	79

CAZ PROJECT PROFILE

Program Name:	Community Action on Zika
Activity Start Date and End Date:	September 29, 2016-November 29, 2019
Name of Prime Implementing Partner:	Save the Children
Cooperative Agreement Number:	AID-OAA-A-16-00063
Name of Subcontractors/ Sub awardees:	International Federation of Red Cross and Red Crescent Societies (IFRC); Save the Children, Dominican Republic; Save the Children, Honduras
Geographic Coverage	Selected municipalities and communities in Colombia, El Salvador, Nicaragua, Dominican Republic and Honduras
Budget	Amount granted: \$14,980,082.67 USD Counterpart: \$4,495,917.00 USD
Objectives:	<p><u>Project Goal:</u> Reduce Zika transmission and minimize the risk of Zika-related microcephaly and other neurological disorders among the most vulnerable populations through community-based prevention strategies in Colombia, Dominican Republic, El Salvador, Honduras, and Nicaragua.</p> <p><u>Strategic Objective:</u> Increase adoption of healthy practices and enhance community response to Zika outbreak in highly vulnerable communities and populations, with a focus on pregnant women, women of reproductive age, and people living in extreme poverty.</p> <p><u>Objective 1:</u> Strengthen community and individual ability to prevent Zika through vector control-related community empowerment and mobilization.</p> <p><u>Objective 2:</u> Change key behaviors in vulnerable populations, individuals, and affected infants, children and their families: increase knowledge and community dialogue, alter attitudes toward disease, demand for information and services, reduce stigma and discrimination.</p> <p><u>Objective 3:</u> Increase active community participation in community surveillance measures.</p>

EXECUTIVE SUMMARY

The Community Action on Zika (CAZ) project was implemented by a consortium formed by Save the Children (SC), the International Federation of the Red Cross (IFRC) and the National Societies of the Red Cross (RC) in five countries in Latin America and the Caribbean: Colombia, Dominican Republic, El Salvador, Honduras, and Nicaragua. CAZ was funded by USAID as part of a regional Zika emergency response effort in 23 countries in Latin America and the Caribbean in response to WHO's declaration that Zika was a public health emergency of international concern. The CAZ project goal was "to reduce the transmission of Zika and minimize the risk of microcephaly related to Zika and other neurological disorders among the most vulnerable populations through community prevention strategies in Colombia, El Salvador, Honduras, Nicaragua and the Dominican Republic."

Two months after the project started, the WHO declared that Zika was no longer an emergency, but that it still required a long-term response. For three years, CAZ implemented immediate actions for prevention of vector transmission in addition to strategies meant to foster community organization responses to Zika and other arboviruses on a long-term basis in 42 departments/provinces and more than 160 municipalities/districts, with a total population of 13,914,766. The focus of the CAZ project was community engagement to implement the following strategies: community and school vector control, social and behavioral change communication (SBC), community-based vector surveillance, and care and support.

This document describes the actions carried out by CAZ and the resulting lessons learned according to the following structure:

- *What did we do?* Key strategies and factors that led to success and best practices according to both key strategy and country;
- *How did we do it?* Instruments, educational materials, protocols, and tools developed by all partners in the CAZ consortium to facilitate and support implementation;
- *Who did we work with?* Partners and key actors with whom CAZ worked on the regional and national levels, including community groups, NGOs, government actors, academic institutions and international organizations;
- *What was accomplished?* Milestones, achievements, and delays reported by each country; changes reported by project participants; results of the knowledge, attitudes and practices (KAP) studies; and project achievements reached per indicator;
- *What did we learn?* Lessons learned as well as project challenges and successes per key strategy; and
- *What is the way forward?* Elements and evidence of project sustainability across four areas: sustained resources, sustained partnerships, sustained capacity/knowledge, and sustained motivation.

The document closes with a summary of conclusions and recommendations, presented by thematic area.

Community Vector Control

- Volunteers led many of the project activities which encouraged community ownership and developed local capacity; however, high turnover and the limited availability of volunteers made it challenging to respond to project demands.
- Community mobilization strengthened overall social cohesion, which has a positive impact not just for vector control activities, but for all community development efforts.
- Although communities carried out activities based on community mapping and plans, several teams expressed that activity implementation lacked flexibility.
- Recommendation: Explore additional ways to motivate and incentivize volunteers through public recognition and professional growth opportunities.
- Recommendation: Allow for more flexibility in vector control activities which account for existing community practices that work and/or promote new ones through a community innovation fund or community subgrants.

School Vector Control

- Recreational, sports, and interactive activities led by youth effectively engaged youth and generated public interest and awareness around vector control.
- Students have a highly effective ability to promote vector control practices inside and outside of schools and serve as agents of change between school, home, and community.
- Recommendation: Further optimize the leadership and potential of organized youth in behavior change and advocacy strategies.

SBC

- The CAZ SBC Strategy guided project actions by identifying key audiences using an evidence based behavioral framework using the selection of 7 key behaviors from Breakthrough ACTION and Breakthrough RESEARCH.
- The strategy was developed based on the results of a situational analysis, which provided content for developing a problem statement and identifying segmented audiences. For each audience, the strategy identified the desired behaviors for Zika prevention and control, barriers for adopting the desired behaviors, SBC objectives, a series of channels and activities in order to achieve the SBC objectives, and suggested SBCC materials. Each country then adapted the regional strategy to develop a country-specific strategy.
- Country teams developed abundant and contextualized materials. This required a series of steps from design, review, and approval on a country-level, regional-level, between CAZ partners, and with the USAID mission in country and in Washington. Given the complexity of this process, communication materials were slow to be fully approved. CAZ implemented key steps to speed this process along.
- Recommendation: An SBC Strategy should be established from the beginning of a project to guide teams and actions with an integrated approach. However, this must allow for any

necessary adaptation and contextualization across countries and changing epidemiologic trends.

- Recommendation: Key behaviors, messages, and the minimum standard criteria for material development should be established early on to guide local development of materials and facilitate material approval.

Community Surveillance

- Ovitrap were an effective way to not only generate information in the community to focus vector control activities, but they were also a good way to raise awareness and interest around vector control as a learning tool for both youth and adults.
- Recommendation: Greater integration of community-level surveillance information systems into the larger ministries of health surveillance systems to institutionalize community participation in vector surveillance.

Care and Support

- The psychosocial support provided to families affected by Congenital Zika Syndrome (CZS) not only helped them care for their affected children, but also offered support in various aspects of their lives.
- Care and support activities had a broad effect on reducing stigma associated with people with disabilities and special needs as these actions generated discussion about disability between affected families and communities.
- Early stimulation circles offered spaces for families to share with others in similar conditions. These were often much more beneficial for caregivers than affected children because it gave caregivers a space to process their experiences and receive support.
- Recommendation: Rely on and further integrate SC's and RC's existing experiences and materials in early childhood development interventions and early stimulation in the care circles.
- Recommendation: The care and support methodology should be integrated into other social development programs to foster exchange and support among participants of other community / social development programs.

I. CAZ PROJECT DESCRIPTION

This section presents descriptive information of CAZ: the project design based on the results framework, a description of CAZ implementing partners, geographical area and scope of coverage, major milestones according to the implementation schedule, and a summary of the CAZ budget.

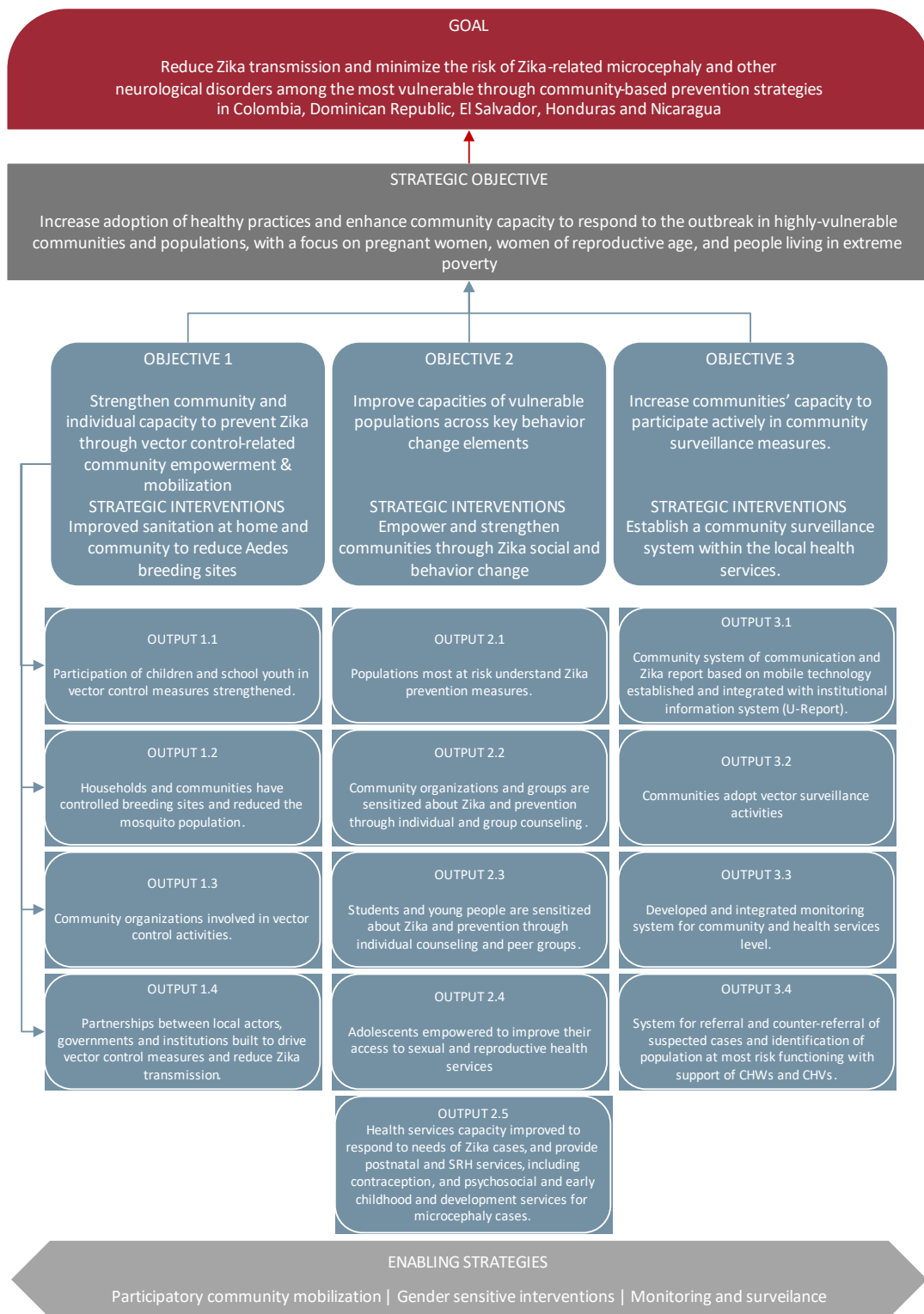
A. Results Framework

The CAZ project goal was to, “Reduce the transmission of Zika and minimize the risk of microcephaly related to Zika and other neurological disorders among the most vulnerable populations through community prevention strategies in Colombia, El Salvador, Honduras, Nicaragua and the Dominican Republic.” The CAZ results framework demonstrates the logic of how the expected outputs contribute to three specific objectives, which contribute to the strategic objective and ultimately, the overall goal. The first specific objective focused on community mobilization strategies; the second focused on communication strategies and actions for social and behavior change; and the third objective focused on community-based surveillance (epidemiologic and entomologic) in areas that presented as high-risk for Zika risk areas, and care and support for suspected Zika cases and congenital effects related to Zika.



Photo: Home visit, El Salvador

Figure 1. CAZ project results framework



Source: CAZ Technical Proposal, Save the Children, July 2016 (1)

B. Implementing Partners

CAZ was implemented by a consortium led by SC and made up of the IFRC and the RC in five countries in Latin America and the Caribbean. The consortium partners already had existing relationships with local government and private sector actors and community platforms, as well as experience in public health, social behavior change communication, and community mobilization to assist in achieving project objectives.

The combination of SC's experience in community development programs, IFRC's expertise in building resilience to disasters and RC's ability to mobilize volunteers created a consortium with the ability to respond in impact and scope.

SC has extensive experience in humanitarian response and national capacity building for emergency humanitarian response. Country programs implement projects that promote the rights of children and adolescents, benefiting larger at-risk populations. SC's actions depend largely on collaborative work with local civil society organizations and on partnerships with the local ministries of health and education. Within its programming, SC incorporates a gender-sensitive approach with cultural resilience and relevance as cross-cutting themes. Prior to the CAZ project, SC had already initiated a Zika response in marginalized communities in Latin America and the Caribbean with a network of partners (1). This experience and the recognition of SC among local authorities, especially for the work in schools and with child protection

issues, helped facilitate linkages with local authorities.

IFRC also brought extensive regional experience and coverage to the project. The IFRC supports 35 National Societies of the Red Cross in the Americas through 5,000 branches of the RC and manages over 744,500 trained volunteers who are involved in assistance, recovery and development programs. The RC has extensive experience in the Americas in community health programs, community participation strategies, behavior change methodologies, vector control and community surveillance. RC works in partnership with non-governmental and civil society organizations, UN agencies, the private sector, and national and local governments (1).

Like SC, IFRC was already involved in Zika response before the CAZ project. In early 2016, IFRC mobilized regional resources for a health evaluation in Brazil and then launched the *"Global Response, Zika Virus Response - Focus on the Americas"* project in 28 countries in Latin America and the Caribbean. Twenty-seven National Societies in the Americas implemented Zika response actions, including mass communication, psychosocial support for affected families, team and volunteer security, and community-based surveillance and vector control (2).

The combination of SC's experience in community-based programming with a focus on comprehensive development, together with IFRC's expertise in building resilience to disasters,

and RC's ability to mobilize volunteers, created a consortium with the ability to respond to Zika in impact and scope.



Photo: National Red Cross team, Honduras

C. Coverage Area

Interventions were carried out at the regional and local level in 42 departments/provinces, and 920 communities across the five countries where CAZ was implemented, reaching a population of 13,138,460 beneficiaries (see table 1 and figure 2). The coverage area was selected together with the ministries of health, local governments, USAID, UNICEF, PAHO and other stakeholders that worked in Zika response to maximize geographic coverage of high-risk populations and minimize duplication of services. This was especially the case in Honduras, where several other Zika-response projects were already in place. The selection criteria included factors that increase risk for Zika: high population density, poverty, environmental suitability for the Aedes mosquito, mosquito density, recent outbreaks of the Zika virus (ZIKV), Dengue and/or Chikungunya, and low institutional presence (1).

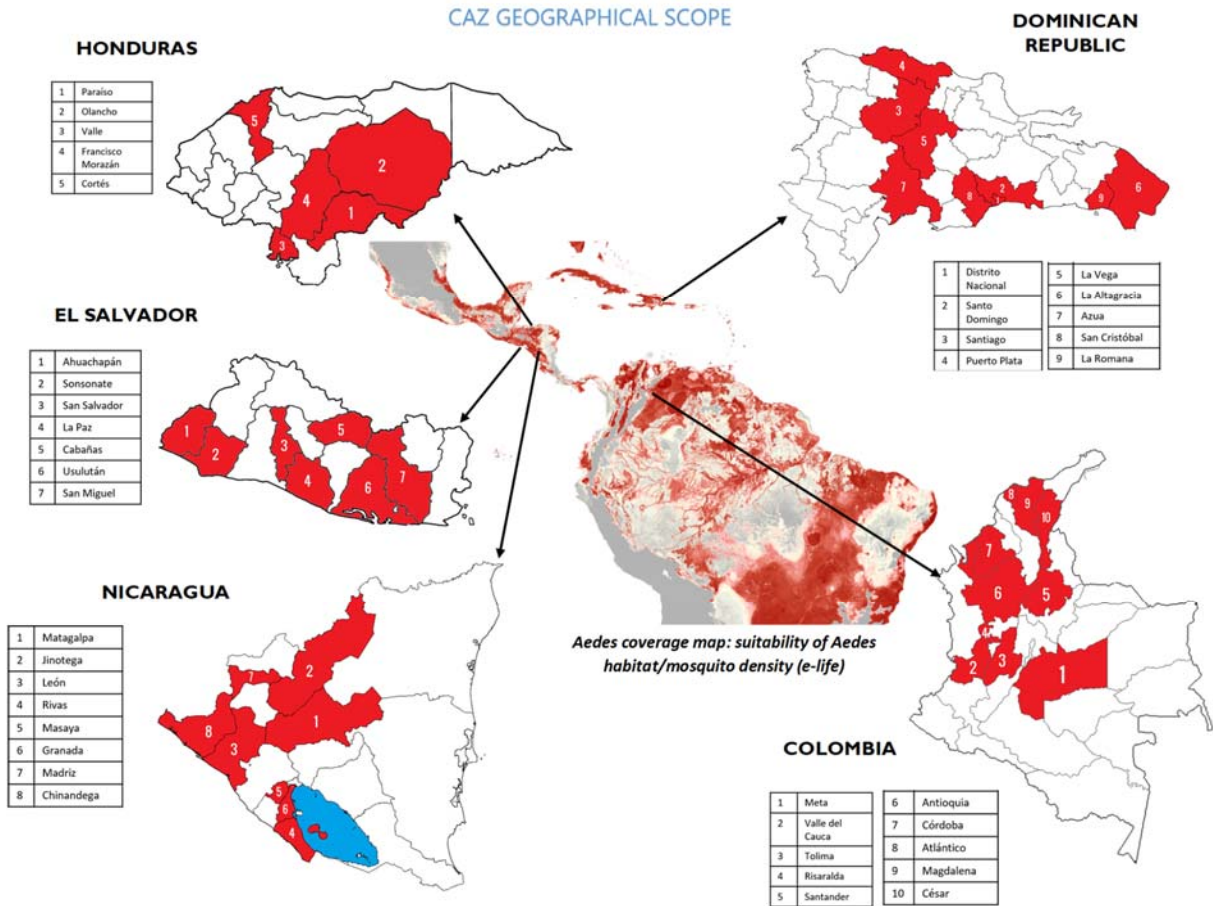
Table 1. CAZ project coverage area and beneficiaries by Country

Country	Target Population	Beneficiaries Reached
Colombia	6,783,414	6,155,567
Dominican Republic	3,506,320	1,308,967
El Salvador	1,482,483	2,034,407

Country	Target Population	Beneficiaries Reached
Honduras	716,862	1,387,422
Nicaragua	1,425,687	2,252,097
Total	13,914,766	13,138,460

Source: CAZ Technical Proposal, Save the Children, July 2016 and PMP 2019

Figure 2. CAZ geographic area



Source: CAZ Technical Proposal, Save the Children, July 2016

D. Implementation Schedule

CAZ was a three-year project. A significant part of the first year was dedicated to internal organization of the team and preparation of technical instruments in order to begin implementation. The second year was dedicated to implementation of strategies that were designed and defined during the first year together with communities, authorities and partners. The focus of the third year was consolidating and concluding planned activities in order to extract lessons learned, achievements and best practices generated by the project. Both SC and IFRC hired specialists for the systematization and documentation of experiences in key project areas, including the final KAP study (3).

Over the course of these three years, CAZ achieved several planned and unplanned milestones. The following figure illustrates some of these milestones by year (Y) and quarter (Q) during three phases of the project: preparation phase (months 0-6), scaling up phase (months 7-24), and compiling best practices phase (months 25-36).

Figure 3. CAZ timeline of project milestone by year and quarter (3)

Preparation Phase (months 0-6)	
Y1: Q1	Recruitment and team building
Y1: Q1-Q2	Adaptation and/or development of evidence-based methodologies, protocols, manuals and lessons learned on community management and response to epidemic outbreaks
Y1: Q1-Q2	Presentation of the project, establishment of partnerships with institutional and community actors
Y1: Q1-Q2	Zika awareness raising at national, regional, local levels
Y1: Q2	Coordination with community leaders to identify volunteers
Y1: Q2	Carrying out of the first KAP study and reorientation of actions
Y1: Q2	Establishment of relationships with schools
Y1: Q2	Development of community and school plans



Scaling up Phase (months 7-24)	
Y1-Y2	Identification and adaptation of existing materials, development of new materials
Y1: Q3-4	Community mapping
Y1	Design of protocols, software and app for ovitraps
Y1-Y2	Training of volunteer trainers and volunteers in community mobilization
Y1-Y2	Home visits
Y1-Y2	Training teachers to replicate trainings with students
Y1-Y2	Approval and delivery of educational materials to target audiences: communities, schools, collaborating organizations
Y1-Y2	Implementation of community and school plans

Scaling up Phase (months 7-24)	
Y1-Y2	Community and school fairs, cleaning campaigns
Y2	Advocacy and negotiation with authorities for community surveillance protocols
Y2	Mini-KAP and reorientation of actions
Y2	Agreements and contracts with health ministries for implementation of community surveillance systems
Y2	Ovitrap pilot projects, analysis and lessons learned
Y2	Ovitrap training for health providers
Y2	Provision of school supplies
Y2	Specific interventions with men
Y2	Workshops with media sources
Y2	Introduction of the SRH topic
Y2	Replicas with teachers and peer education among students
Y2	SBC regional strategy adapted and implemented in El Salvador, Honduras and Dominican Republic
Y2	Training and monitoring of pregnancy clubs
Y2	Identification of microcephaly cases and children with congenital conditions related to Zika
Y2	Reinforcement training and training in interpersonal communication (IPC) for volunteers
Y2	Introduction of 6-7 key behaviors to be promoted



Compiling Best Practices Phase (months 25-36)	
Y3	Accountability Workshop
Y3: Q1	Approval and delivery of additional educational materials
Y3	Training of another level of volunteers (managers, local consultants)
Y3	Participation in the Entomological Surveillance Forum
Y3: Q1	Establishment of care and support protocols
Y3: Q2-Q3	Volunteer training in care and support and early stimulation circles
Y3: Q2	Establishment of support circles
Y3	Development of Zika360, a virtual reality tool to raise awareness about Zika in the community

Y3: Q3	Informal exchange of experiences between schools through community events and multi-school activities
Y3: Q4	KAP final evaluation and analysis
Y3: Q3-Q4	Monitoring and sustainability agreements with authorities
Y3	Documentation of best practices and lessons learned
Y3: Q4	Closing events

E. Funding

CAZ was funded by USAID as part of a response to Zika in Latin America and the Caribbean in 23 countries. In 2016, \$365.5 million USD was allocated to USAID for this response with \$211 million USD being redirected from funds to combat Ebola, and an additional \$155.5 million USD authorized for a three-year response. The response was designed and managed from USAID/Washington D.C., using a combination of existing global projects and new regional projects for the most rapid and efficient deployment. The response included interventions in SBC, vector control, research, development and innovation, provision of health services, and community engagement. The following organizations received funding:

- **Vector Control:** Abt Associates, Pan American Health Organization (PAHO/WHO);
- **Provision of health services and supplies:** University Research Corporation (URC), Johns Hopkins University's Jhpiego, International Planned Parenthood Federation (IPPF), Chemonics' Global Health Supply Chain Program Procurement and Supply Management (GHSC PSM), Population Services International (PSI);
- **SBCC:** Johns Hopkins University's Center for Communication Programs, UNICEF, PSI, Population Council; and
- **Community engagement:** SC, Medical Care Development International (MCDI), CARE, Sustainable Science Institute (SSI), IFRC, Global Communities, Pan American Development Foundation (PADF) (4).

Save the Children U.S. requested \$14,980,082.67 USD from USAID for the CAZ project, which was administered by the SC Latin America and Caribbean regional office. As a part of CAZ, IFRC received a sub-grant for implementation in the five countries as did two national SC offices as they are part of SC International.

- \$ 6,840,450.00 USD for IFRC
- \$ 1,487,914.60 USD for SC Dominican Republic
- \$ 836,265.71 USD for SC Honduras

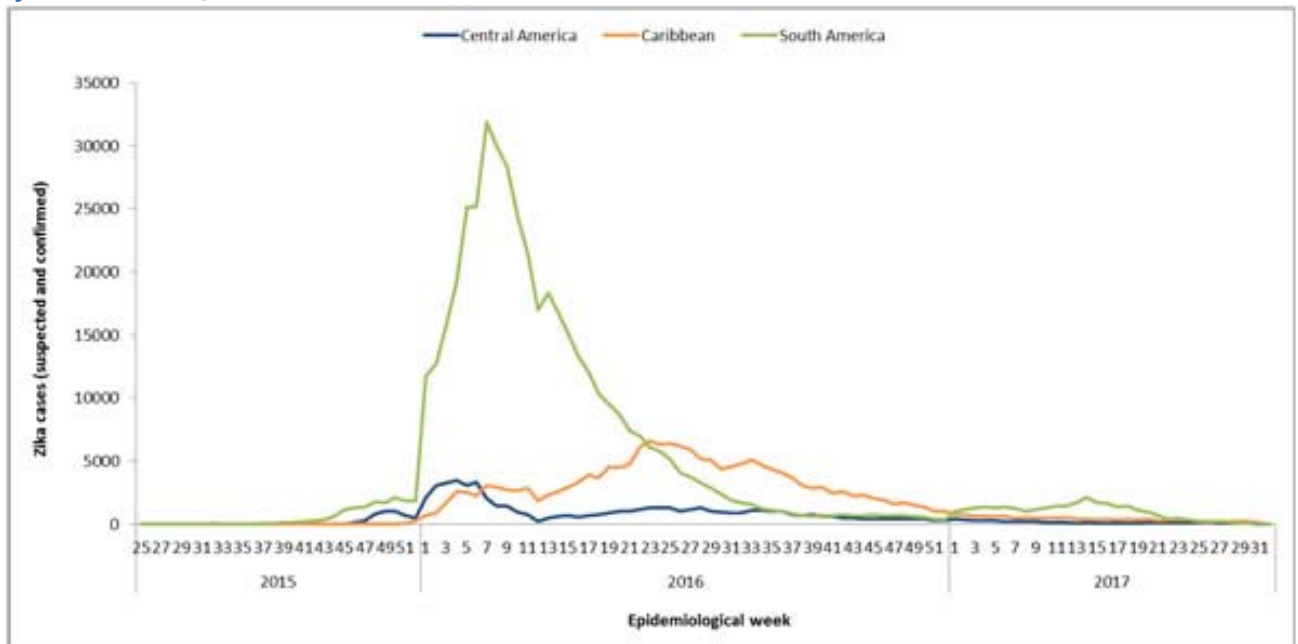
In addition, the CAZ project offered a cost share contribution of \$4,495,917.00 USD (5).

II. BACKGROUND: ZIKA AND OTHER VBD

Beginning with the first report of Zika transmission in Brazil in May 2015, the epidemic spread rapidly through the Americas. The World Health Organization (WHO) declared Zika a public health emergency of international concern in February 2016 once the association between Zika infection with Guillain-Barré syndrome (GBS) and microcephaly as well as other congenital syndromes in newborns and the inception of infection during pregnancy came to light. WHO urgently requested international coordination and collaboration to better understand the full impact of the virus and to prevent and control the disease (6).

Given the decreased intensity of the outbreak, in November 2016, WHO lifted the classification of Zika as a public health emergency of international concern and identified it as a disease that requires a long-term sustainable response given the congenital consequences. However, by March 2017, 84 countries worldwide had reported evidence of local Zika virus transmission. By the end of 2017, the Pan American Health Organization reported Zika transmission in 48 countries and territories of the Americas with cases of sexual transmission in 5 countries. At that time, there was a decreased rate of Zika, CZS, and Guillain-Barré in the region (Fig. 1). As of September 2017, 801,191 confirmed and suspected Zika cases were reported. Zika outbreaks persisted and cases increased in 2017, in Belize, Turks and Caicos, Peru, Bolivia, Argentina, and Ecuador. As of September 2017, 3,686 confirmed cases of CZS were reported.

Figure 4. Distribution of suspected and confirmed cases of Zika by EW and sub-region. Region of the Americas, 2015-2017



Source: Data provided by countries and territories of the Americas and reproduced by PAHO/WHO (7)

It is worth noting that the WHO's reclassification of Zika as no longer being a public health emergency of international concern, puts Zika at risk of becoming a neglected tropical disease

that receives less attention and research funding. In this sense, the CAZ project was an important initiative to continue prevention activities with the most vulnerable populations.



Photo: Educational talk for volunteers. Dominican Republic

III. CAZ STRATEGIES AND ACHIEVEMENTS

The CAZ project was designed around three main objectives and their corresponding results as shown in the results framework in section IA. A variety of actions were carried out to achieve project results and objectives which can be grouped into larger strategies: community mobilization and advocacy, social and behavior change communication (SBCC), community and school-based vector control, care and support for affected families, and community-based vector surveillance. Community mobilization, advocacy and SBCC are cross-cutting approaches—they

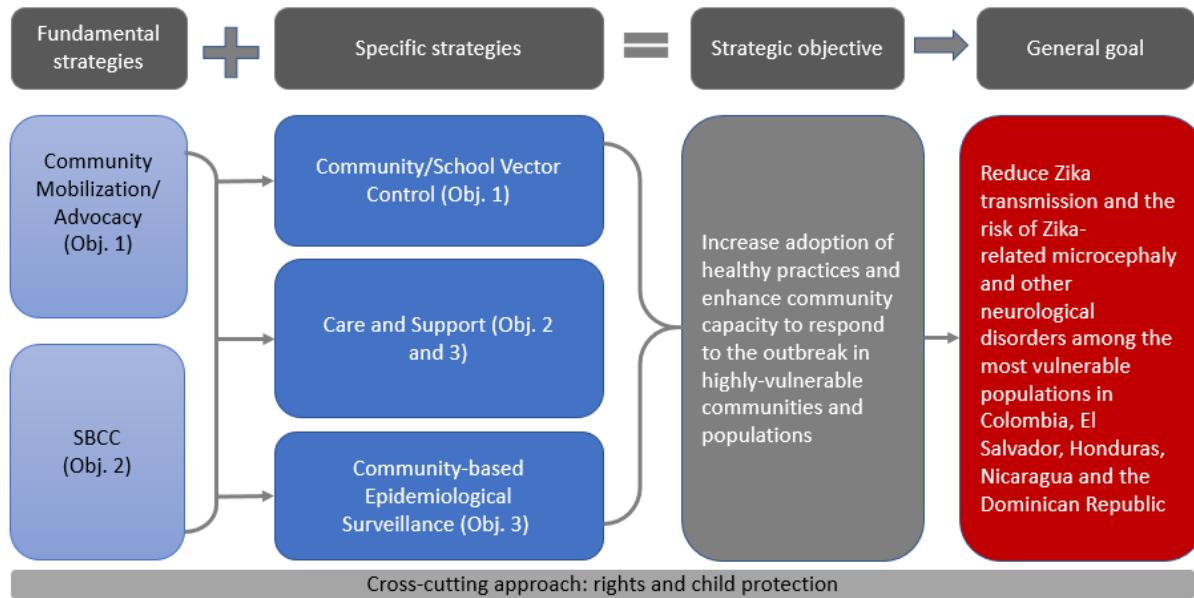
Community mobilization and the SBC Strategy built the platform for action and change to carry out all other CAZ strategies

formed a strategic base from which to carry out the other strategies. These guided and promoted all CAZ actions and created the platform to carry out community and school vector control, care and support, and community-based vector surveillance. Each of these strategies correspond to the project's objectives as shown in figure 5 below. In addition, the cross-cutting theme of children's rights and protection was integrated into all CAZ strategies. Together, the implementation of the base and specific strategies helped to achieve the CAZ objectives, which contributed to the overall strategic and general objectives.

Section III tells the story of CAZ using the sequence *What did we do? How did we do it? Who did we work with? What was produced? What did we learn? And what is the way forward?* Through this sequence of questions, the systematization

information was collected and validated with the CAZ teams and in a regional learning workshop with representatives of SC, IFRC and RC from the five countries where the project was implemented.

Figure 5. CAZ key strategies' conceptual framework



A. What did we do? Description of Key Strategies

This section describes the key strategies in general, and then the success factors and best practices in each country per key strategy: community vector control, school vector control, SBCC, community-based vector surveillance, and care and support.

Community Vector Control

The community mobilization described in objective 1 includes community vector control and school vector control. The community mobilization design was adapted from SC and IFRC methodologies, using the SC guide, "How to mobilize communities for health and social change"¹ and the IFRC community mobilization methodology. The community vector control methodology adapted for CAZ included the following actions:

- Identification, training, and accompaniment of volunteers with strengthened awareness and ability to monitor and control vector breeding sites;²
- Development of community and school plans for Zika transmission prevention;
- Mapping of high-risk locations for vector reproduction;

¹ <https://resourcecentre.savethechildren.net/library/how-mobilize-communities-health-and-social-change-field-guide>

² Many times, identifying volunteers meant linking to and recruiting them from existing community and municipal organizational structures.

- Home visits conducted by volunteers to eliminate vector breeding sites;
- Distribution of community hygiene/cleaning kits;
- Collaborative work with different community platforms: NGOs, community organizations, community leaders, churches, parent groups, youth groups, pregnant women’s groups, government and other entities present in the community;
- Planning and implementation of hygiene, cleaning, anti-vector, breeding sites and risk communication campaigns in coordination with these actors; and
- Advocacy and partnerships for public investment with contributions from the private sector to eliminate vector breeding sites and improve water and sanitation systems.

To carry out these actions, CAZ strengthened the skills and knowledge of several local actors, including local authorities, municipal governments, departmental and municipal health and education sectors and other social sector ministries (1). In the case of the RC National Societies, CAZ identified and trained community-based field supervisors in year 3 to facilitate the continuity and sustainability of CAZ actions. These community supervisors helped to anchor strategies in the communities and acted as liaisons between the RC teams and the communities (8).

Through the CAZ reflection and learning workshops, teams reported that community vector control actions were among the most successful of the project, due to the following factors and best practices:

- Volunteers’ commitment to raising awareness, communication, field work, and the leadership they demonstrated by taking initiative in the communities;
- Use of waste material and garbage collected for other purposes such as repurposing recycled tires in playgrounds and parks;

The added value of community vector control actions the social network that is created which fosters community resilience in the face of any emergency.

- Coordination with mayors, community committees, and multi-sectoral groups to organize activities and identify further resources;
- Coordination with health promoters, environmental health technicians, volunteers, and community health promoters within the health department, which allowed for expansion of services and greater involvement in project activities;
- Coordination and accompaniment by community leaders and health providers in community activities which generated trust and legitimacy within communities;
- Increased leadership skills in vulnerable populations and identification of new leaders (youth, people with disabilities, etc.) contributed to greater community participation.

As an added value from these community mobilization actions, a community social network was built, which strengthened community resilience in the face of future health epidemics or community crises (3).

However, the teams also reported difficulties in implementation, including the following:

- Budget restrictions regarding the purchase of promotional materials, volunteer identification, cleaning kits, and protection materials such as repellents;
- Dependence or the expectation by communities to receive something in exchange for their participation due to trends in previous development projects;
- Security issues in some areas of the project which required some CAZ teams to adapt their activities in the field to adhere to security protocols;
- Socio-political situations (blockades and demonstrations) which affected activity implementation;
- Lack or inconsistency of municipal garbage collection services;
- Community disinterest and lack of understanding of Zika at the beginning of the project; and
- Limited availability of volunteers combined with high expectations for carrying out activities in order to reach established goals.

The following sections offer specific experiences implementing community vector control in each country.

Colombia

CAZ Colombia focused on capacity building for volunteers, health service personnel, and communities. Using the Community Engagement and Accountability (CEA) model, CAZ expanded the program scope by implementing training at RC offices and then replicating these trainings to communities as a part of the community plans. In addition, the CAZ project implemented cleaning campaigns, home visits, delivery of community clean-up kits, campaigns for developing ecological parks with disposable household materials, and fairs to support community-based vector control activities (5). To ensure actions were relevant and provided the necessary response, the CAZ team tested



Photo: Educational talk, Colombia

the impact and effectiveness of educational materials. Training workshops, as well as validation processes at the community level (including indigenous communities), provided valuable information on how materials were perceived, and helped to identify possible thematic gaps. This also facilitated the development of additional plans to respond to other community needs (2).

“We had to start making home visits, a strategy that helped us a lot because by the time we started to carry out the elimination campaigns, they already knew what we were doing. Home visits take much longer but directly impact the community.”—CAZ Team, Colombia

El Salvador

The El Salvador Project’s main success resulted from working with communities through volunteers and local consultants. The volunteers’ commitment to increasing awareness, communication, fieldwork and leadership in community initiatives was a key element in the project objective of reaching target communities. In addition, hiring local community leaders as independent contractors to accompany project field specialists contributed to greater community buy-in and allowed field teams to further extend their reach in target communities.

“Having consultants and local volunteers is seen as a good thing and considering that, together with the presence of CAZ team members, this strengthened citizen participation and commitment to act against the threat of Zika.”—CAZ Team, El Salvador

“The direct approach with these leaders is very important... they are our local actors because they have a direct relationship with families... many have taken actions in schools, in communities, and in churches in cleaning and elimination campaigns ... they have been involved in a lot, and progress is evident because from the beginning they took an active role.”—Municipal Community Educator, El Salvador



Photo: Home visit, El Salvador

Also, as in other countries, coordination with the Ministry of Health for institutional support through local Ministry health promoters was essential. The vector control unit, local health committees, and health promoters that accompanied the team in the field helped build rapport and legitimacy in the communities and made it easier to adjust actions as necessary. Other efforts to coordinate with mayors, civil protection units, and municipal risk management committees

succeeded in establishing municipal agreements. Also, SC promoters were trained in the use of the U-Report, an app that allowed young people to report project information and carry out advocacy efforts.³

Honduras

In Honduras, institutional partnerships formed through multisectoral working groups, schools, health establishments, mayors, etc., helped further strengthen the projects' actions. Different institutions also contributed materials and resources such as physical space for events and office workspace for project field staff. These contributions were essential as CAZ Honduras implemented workshops on Zika transmission and vector control for water commissions, boards of trustees, religious groups, journalists and media, health committees, multisectoral working groups, young people, schoolchildren, teachers, and parents. Volunteers then carried out home visits to reinforce these behaviors among households. These efforts helped CAZ identify, organize and connect volunteers to local health establishments, which strengthened the relationship between the community and local health services. Additionally, updating and relaunching the MOH-registered volunteer network was a success and helped to renew commitment and involve more young people in project-related activities.

One of the challenges of the project during the first months of implementation was recruiting community volunteers, especially in urban areas. This was due to a lack of motivation by prospective community volunteers, insecurity in the project implementation communities, and political demonstrations during the election season that caused interruptions in activity planning. Despite these challenges, CAZ was able to involve over 900 community volunteers in project efforts.

Nicaragua

In the initial stage of the project, Nicaragua exceeded project targets due to effective close collaboration with the Ministry of Health and the Ministry of Education during the first year and a half rollout of project activities. However, due to the political crisis that escalated to violence in 2018 in Nicaragua, project implementation was limited to interventions in schools and maternity centers during the third year of the project. Initially, this coordination helped to carry out and replicate project actions, gain access to the use of vector control records with the Ministry of Health, align institutional project strategies with institutional protocols, and institutionalize the CAZ educational materials. Another success was the mobilization of community volunteers from the Ministry of Health who carried-out the community volunteer actions, allowing the project to cover more territory with a smaller team. Before the reduction of activities, CAZ Nicaragua also implemented educational activities directed towards the general public to inform communities about arbovirus prevention through murals, fairs, and information campaigns.

“Among the achievements are the staff the project trained. At first, we did not know much about Zika. With Save the Children, we received training—the staff, the volunteers too,

³ U-Report is an interactive social platform available via SMS, Facebook and Twitter that allows information and opinions to be shared among young people involved in the CAZ project.

and now we have the knowledge to share it with others and guide women on how to prevent Zika.”—Officer from a Maternity Home, Nicaragua

“In terms of vector control, the community was trained on some subjects, but we were not able to follow up on those trainings. We planned to give them a complete training on vector control and instead, only general subjects were given. The leaders were not able to be trained more or conduct all the activities we had planned, like follow up visits with pregnant women in each neighborhood, for example—none of these activities were achieved... because of the socio-political situation.”—CAZ Team, Nicaragua

Dominican Republic

CAZ in the Dominican Republic highlighted the success that came as a result of collaborative implementation. The CAZ team effectively organized and trained a cohort of volunteers who facilitated implementation rollout. Team and volunteer collaboration with health, education and local government authorities ensured high quality implementation of Zika community prevention plans, execution of actions, and provision of prevention kits. Community members and youth also got involved in cleaning actions and educational sessions, completing the circle of collaborative implementation linking government, CAZ team and volunteer efforts, and the target communities.

Community partnerships were essential to implementation of prevention activities since volunteers formed the foundation of CAZ’s community work. The community health commissions were made up of volunteers and supported the health promoters by holding workshops and making household visits, therefore extending the reach in the communities. The regular training and institutional support offered to volunteers gave them an opportunity to develop new skills in a specialized subject, contributing to their professional development.

“We organized participatory sessions whereby volunteers developed good connections with the community, to the point where we now have better grassroots community organizations, neighborhood committees, and volunteers who worked for the project, which has been excellent. The interventions we carried out were tremendous, very organized and very good in terms of vector control results.” —Provincial Health Director, Dominican Republic

“At the community level... one of the biggest changes is that we could break taboos around Zika, and that the community understood that it was a disease that especially affects babies and pregnant women, that it can bring serious consequences, even death. That is very important when you work in the community, that you achieve a change in risk perception.” —CAZ Team, Dominican Republic

At the national level, the CAZ team coordinated with health and educational authorities who were open and willing to collaborate, accept project proposals and suggestions regarding materials and tools to use in the communities, which aligned project activities with the technical protocols.



Photo: Cleaning day, Dominican Republic

School Vector Control

School vector control involved mobilizing students (primary school children and youth ages 9-18) together with the support of teachers to carry out vector control activities. Similar to community vector control, actions were carried out based on activity planning and implementation using school vector control plans to identify, eliminate and monitor mosquito breeding through cleaning campaigns and educational sessions. Hygiene committees were organized and worked together with school councils and teachers to implement these actions. In addition, CAZ worked closely with the ministries of education and health to review or develop and implement sanitation standards for vector control in schools (1).

As part of the SBC Strategy (described in detail in the next section), CAZ also took advantage of spaces in schools to share information and create dialogue that promoted key behaviors to prevent vector transmission. Students planned various activities to promote behavior change, including extracurricular and educational activities within classrooms such as film forums, rallies, workshops, talks, fairs, competitions, etc. One of the main tools used in these activities was IFRC's "Prevention Toolkit for Zika, Dengue and Chikungunya". CAZ also distributed educational kits and hygiene and cleaning kits to schools to carry out these activities (5).

Students represented an important link between the community, school and home in terms of vector control actions

CAZ teams in all implementation countries identified school actions as being some of the most impactful activities with the greatest results in terms of community engagement. Among the success factors and best practices mentioned by the teams include the following: the commitment of school principals and teachers to coordinate and replicate vector control actions at school and in the community; interactive games and activities in schools that effectively captured students' attention and enthusiasm; and the important role that students played in linking community, schools, and home in their participation in vector control actions in these different arenas.

The following sections offer specific experiences implementing school vector control in each country.

Colombia

CAZ Colombia actively coordinated with national and local health and education authorities to ensure access and participation of public entities in project activities. Workshops were carried out by volunteers, who also coordinated activities on vector control for thousands of students, including cleaning campaigns, mapping of breeding sites, and Zika prevention talks. Using peer education training while working with children and youth helped increase motivation and interest in project actions. In fact, efforts carried out in schools were reported as one of the most successful project components in terms of promoting key behaviors.

“In year 2, we started with the idea of including vector control and the whole part of entomology within the biology curriculum. In many schools, Red Cross was already there working with first aid and educational promoters, so what we did was empower them with vector control information and we also included biology teachers and those who had recycling groups and they became interested in the subject.”—CAZ Team, Colombia



Photo: Participating school children, Colombia

El Salvador

School-based vector control strategies used in El Salvador were reportedly well-accepted by children. Activities were designed and rolled-out according to school Zika prevention protocol. These activities included school races, extracurricular activities, workshops with guest speakers, school fairs and video technology. Student committees were created and/or existing committees were incorporated into activities to promote Zika prevention and control, and a school guide with corresponding instructional support materials were used to train trainers and then replicate trainings with the students. School plans and mapping helped identify sites with high-risk for mosquito breeding and vector control activities were planned for these areas. Interactive games and activities in schools were effective in capturing student's attention and participation, providing them with knowledge on the subject evidenced by children replicating what they learned with their peers in schools.

"The strategy of working with schools brought advantages, not only because of the students' ability to absorb new knowledge, but also, because the students became change agents of these new practices in their own homes and now are well aware and motivated to actively undertake actions in their own environments."—CAZ Team, El Salvador

Honduras

Working in schools allowed for a more sustainable way of promoting behavior change. Children who participated in activities in schools, replicated this knowledge with similar activities in their homes and communities. Several CAZ team members reported that school activities were especially creative and encouraged young people to be more proactive when promoting behavior change to reduce Zika transmission. Teachers are now motivated to continue training and carrying out classroom activities, helping ensure that information will continue to be shared beyond the life of the project.

"Children at our school come from all over the municipality and it is very important for them to get involved in this type of project because it allows the students to take the message back to their homes. The messages don't just stay at the schools, they also reach homes."—Teacher Assistant, Honduras

Another important aspect to school interventions was the close coordination with the Secretary of Education through the district and departmental directors, specifically DECOAS. With the support from UNICEF, DECOAS developed educational materials for Zika prevention in schools, for example the "Zika School Guide" and the "Instructional Guide for Teachers." SC used these materials and received training from DECOAS technicians on their use.

"It is easier to do activities in schools. Children are more perceptive, and teachers participate with creativity. Zika caught their attention because of the risks associated with it. The methodology and strategies used in the schools were very effective."—CAZ Team, Honduras

Nicaragua

Due to the socio-political situation in the country, the project changed its approach and directed all project efforts towards schools and maternity homes, which resulted in important achievements despite the change. CAZ Nicaragua worked closely with education and health

authorities in the development of a school guide called the "ABC Zika Guide," which is accompanied by a teacher and student workbook. The methodology used in schools included games, riddles, crosswords, stories, etc., and relied on training teacher facilitators, health staff, and student monitors. School principals and teachers were committed to vector control activities in schools and communities; and, children and youth were encouraged to become leaders in promoting key behaviors in school and in their homes. In fact, one of these groups of young people took their role as leaders to heart by planning and carrying out cleaning days, eliminating breeding sites and organizing other activities.



Photo: Student with a mosquito larva model, Nicaragua

“This is where the impact can be most seen - teachers and students are informed about Zika, Dengue, and Chikungunya and understand prevention measures. We have observed behavioral changes: there are teachers, directors who have started to promote activities on their own, cleaning days with students who are part of the promotion efforts. We have 29 volunteers trained in schools and there are children who have been part of the project from year 1. We can see they have a certain level of awareness and knowledge and assume the role of change agent within their schools that they can continue forward.” –CAZ Team, Nicaragua

Dominican Republic

School vector control in the Dominican Republic also relied heavily on recreational and creative activities as part of school plans. This included child-to-parent teaching, and training workshops with teachers. Children and young people then replicated the information and trained other

children and youth in schools. CAZ delivered cleaning kits to schools and trained students to carry out cleaning campaigns to eliminate trash and remove mosquito breeding sites. These efforts led to the children, teachers, and parents becoming change agents as they spread the information and behavior practices. Factors which contributed to this success were the captive audiences in schools, seeking support and linking actions to existing initiatives, and relying on local authorities and volunteers to help implement.

“Promoting social mobilization through educational participation was what struck me most about the project, the active participation of the community members. The first time I went to the neighborhood council, there were more than 60 women and young people and they were fully engaged. We started at 8 in the morning and at 3 in the afternoon we had to tell them that the trucks were coming for them and we needed to stop, but they didn’t complain, they didn’t want to leave, they remained active and interested.” — Provincial Health Director, Dominican Republic

Social and Behavior Change (SBC)

The SBC Strategy was integrated into the entire CAZ project: social and behavior change was an integral part of all community and school vector control activities, community-based vector surveillance, and care and support activities. The SBC Strategy guided these actions in a systematized and integrated manner, prioritizing audiences, behaviors and communication channels with the greatest potential for change. The specific SBCC activities for the design and roll-out of the SBC Strategy as proposed in the project design are included in project objective 2; however, the SBC Strategy was implemented throughout the execution of other CAZ activities. This section focuses on the establishment of the SBC Strategy and the design, approval, and use of SBCC materials.

The CAZ developed a regional SBC Strategy using a social and behavioral framework and model, and SC best practices. The strategy was based on the socio-ecological model that addresses social determinants of behavior at the individual, household, community, and health services levels. Strategy development revolved around data and results of a situational analysis, which provided content for developing a problem statement; and for identifying audience segments. This also informed the desired behaviors for Zika prevention and control for each audience segment, barriers for adopting the desired behaviors for each audience segment, SBC objectives for each audience segment, a series of channels and activities for each audience segment, in order to achieve the SBC objectives, and suggested SBCC materials to develop for each audience. The CAZ project also determined it important to break up activities in the strategy based on four key areas: 1) sexual transmission; 2) vector-borne transmission and vector control; 3) care seeking, detection and surveillance; and 4) community and psychosocial support for families with children affected by CZS. Each country further adapted

The SBC Strategy guided the design of all CAZ actions, prioritizing communication channels and key messages with the highest potential for change.

the regional strategy to develop a country strategy that reflected the audiences, barriers, SBC objectives, channels and activities, and SBCC materials specific to each countries' context.

The following table shows key audiences, with key actions for each category as presented in the regional CAZ SBC strategy.

Table 2. Key actions per category, identified for each audience segment, as found in the CAZ SBC Strategy

Audiences	Category	Key Actions
Primary: Urban and rural women and their partners	Sexual transmission	Prevent Zika by using condoms
Secondary: Community members		Support the use of condoms by directly affected groups
Primary: Urban and rural women	Vector borne transmission and vector control	Apply personal mosquito repellent and eliminate mosquito breeding sites in the home
Secondary: Community members		Actively participate in household removal of mosquito breeding sites
Primary: Partners of women		Become Zika educators in school and in the home
Secondary: Urban and rural school children	Care seeking, detection and surveillance	Pregnant women seek antenatal care; new mothers recognize early signs of CZS and seek ECD for their affected newborns
Primary: Urban women		Active involvement in the health and well-being of their partners and babies
Primary: Partners of women	Community support	Have reduced fear and prevent rumors related to CZS
Secondary: School children		Lead efforts to minimize rumors and increase support for families affected by CZS in their schools
Secondary: Community members		Reject fear and rumors related to CZS

Audiences	Category	Key Actions
Secondary: Community health volunteers	All four categories	Actively engage in community health volunteerism and provide communities with correct information on Zika risk, transmission, protection and psychosocial support Knowledgeable volunteers who can provide communities with correct information on Zika risk, transmission, protection and psychosocial support; and are able to conduct training for advocacy, IPC, counseling
Secondary: Community leaders		Provide support and education to communities on Zika
Tertiary: Local media		Actively involved and promoting correct information on Zika
Tertiary: Municipalities		Regular rubbish removal in townships and villages

During year 2, the Breakthrough ACTION and RESEARCH projects presented results of extensive research to define priority behaviors with highest potential for Zika prevention. This list of behaviors guided the regional CAZ SBC strategy and the strategies for all Zika partners receiving funding from USAID. These behaviors included the following:

1. Application of mosquito repellent (DEET, Picaridin, IR3535, or oil of lemon eucalyptus only), using each product as directed, for duration of pregnancy, to reduce risk of Zika transmission through mosquito bites.
2. Use of condoms during pregnancy to prevent sexual transmission of Zika in pregnancy.
3. Regularly removing standing water not intended for storage around the home and in communal areas.
4. Covering infrequently used water storage containers at all times with a cover that is tight fitting and does not warp or touch the water.
5. Eliminating mosquito eggs from walls of frequently used water storage containers weekly.
6. Seeking prenatal care to monitor pregnancy and discuss Zika risk and prevention.
7. Seeking counseling from a trained provider on modern family planning methods if not planning on getting pregnant (9).

CAZ adopted these behaviors into the SBC Strategy and developed SBCC materials with the updated behaviors, with less emphasis on promoting condom use given the social and cultural taboo around this issue. CAZ created a care and support intervention package that included SBC strategies related to case identification and care and support for families affected by CZS.

A variety of activities were used to promote these behaviors. Schools used fairs, campaigns, theatrical presentations, and recreational activities to share accurate, and up-to-date information; and, communities used cleaning campaigns, fairs, SBCC materials in public places, and radio and television advertisements. To reach a wider audience, CAZ published press releases and held meetings and workshops with local journalists to reach wider audiences. With the support of Breakthrough ACTION and Breakthrough RESEARCH in identifying these behaviors for Zika prevention, CAZ was better able to streamline activities and promote behaviors with communities. Using six or seven specific behaviors instead of a larger set of behaviors (as was done early in the response) helped volunteers to communicate specific and simplified information to communities and assisted with simplifying SBCC materials.

Each country developed and compiled SBC materials based on their country SBC Strategy and country context. The regional office also developed materials used throughout the region. The full communication materials package included a large amount of materials from the region, materials developed by countries, and materials compiled from other USAID Zika projects and from the ministries of health in each country. Examples of these SBC materials are found in the section B. *How did we do it? Tools and materials*. In addition, SC has compiled all key SBC materials onto a digital resource library, found at www.savethechildrenzika.org. A list of the full materials is also found in annex G of this document.

The review, update, and adaptation of existing materials and preparation of new SBCC materials that met the technical and aesthetic standards required an enormous effort by CAZ national teams, USAID country and regional representatives, and SC regional and US teams. Steps taken by the countries to adapt materials to each unique country context included: 1) Identifying the necessary materials according to the SBC Strategy and the key actions per audience; 2) Consulting with various sources and conceptualizing material content by national teams, including, whenever possible, input from the target audience of the material; 3) Validating technical content

of material with stakeholders including ministries of health and USAID; 4) Validating each material with the intended audience (e.g. appeal of the design, colors, illustrations, graphics, validating appropriate use of language, confirming information is clear and easily understood etc.); and 5) Conducting training on the use of these materials.



Photo: Using labels to mark vector growth levels, El Salvador

CAZ identified the following success factors/best practices and difficulties when implementing the SBC strategy:

Successes and Best Practices

- Children and young people acted as agents of change: there was a marked increase in the number of children and youth leadership capable of promoting key behaviors in schools and in their homes.
- Sharing of correct and detailed information on Zika prevention catered to specific target groups: CAZ shared Zika risk communication information with a variety of different community groups including health committees, informal community groups, in schools by teachers and students, at health centers, with municipal officials, churches, and others.
- Use of technology: CAZ used technology to share information, which created alternative opportunities for learning, including computer games, virtual courses, Zika360, Kobo, WhatsApp, and Facebook groups.
- Targeting existing pregnancy clubs and maternity homes: this offered a captive audience and an opportunity to engage pregnant women, in addition to other family members, to participate in Zika prevention dialogue and learning.
- Increased use of prenatal care services:⁴ CAZ encouraged pregnant women to seek prenatal care services regardless of Zika risk as part of the educational sessions with pregnant women in pregnancy clubs and psychosocial support for pregnant women and mothers in clubs and support circles.
- Outreach with vulnerable populations: this included work with people with disabilities, with nursing homes (in Nicaragua only), and with pregnant women through pregnancy clubs.
- Linking the project to other community issues: it was helpful when presenting the project and its interventions to include other arboviruses, water and sanitation issues, prenatal care/child development, etc. to increase the public's interest in participating and the project's relevance to their immediate concerns.
- Involve media (journalists, TV and radio broadcasters): their involvement was key for wider distribution of clear, accurate, and up-to-date information, which helped to clarify common myths and misconceptions related to Zika.
- Language contextualization: Adaptation of materials to local contexts using colloquial language facilitates information assimilation.

Difficulties

- The development of communication materials required a series of steps to design, review, and approve materials on a country-level, regional-level, between CAZ partners, and with

⁴ Data between baseline and final project evaluation reveals an increased percentage of women who reported they attended prenatal visits while pregnant in Colombia (3.4 to 4.2%), El Salvador (4.3 to 4.5%), and Dominican Republic (4.6 to 5.9%)

the USAID mission in country and in Washington; which, given the complexity of this process, there were many delays.

- The lengthy material development time limited the project’s ability to quickly adapt and respond to changing contexts which required quick and dynamic action.
- Elderly community members or those with little practice using digital tools struggled with project apps and digital educational tools.
- In general, social and behavior change is a long-term process requiring consistent promotion of behaviors and creation of a supportive environment. Such a process requires more time than the project’s timeframe offered. CAZ, a three-year project, had less than the three years to implement activities to promote behavior change, given project start-up and close-out took between 12- and 18-months total across the region to develop and roll-out the project in varied contexts and collect results, evaluate and report learning. This left roughly 1.5 years to roll-out the SBC Strategy, promote behaviors, and then reinforce behaviors for long-term sustainability.
- Communication about the uptake of condom use during pregnancy was difficult given the cultural taboo around discussing modern family planning. Additionally, there was community confusion about the promotion of condoms during pregnancy, since other public health efforts tend to promote condom use as a preventive measure against pregnancy, although our target audiences were already pregnant and thereby saw condoms use during pregnancy as counterproductive and undesirable.

The following sections offer specific experiences implementing SBCC in each country.

Colombia

CAZ Colombia reached more than 160,000 people in the first year alone with materials and information through the implementation of the “Zika control, in your hands” campaign, a public campaign on radio and social media to reach mass audiences. Some of the successes cited by the team include the workshops for pregnant women and women of reproductive age, training volunteers in the prevention of sexually transmitted Zika, reaching young people in nightclubs, and distribution of informational kits. CAZ Colombia made an important effort in training its team members in the technical aspects of the virus and then combining activities to make them much more fun and attractive to communities.

“It was great to see innovation in key messages and how they could be used in community engagement. The project prioritized community participation in the construction of the key messages [to promote behavior change]—it was through this process that another communication plan was developed.” —CAZ RC team, Colombia

CAZ developed a virtual reality communication tool, Zika360, which was validated in Colombia, El Salvador and Honduras. The tool wasn't incorporated into the project until the third year due to the time required for its development, purchase of equipment, and validation at the community level. However, it was well received in the communities where validation was carried out and after it was presented at the Inter-American Conference and the Netherlands Innovation Congress. The video-based participatory evaluation was another innovative methodology used by the project in which beneficiaries from communities produced stories recorded in videos on project results using an application for tablet devices designed for this purpose. This was a collaborative initiative between IFRC and the Open Lab program of the University of Newcastle in the United Kingdom (2).



Foto: Charla educativa, Colombia

El Salvador

El Salvador stands out for the abundant and detailed SBCC materials that they developed to reach various target groups: health committees, informal community groups, schoolteachers and students, health centers, municipal officials, and churches, among others. CAZ El Salvador meticulously developed SBCC materials based on SBC Strategy guidance, and carried out a review, update, and design process each time they developed new material. Given this, El Salvador became a resource for good practices in SBCC material development and a resource hub for the region. Using the SARAR methodology ⁵, CAZ El Salvador promoted educational and communication activities, expanded and included alternative media (social networks, peripheral

⁵ Five principles to promote individual behavior change: Self-esteem, associative strengths, resourcefulness, action-planning and responsibility

and community events) and used vector control campaign materials, brochures, posters, psychosocial support guides, surveys for home visits, pre and post knowledge tests, volunteer guides, social network publications, school guides, and educational games.

“The success has been the ‘tropicalization’ or user-friendly versions of the material - all the material we have developed have a technical basis because they were created by the team’s technicians and other writers. When each material was created, we went and sat down with a focus group and they told us if they understood it or not, made suggestions of what to put where and then following the validation route, together with regional USAID, they told us ok, you can do it that way.” —CAZ Team, El Salvador

“One of the most important changes is that the pregnant patient can now see the possible effects this disease can have; we have been emphasizing these messages [to promote



Photo: Educational talk, Honduras

behavior change] with the patients and the community has become more aware of the issue of Zika.” —Health Promoter, El Salvador

Honduras

Among project successes, the CAZ Honduras team cited increased knowledge and awareness about Zika risk, whereby communities can now describe Zika symptoms and understand and carry out prevention measures. Honduras also integrated project prevention and education actions into health and community nutrition courses of national high school educational curricula.⁶ CAZ Honduras encouraged women participating in pregnancy clubs to seek regular prenatal services,

⁶ This curriculum is a social service that all high school students must complete in their last year in Honduras

reaching a total of 2,101 pregnant women throughout the project. The scope and quality of the work with pregnant women through the pregnancy clubs was effectively organized by health facilities with support and training by CAZ Honduras. According to project staff, women better understood the risks of Zika for their babies after participating in pregnancy clubs. Pregnant women and mothers also received psychosocial support in clubs and support circles.

However, promotion of condom use, given the sociocultural taboo, and promotion of repellent, given that it was economically out of reach for many, was still a challenge.

The CAZ Honduras team reported that communities' adoption of vector control practices is visibly evident, and communities credit the project for their heightened awareness of Zika. However, the technical team expressed that the project was not long enough to be able to fully observe changes in behavior. In addition, the team highlighted that efforts need continual monitoring, reinforcement training, and more time for further adoption to ensure that the project's success will continue.

Nicaragua

Nicaragua reported success in working with children and adolescents in Zika prevention and protection education. Radio spots were used to share Zika education and prevention messages. CAZ Nicaragua participated in coordination meetings between SC and UNICEF to develop guides and materials that community members used to detect developmental delays and warning signs in children born in areas with high risk for Zika and to support mothers with children affected by Zika through early stimulation exercises and referrals to health services. However, the project discontinued this planning process and was not able to implement after the change in country strategy due to the unstable socio-political situation.

*“One of the achievements is the community empowerment that happened through teaching materials, posters, interactive tools, and guides explaining the role of the peer monitor... Another achievement is that the materials were provided to schools so that from within the schools themselves they could keep a clean, healthy environment.”—
Community Leader, Nicaragua*

Regarding changes in knowledge, communities gained an understanding of the vector, its behavior, and means of transmission. CAZ Nicaragua addressed the sexual transmission of Zika and was able to promote condom use among pregnant women and their partners in the pregnancy centers, which was more effective compared to reports from other countries. The project helped to increase risk perception for pregnant women through its work with women in maternity homes where they learned about the possibility of having a baby with microcephaly and how to use prevention measures that were applicable to their environment and needs (i.e. in case of not being able to purchase repellent, wear clothes that cover most of the body). Nicaragua experienced delays in the review and approval process of materials by the donor. However, in year 2 SC received instruction from the USAID mission in Nicaragua to discontinue the distribution of the materials given the sociopolitical situation. This included the removal of project logos from the materials and leaving only logos of local organizations involved.

“At the local level, we participated in local radios with communication campaigns on Zika prevention and each news source shared with us the number of people they were

reaching... Together with billboards, we reached more than 2.5 million people... It was a very significant achievement for us and for the society as a whole.”—CAZ RC team, Nicaragua

Dominican Republic

The DR CAZ team reported success in raising awareness around Zika through workshops with pregnant women on Zika risks, prevention and protection during pregnancy. Key information on Zika prevention was shared during household visits with pregnant women, during community meetings, and through educational activities in health centers and hospitals. The project also shared information on the prevention of sexually transmitted Zika and condom use in educational activities. CAZ Dominican Republic was a member and participated in the country-level Zika Risk Communication working group, which included partners such as UNICEF, HC3, Breakthrough ACTION, and ASSIST. Content and information were developed from these working group meetings which CAZ DR used to promote key behaviors, in combination with other SBCC materials

The community-based vector surveillance and control system allowed the project to focus interventions in the areas of greatest risk.

developed based on the project’s SBC Strategy. The project shared Zika information through radio spots on three stations, four times a day with messages directed at pregnant women to minimize risks of microcephaly and other disorders caused by Zika.

“The social behavior change strategy worked because of the creativity and confidence of the effectiveness of the information shared. Another strategy that worked was to create information differentiated by audience, considering the different scenario of each and working on interpersonal strategies.”—CAZ Team, Dominican Republic

Among the difficulties, more effort was required to raise awareness about how Zika could be transmitted sexually; many health service providers were unaware of this transmission route. There was also a significant delay in SBC strategy implementation due to material development and approvals.

Community-based Vector Surveillance

To complement community vector control activities, CAZ implemented a community-based vector surveillance and control system (CB-VESCO). The CB-VESCO system uses low-cost technology—ovitrap, that allow volunteers and communities to monitor and respond to ovitrap results, by taking action to eliminate breeding sites on a weekly basis. The process consists of placing the ovitrap 200 meters apart in areas where mosquitoes lay eggs and monitoring the ovitrap weekly. Weekly results of egg counts are entered into a mobile application that marks the geographic reference of the specific ovitrap result, which are displayed on a dashboard. The application displays a map of all the ovitrap in the community, and the number of eggs each ovitrap is capturing. Egg count status for each ovitrap are also reported with stickers on a wall where the ovitrap is placed, such as inside a person’s home, which indicates whether the results

of the ovitrap is green (low egg count), yellow (medium count), or red (high egg count). For those areas that have red status, high rates of mosquito breeding, CAZ volunteers work with the community to plan events to eliminate breeding sites within the community. This system helped to focus actions in areas of most need and made the connection between vector control actions and the ovitrap results visible to community members. This optimized the use of resources, increased the effectiveness of vector control actions and motivated communities, leaders and authorities to actively participate in the communities' vector control activities.

Before implementing ovitrap to scale and developing implementation protocols, CAZ began with pilot programs in El Salvador, Honduras, Nicaragua, and Colombia in coordination with the ministries of health and the ZAP and ZICORE (in the case of El Salvador) projects. Four to nine neighborhoods or communities were selected in each country for the pilots. CAZ also worked with the National Institute of Health in Colombia. The following steps were taken to implement the pilot projects, as described in the systematization study of the community surveillance strategy done in El Salvador, Honduras and Nicaragua:

- Select pilot area based on population and areas at high risk for the vector;
- Train CAZ teams, Ministry of Health technical personnel, and project volunteers on ovitrap community surveillance and vector control, and on the use of technology for reporting and mapping ovitrap results via smartphones and geographic information systems;
- Select neighborhoods and homes for ovitraps installation;
- Coordinate with health institutions and local governments;
- Form Zika Control and Prevention Committees made up of project volunteers, health personnel and community members to monitor ovitraps;
- Evaluate results of the pilot projects identifying best practices, conclusions and recommendations for expansion;
- Plan for expansion to other areas that reported high levels of the *Aedes Aegypti* vector and that had appropriate conditions in terms of community structures that could respond to entomological control and surveillance activities with ovitraps (10).

Due to the political issue in Nicaragua and the resulting strategic changes in the project, ovitraps were discontinued on a community level, but their use was reinforced in schools. In addition, CAZ implemented ovitraps in schools in Honduras, El Salvador and Colombia and worked with the health sector in each country to assume more responsibility in managing the ovitraps.

The use of ovitraps not only supported community surveillance, but also encouraged youth leadership and initiative to raise awareness about the epidemic in their homes and communities.

Success factors and best practices reported by CAZ teams and identified in the community surveillance systematization include the following:

- Information and results from the testing, scale-up, and implementation of pilot programs were useful when implementing at a wider scale;
- CAZ aligned the surveillance protocols with those of the ministries of health, which facilitated the implementation and adoption of the tool by governments;
- Technical support from specialists, entomologists, and community commitment helped to facilitate successful implementation and use of ovitraps in communities;
- Use of ovitraps increased surveillance capacity and performance in communities and schools where they were also used for educational purposes;
- The enthusiasm of children and young people to use this methodology generated interest in their parents and resulted in ovitraps use in homes;
- The use of accessible technology for communication and geo-referencing, WhatsApp, Google Maps, photographs, etc., helped facilitate surveillance in communities;
- Community committees were recognized as good examples of how to adopt vector control practices;
- On-site training was effective and personalized and resulted in community members actively participating in egg breeding tracking; and
- Public, municipal, and private institutions participated in reading ovitrap results and the technology was well received by authorities.

Difficulties reported by CAZ teams include the following:

- In some countries, delays in receiving ministries' approval of ovitrap implementation;
- There was some initial resistance to using the ovitraps out of fear that they would create abandoned breeding sites;
- Teams were not familiar with the app Open Data Kit (ODK), an open source Android app that replaces paper forms to collect and use data, and had difficulties using it to analyze and report the results of the information collected;
- Use of technology presented personal safety risks when carrying equipment in insecure areas as there was a higher threat of assault or robbery;
- The turnover of health authorities required additional meetings and coordination efforts to continue collaboration;
- There was not always a clear profile defined as to the most appropriate person to use and report data on the ovitraps was not always applied, therefore, in some cases, ovitraps were installed in the homes of elderly people or people who did not have access to a smart phone to send data, or who did not have experience using a smart phone, which inhibited them from carrying out surveillance;

- Sharing of results depended on the use of the phone app; therefore, the ability to upload and share information depended on whether volunteers had access to a smart phone and data to upload the information.



Photo: Monitoring ovitraps, Nicaragua

The following sections offer specific experiences implementing community-based vector surveillance in each country.

Colombia

Strategies used in Colombia include training of trainers on epidemiologic and entomologic surveillance and use of the ODK application, planning meetings to define and monitor the strategy, coordination meetings with health authorities and other organizations, community surveillance workshops with volunteers, use of the ovitrap and surveillance protocol, and an evaluation of the entomologic surveillance pilot project experiences and monitoring results.

CAZ Colombia conducted surveillance with ovitraps in coordination with local health authorities and under the supervision of the National Institute of Health. The mosquito egg samples obtained in some offices of the Colombian RC were transferred to the National Institute of Health's Entomology Laboratory, which supported the identification of the species. In addition, the team used WhatsApp to answer questions related to ODK use in reporting results. However, there were some difficulties. Key contacts reported that the results were not systematically communicated to local coordinators or participating communities. In addition, the ovitrap strategy did not lead to as much of an increase in community participation and ownership of surveillance and monitoring as expected, this differed from what was reported in other countries. The main

element of vector surveillance consisted of larva studies consistent with data collected by local authorities (2).

“We tried to manage the ovitraps with the ODK and it was a bit complicated because of the time we had. In the city of Antioquia, they generated a kind of system called Simone where they identified an actual geographic point on WhatsApp, cross referenced that with Google maps and then the eggs appeared.”—CAZ RC team, Colombia

El Salvador

The experience of ovitraps in El Salvador was one of the most successful components of the project because it generated community interest and involvement while collecting information that helped focus vector control efforts. CAZ trained and encouraged those families assigned with ovitraps in their homes to do their own surveillance. The Ministry of Health provided accompaniment in training, assembly, monitoring, and quality control. Local universities also provided support with implementation and ovitraps were used in schools, integrated into the community health curriculum. Through advocacy and awareness raising with health authorities, the Ministry of Health became very engaged and involved in the surveillance system.

“Using these types of innovative tools such as ovitraps was a challenge - the biggest challenge that CAZ had at that time because they were banned nationwide, and not only for us but also the other two partners that work with ovitraps. We had to talk with ministries, national directors to sell them on the idea of what we wanted to do with community surveillance using ovitraps, which took more than 6 months, but we succeeded. We not only saw how ovitraps could work, but the effect that something so simple can have in engaging the community.”—CAZ Team, El Salvador

Honduras

CAZ Honduras succeeded in implementing ovitraps in both communities and schools due to integrated support of several actors. Volunteers were committed to ovitraps implementation; health authorities responded to ovitrap results with a positive attitude, health centers supported implementation because they saw the benefit for Zika and surveillance for other epidemiological outbreaks, and CAZ teams who were motivated to apply new and innovative practices in the field. The results from the ovitraps were a tangible and concrete way to measure need and respond accordingly.

An unexpected result was the success of surveillance activities at schools. Project staff reported that the ovitraps were more easily integrated into schools than homes because of the enthusiasm and commitment on behalf of the schools and students. The use of ovitraps in schools not only promoted community surveillance but also supported students' leadership as agents of change to help raise awareness about the epidemic in their homes and communities.

“Ovitrap was very successful because it allowed the community to monitor how the vector is growing. I think the success was in the approach from the beginning, the technicians were empowered from the beginning... It was successful because it led to surveillance, but it also gave way to actions that responded to that surveillance. It's not just counting eggs, it's acting, it's reducing the number of eggs. It allows continuity, requires more, and produces a more concrete deliverable.”—CAZ Team, Honduras



Photo: Using an ovitrap, Honduras

Nicaragua

CAZ, in coordination with authorities from the Ministry of Health, implemented community surveillance pilots using ovitraps in the department of León. CAZ installed 38 ovitraps in 9 neighborhoods of the municipality of Malpaisillo, covering a total of 2,040 homes and 15,200 inhabitants. Ovitrap surveillance was carried out by 10 trained community health agents. Community surveillance supervision was carried out by the health center staff who were also trained in community surveillance. Together with the Ministry of Health, CAZ contributed to the development of 41 epidemiologic technical councils, with 986 participants. The weekly epidemiologic situation was analyzed through these councils and joint decisions made to carry out community vector control interventions based on observed risks. Ovitrap protocols were designed and developed together with health personnel, which was the first of its kind in Nicaragua.

“Ovitrap activities were born with the project. MINSA had not used them basically in all of Nicaragua ... we knew about the issue because some colleagues here in the community were learning about a surveillance system, but it had not yet been applied here until the project.”—Community Leader, Nicaragua

However, after CAZ Nicaragua re-directed all their activities to schools and maternity centers, all community interventions with ovitraps stopped and refocused to in schools. Students were responsible for monitoring the ovitraps and counting eggs, and teachers reported the results

through the mobile app. Students took the ovitraps home and shared the tool with their families, along with information about Zika prevention and vector control, which was an effective strategy to reach communities despite not being able to have presence in the communities.

“In terms of vector surveillance at the community level, what was expected was fulfilled. One of the achievements was the involvement of MINSA at the local/national level and having prepared an ovitrap supervision sheet endorsed and approved by MINSA. The appropriation and empowerment of girls and boys in vector surveillance through ovitraps motivated fathers and mothers to support prevention activities in the community.” —CAZ Team, Nicaragua

“Surveillance with ovitraps was a lesson strengthened through the project because it allowed us to know how many eggs a female mosquito lays and what level of risk that causes... There are some mosquitoes that lay up to 200, 300 eggs and the ovitraps helped us to know early on the risks of the possible mosquito population in the community. That is important knowledge.”—Community Leader, Nicaragua

Dominican Republic

Together with the CENCET from the Ministry of Health and the ZAP project, CAZ DR planned a community-based vector surveillance system using ovitraps. This involved training community members on the use of the ODK app, on use of data collection systems and dashboards, and on reporting information back to communities. The ZAP project trained CAZ and Ministry of Health staff offered technical assistance for the application of the ovitraps and communicated the results to the Ministry of Health to plan for appropriate response. SC offered linkages to the community volunteer network and helped with the field monitoring. However, there were difficulties getting health authorities to respond effectively.

“Coordination and administration [with the Ministry of Health] for the ovitraps did not work; the agreement to work with them failed. They did not offer the physical space that they agreed to. The local health authorities did not comply with the agreements established which was discouraging and forced the project to use other strategies to continue the work in this area.”—CAZ Team, Dominican Republic

Care and support

The Zika virus can seriously affect individuals, families, and communities through congenital neurological complications associated with the virus, and the stress and emotional pressure caregivers of children with these conditions experience. In addition, social stigma and discrimination can lead to greater anguish and isolation. At the same time, communities can develop fear based on myths, taboos and lack of knowledge that inflicts suffering on affected people (2).

The activities for care and support the CAZ carried out through were designed based on the following three pillars:

- Work with the communities to prevent and reduce stigma, discrimination and other types of violence and increase awareness about the Zika virus and thus, reduce the psychosocial impact of the disease on people, families and communities.

- Reduce the psychological effects of Zika through support circles among affected families, offering a space for the exchange of experiences and mutual support, while also facilitating referrals to public services for medical care, including physical therapy for affected children.
- Improve psychosocial interventions, develop new tools, promote the exchange of best practices, and ensure better coordination in regional psychosocial support actions (2).

The care and support model involved two types of strategies, the first oriented toward the detection of children with possible signs of developmental delays, which CAZ offered with early stimulation circles developed by SC. These care circles taught caregivers exercises to stimulate sensorimotor development and other differentiated treatment exercises for boys and girls. These sessions helped families practice exercises to facilitate the cognitive and physical development of their children with conditions related to Zika and other disabilities. The content and methodology used in these early stimulation circles was based on material shared by UNICEF and the SC child development methodology used in other programs.

Response to any emergency is not just about physical and material rescue, but also offering the much-needed emotional support for affected families and communities, which is what the care and support component provides.

The second strategy was psychosocial support for children with clear signs of CZS or other Zika-related conditions, using a methodology developed by IFRC. This strategy served families by helping them address various challenges, ranging from discrimination, lack of access to health services, depression, shame, and lack of understanding of the conditions. CAZ conducted a systematization of the methodology for these support circles and the use of the volunteer field guide for psychosocial support.

For SC, the El Salvador, Honduras and Dominican Republic teams emphasized use of the prevention strategy. For RC, Honduras, Colombia, and El Salvador emphasized use of the psychosocial support circles.

“Before, I was depressed, I thought it was just me and my family - I didn’t have support, but the CAZ volunteers helped us psychologically, (they) empowered us and helped us see that not all is lost and that we have to fight for it... with that empowerment they have helped us get ahead.”—Participating Mother from a Psychosocial Support Group

Global Best Practices and Success Factors

Although the CAZ did not fully roll out the care and support strategy until the third year of the project, it still resulted in several beneficial results for participants. The following best practices and factors contributed to these achievements.

- Increased knowledge and awareness among organizations, community groups, students and youth about the link between Zika and CZS and how to identify symptoms.

- Strengthened health providers' capacities in care and support techniques for families with CZS.
- The use of existing SC methodology for the early stimulation circles and IFRC methodology for psychosocial support, which can be adapted for future projects.
- Mapping of supporting institutions helped to identify participants and make referrals for services.
- Support and early stimulation circles had a positive effect on all childhood development, not only for those with CZS.
- Integration of rights and child protection issues, encouragement to seek prenatal care services, and the provision of information about health and nutrition during the 1,000-day window adds value to the sessions.
- Effective coordination with UNICEF and the URC ASSIST project allowed for the design of a comprehensive and effective methodology.
- Preventively working with at-risk groups and children with congenital conditions associated with Zika helped to widen the reach.
- Support circles played a role in generating wider networks of support and new bonds of solidarity between families and served to address and manage other psychosocial problems in communities, such as family violence and stress.
- Awareness was raised about the importance of mental health and the need for psychological services.
- Support circles helped strengthen emotional bonds between volunteers and communities, especially among affected families.

“The best thing that has come (of the psychosocial support strategy) are the care and support circles. It is an innovative strategy, which could be implemented one hundred percent, and are sustainable in the communities. At first, no one looked at this as a priority, but when we began to see the pain and grief of the families, a strategy was developed and implemented.” —CAZ Regional Team



Photo: Care and support circle, Honduras

Global Difficulties

- Delays in establishing a protocol for proper management of suspicious cases and provision of early stimulation services in support circles and psychosocial support;
- Greater results in the early stimulation circles were not seen due to intervention delays given there was little time to implement the strategies; and
- Technicians did not have sufficient knowledge or technical capacity to identify suspected cases of CZS.

The following sections offer specific experiences implementing strategies for care and support in each country.

Colombia

The strategy consisted of creating and implementing women's support groups, in which psychosocial support was provided through a series of sessions. In total, 22 psychosocial support groups were established for pregnant women (2). CAZ Colombia took the following actions to roll-out this service: training of trainers for psychosocial support, design and distribution of the community psychosocial support circles strategy, development and printing of case management support materials, workshops for volunteers, and then the implementation of the community circles. Participants were mostly mothers and offered a place for them to share their concerns and difficulties with other mothers facing similar situations.



Photo: CAZ project, Colombia

El Salvador

The care and support work in El Salvador included:

- production and distribution of a user-friendly guide for referral services;
- workshops to raise awareness with target groups;
- psychosocial support that helped prevent and reduce social stigma;
- community tools and materials for pregnant women;
- adaptation and elaboration of support material and validation of the material with SC and Ministry of Health promoters;
- delivery of educational kits and development of support networks in communities.

“Support and care for the families that are affected by CZS has been one of the activities done in the last year that is very relevant because it touches on the issue of the rights of children with disability, related or not to Zika... At the community and national level there is a lot lacking on the subject... We have developed a strategy together with Save El Salvador and UNICEF El Salvador, and with this support a family who has a child with a disability will be able to know what to do from their home.”—CAZ Team, El Salvador

The care and support strategy fit well into CAZ’s work given SC’s general emphasis on child development and protection. The SC team in El Salvador expressed the importance of the issue not only for CAZ, but as a part of all programs that are carried out and the potential the strategy could have had, had the strategy been implemented earlier in the project.

“I believe there was something missing with care and support because it is a very relevant issue for SC being a protection organization... much more could have been done. The materials were developed, networks are being made, a lot of things, but we are leaving now at the time when we needed just a bit more (time) to implement it fully... A challenge for CAZ is going to leave it as is. We fulfilled the objectives, but on a personal level, and I think that the whole team not only I, would have liked to do a little more in this area because it is SC’s seal.”—CAZ Team, El Salvador

Honduras

In Honduras, successes reported were the coordination between volunteers and health centers, trainings for mothers, early stimulation circles, increased volunteer knowledge on early stimulation techniques, and capacity building with Ministry of Health staff in care and support for families affected by CZS. RC Honduras is credited with specific success in the care and support services for families affected by Zika, childcare, and psychosocial support for affected families, and care and support circles to reduce stigma.

Staff from the CAZ team mentioned a few difficulties in its implementation. The coverage area selected for the project did not take into consideration the rates of microcephaly cases. The care and support interventions carried out did not necessary fall within the defined project coverage area and communities in some municipalities with the most cases of CZS were not included. Some CAZ staff expressed that case management success was not evident because time was short, but that the potential of the strategy was evident. Despite this, the Honduran RC was able to identify and offer the care and support psychosocial support circles for affected families, achieving the project target.

Likewise, strategies to achieve a referral and counter referral system for suspected cases and the successful identification of the most at-risk populations with the support of community agents and volunteers was difficult because of a delay in the establishment of the guidelines and corresponding training. In its absence, the team relied on the Ministry of Health’s, National Reference and Response System document. The Honduran team indicated that they were not specialists in identifying signs of CZS and fell short in identification. Although there were other support circles identified as part of other SC projects, they did not fall within the project scope and there was not enough time to implement the strategy completely.

Nicaragua

Due to strategy changes in Nicaragua, the CAZ team incorporated care and support into interventions and sessions with pregnant women at maternity homes with a focus on addressing stigma and discrimination associated with CZS.

Prior to this change, CAZ Nicaragua held coordination meetings with UNICEF to develop a guide and materials that community agents would use to detect signs of developmental delays in children born in Zika-risk areas, support for mothers with children affected by Zika through early stimulation actions, and referrals to health services. Training in Zika case referrals was also implemented in the country and visits were made with pregnant women in municipalities where the project carried out activities together with the Ministry of Health. In addition, the project staff participated in the *Zika Psychosocial Support* course and helped carry out awareness events to reduce stigma and discrimination.

“Within the maternity homes, the project worked with pregnant women. We offered sessions in psychosocial support where we were taught several things: the effects of Zika at the psychosocial level, how it affects you when you see a child with microcephaly, and how the mother needs support to seek services, stimulate the child’s development, and take them to all their check-ups.”—CAZ Red Cross Team, Nicaragua

Dominican Republic

Highlights in case management efforts and psychosocial support in the Dominican Republic include the collaborative work with UNICEF, use of materials produced by UNICEF, including the “Play with your Baby” guide, support and follow-up for cases of microcephaly with support from UNICEF, home visits with health promoters to motivate the community to seek medical attention and to identify cases, care and support circles for pregnant women and mothers, and specific support for families for child development. In addition, in some areas, health, education and INAIPI⁷ personnel participated in child development training processes.

“I loved how things happened in the Dominican Republic with care and support because we implemented strategies for the development of care and support in 28 communities and contextualized this service depending on the location. In Santiago, what was done was to train INAIPI staff; in San Gregorio de Nigua, we did it in their homes and we did it with material produced by UNICEF, the guide “Play with your baby”—CAZ Team, Dominican Republic



Photo: CAZ project, Dominican Republic

⁷ The National Institute for Integrated Services in Primary Health Childcare

B. *How did we do it?* Tools and Materials developed

The following section presents a compilation of the instruments, educational materials, protocols and tools developed by the CAZ project to facilitate the work carried out and described in section A. The CAZ project made an extraordinary effort to develop tools and materials to implement key strategies both at the regional level and in each country. The following tables present a summary of the variety of these tools and materials, accompanied by images of some of the materials. These lists are not intended to be exhaustive; however, they demonstrate the breadth of tools and materials developed to implement key project components.

Table 3. Tools and materials developed and used throughout the region

Community Vector Control	Community Surveillance	Care and Support
<ul style="list-style-type: none"> • Poster on the correct use of repellent • Pocket job aid for volunteers • Zika, Dengue, Chikungunya Prevention Kit • Technical guide on key messages and behaviors • Vector control video • Removal of breeding sites poster • Community Volunteer training guide on IPC, and key behaviors 	<ul style="list-style-type: none"> • Posters on Aedes life cycle and vector control • Animated videos • Monitoring protocol for technicians • Technical protocol and instructions for the installation and use of ovitraps • ODK for monitoring information • Results newsletters • Information system with WhatsApp • Traffic light guide • Equipment kit • Decals for homes • Certificates for volunteers • MOU's with health authorities 	<ul style="list-style-type: none"> • A series of postcards on early detection • Notification forms for referrals to health services • Guide for the implementation of the psychosocial support circles and accompanying volunteer field guide



PASOS PARA VISITA DOMICILIARIA



1. Saludar y presentarse



2. Pedir permiso para realizar la intervención



3. Invitar a toda la familia a participar



4. Informar el objetivo de la visita



5. Identificar las audiencias y priorizar contenidos clave de acuerdo al tiempo disponible



6. Dar la consejería según las personas están en la casa



7. Pedir permiso a la persona/familia para observar el sistema de almacenamiento de agua en el hogar e identificar posibles criaderos de zancudos



8. Felicitar a la familia por sus fortalezas



9. Hacer una o dos recomendaciones claves



10. Acordar acciones de seguimiento



11. Dar las gracias y despedirse

Table 4. Tools and materials developed in Colombia ⁸

Community Vector Control	School Vector Control	Community Surveillance	Care and Support
<ul style="list-style-type: none"> • Toolkit: flipchart, poster, puppets and “Meet Aedes” video • Brochure for pregnant women • Poster on prevention during • Supplementary psychosocial support materials for families • IFRC guide for Community Participation and Accountability (CEA) • Technical Content Guide for Key Zika Prevention Behaviors • Zika 360: app and video aimed at promoting key Zika prevention behaviors in at risk populations 	<ul style="list-style-type: none"> • Zika school guide • Zika, Dengue and Chikungunya prevention toolkit: set of teaching materials for use with people of all ages with information on the prevention of arbovirus infections; this includes modules for work in schools and communities, as well as a seasonal calendar 	<ul style="list-style-type: none"> • Community based surveillance manual, basic principles • Protocol for community-based surveillance and monitoring • Community-based surveillance toolbox and guide for volunteers • Methodological guide for management of tools and techniques for geolocation and geo-referencing for community action on Dengue, Zika and Chikungunya 	<ul style="list-style-type: none"> • Zika psychosocial support toolbox and guide for volunteers adapted for Colombia • Guide for working with pregnant mothers



⁸ Many of these materials were developed by IFRC and used throughout the CAZ region; some were developed specifically for use in Colombia.

Table 5. Tools and materials developed in El Salvador⁹

Community Vector Control	School Vector Control	Community Surveillance	Care and Support
<ul style="list-style-type: none"> • Zika community prevention and control protocol (modules 1-5) and flipchart • Community plans for vector control • Community mapping of risk areas • Letters and commitment agreements with MoH • Volunteer and networking guides • Virtual course for volunteers • Banners for project visibility • Seasonal calendar • Anti-vector campaign materials • Brochures, posters to promote key behaviors • Surveys taken during home visits • Pre-post knowledge test during trainings • Social network publications 	<ul style="list-style-type: none"> • School guide • School plans • Flipcharts • Board and computer games • Zika 360 • School supplies kit • Interactive games 	<ul style="list-style-type: none"> • Technical protocol • Volunteer guide • Use of ODK and Kobo apps for reporting information • Results newsletters • Incentives and visibility materials: decals, certificates • Information system with WhatsApp • Traffic light guide • Ovitrap equipment kit • Ovitrap prototypes 	<ul style="list-style-type: none"> • Basic psychosocial support guide for pregnant women affected by complications associated with Zika and psychosocial support guide adapted for El Salvador



⁹ Due to the amount of material developed and consolidated in El Salvador, the country became a material information hub for the region (5).



Table 6. Tools and materials developed in Honduras

Community Vector Control	School Vector Control	Community Surveillance	Care and Support
<ul style="list-style-type: none"> • Posters, brochures, flipcharts to promote key behaviors • Visibility materials: stickers, t-shirts, caps for volunteers, shirts for pregnant women, decals for taxis, vests and thermoses • Materials for families of pregnant women • Guide for volunteer intervention in the communities • Informative videos and radio spots with key messages • Publications on social networks • Teaching materials for pregnant women 	<ul style="list-style-type: none"> • Teaching materials for schools and adolescents: bingo, crossword puzzle, comics, word search, and other interactive materials 	<ul style="list-style-type: none"> • Material for ovitraps elaborated at the regional level & adapted for the contexts • Ovitrap traffic light 	<ul style="list-style-type: none"> • Regional care and support material: child development calendar and manuals



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Table 7. Tools and materials developed in Nicaragua

Community Vector Control	School Vector Control	Community Surveillance
<ul style="list-style-type: none"> • Training guide and volunteer card • Postcards for pregnant women • Fan for pregnant women • Volunteer guides/guides for monitoring and control of transmitting mosquito • Stickers, banners • Radio spots with key messages • Flipcharts, posters with key messages in Braille • Informational brochures • Workbook to promote key behaviors • Checklist for good practices at home 	<ul style="list-style-type: none"> • Calendar of actions for the school and in the community • ABC guide and school notebook • Zika ABC booklet for teachers • Workbooks with interactive activities • Community plans with activities to be carried out with teachers, children, parents, other volunteers • School surveys to measure knowledge changes 	<ul style="list-style-type: none"> • Ovitrap protocol in schools and observation guide • Success stories, methodological design, reports • Ovitrap traffic light • Ovitrap calendar

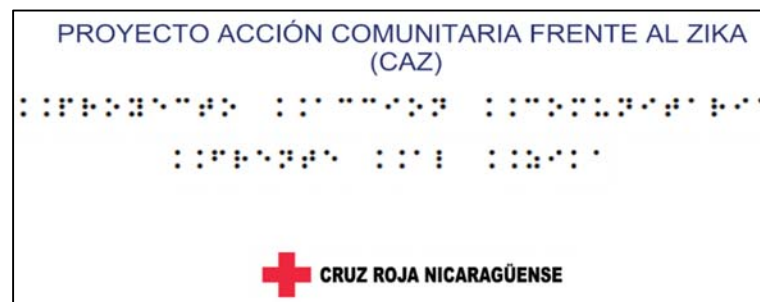
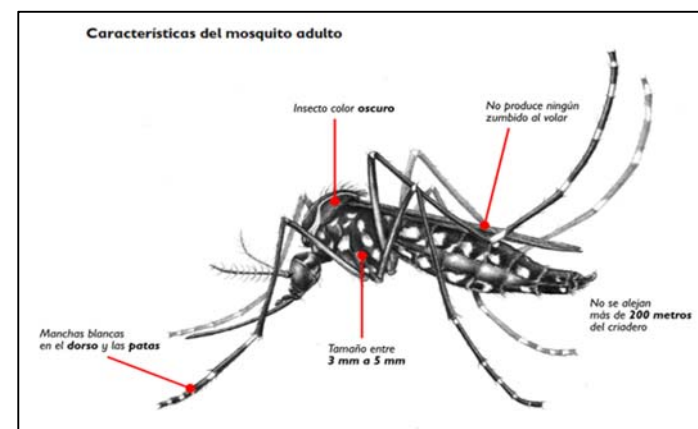


Table 8. Tools and materials developed in the Dominican Republic ¹⁰

Community Vector Control	School Vector Control	Community Surveillance
<ul style="list-style-type: none"> • Community action plans • Letters of agreement (DPS, PAHO) • Presentations, verbal and written agreements with local authorities • Brochures, flipcharts, training guides, support material, key audio messages for communities • Signed agreements and reports of ovitraps results with Ministry of Health • Posters and brochures with transmission prevention messages for pregnant women • Flipchart on transmission paths • Educational video • Radio spots: prevention and early detection 	<ul style="list-style-type: none"> • School action plans • Multiplier boarding guide • Didactic guide for the educational community • Playful games and recreational activities for students such as puppets, mosquito race game, dramas, songs and poems • School plans for coordination and follow-up meetings on school plans • Brochures and flipcharts for community training workshops • Educational guide for project sustainability 	<ul style="list-style-type: none"> • Use of ODK app as a tool for collecting and analyzing surveillance information



¹⁰ Many of the materials used were jointly developed with UNICEF (5). UNICEF was chosen to lead the material development process within the USAID response framework and SC and the DR Ministry of Health, together with other implementing partners at the country level, participated in the development and review process.

C. Who did we work with? Key Actors and Partners

Collaboration with a variety of actors at all levels was an integral part of the CAZ project. CAZ teams, key contacts and beneficiaries noted that partnerships with different multisectoral actors was an important factor in the project’s success. In all countries, CAZ participated in regular meetings with a consortium of organizations that received funding from USAID for Zika interventions, including UNICEF, Johns Hopkins Center for Communication Programs (CCP) (HC3, Breakthrough Action), Abt Associates (ZAP Project), MCDI (ZICORE Project), PASMO, Sustainable Science Institute, Global Communities, among others (5). The following table presents a summary of key actors and partners that CAZ worked with at regional and national levels. A description of the roles of community groups, NGOs, government, academic and international actors and organizations follow.

Table 9. CAZ partners and key actors

	Community	Local NGOs	Government	Academic	International org
Regional	--	--	USAID	Johns Hopkins Center for Communication Programs: HC3 and Breakthrough ACTION; Population Council: Breakthrough RESEARCH	UNICEF, Abt Associates, URC, MCDI, PASMO, Sustainable Science Institute, Global Communities, Maternal Child Survival Project (MCSP), other USAID partners
Colombia	Pregnancy and mothers’ clubs, community managers, parents	FAMI group	National and local education and health authorities, National Institute of Health, and local authorities, secretary of health promoters, teachers, Colombian Institute of Family Welfare	Universidad de las Andes, Universidad de Quindío, Universidad del Norte, Universidad Cooperativa de Colombia en Magdalena, Universidad de Santander en Cesar	PAHO, Center for Disease Control Colombia, Profamilia, UNICEF

	Community	Local NGOs	Government	Academic	International org
El Salvador	Civil protection units, municipal risk management committees, local consultants, local and community development committees, churches, women and youth groups, pregnancy clubs, water committees, transporters, health promoters, local law committees, multisectoral committees	ADIC, Profamilia, Fundesyran, Asaprosar, Credicampo, Entre Amigos, Territorio Vivos	<p>Ministry of Health: health promoters and doctors, local health committees, Vector Control Unit, entomologists, SIBASI (eco-community), health surveillance directors, community family health units</p> <p>Ministry of Education: teachers</p> <p>Others: mayors, municipal environmental units, Civil Protection Department at the central, departmental, municipal and community level, Ministries of Tourism and Agriculture, legislative assembly health working groups, CONNA, Living Territories, FISDL, COMISCA</p>	EMOUES, Universidad Luterana de Cabañas, Universidad Gerardo Barrios, capítulo de El Salvador de la Sociedad Mesoamericana para la Biología y Conservación, Universidad Dr. José Matías Delgado, Universidad de El Salvador Facultad de Medicina, Johns Hopkins CCP (Breakthrough ACTION, HC3)	MCDI (Zicore), OPS, UNICEF, Plan International, MCSP, Abt Associates (ZAP), PASMO, URC (ASSIST), MCSP
Honduras	Volunteers, community leaders, pregnancy clubs, sectorial working groups, religious leaders, youth networks	Media, multisectoral working groups, Ashonplafa, telethon	<p>Ministry of Health: central and regional health centers</p> <p>Ministry of Education: teachers, directors,</p>	Universidad Nacional Autónoma de Honduras, Universidad Tecnológica Centroamericana,	PASMO, OPS, Abt Associates (ZAP), URC (ASSIST), MCSP, Global Communities, CDC, UNICEF

	Community	Local NGOs	Government	Academic	International org
			DECOAS, facilitators, school children Others: City governance, COPECO, National Police, 20/20 Scholarship Program, Comvida	Johns Hopkins CCP (Breakthrough ACTION, HC3)	
Nicaragua	Community networks and leaders, women and youth groups, pregnancy clubs, health promoters, children monitors, Family, Communities and Life Cabinet, media sources, midwives, COMUPRED, education center for girls and boys with disabilities, private clinics	FUNARTE, Mesoamérica, Libros para Niños, Amos, Federación de Asociaciones de personas con Discapacidades (FENCONRI), Asociación de Sordos, Los Pipitos, San Vicente de Paul, Corazón Contento	Ministry of Health: SILAIS (national and local), maternity homes Ministry of Education: teachers Others: municipalities, mayors, MARENA, INAFOR	Universidad Cristiana Autónoma de Nicaragua, Universidad Autónoma de Nicaragua, Universidad Nacional de Ingeniería, Instituto de Ciencia Auto sostenible, Centro de Investigaciones y Estudios de la Salud	World Vision, UCR (ASSIST), HC3, Pasmó, OPS, UNICEF, Abt Associates (ZAP), Sustainable Science Institute (SSI)
Dominican Republic	Mothers Association, Aunt Tato, churches, neighborhood committees, mother clubs, microentrepreneurs, transporters, volunteer networks, housewives and youth, private sector	MUDE, Fundación Obrando Bajo el Sol, Hermanos Pobres de San Francisco de Asis, Fundación la Merced, Fundación Dios Proveerá, Centro progresando	Ministry of Health: area/provincial health directors UNAP Higher Education, National Center for Tropical Disease Control (CENCET), General Health Promotion and Education Department (DIGPRES),	Escuela de Enfermería de Nigua, Universidad de Eugenio María de Hostos, Virginia Commonwealth University, Padre Zegrí	UNICEF, URC (ASSIST), Abt Associates (ZAP); MCSP

Community	Local NGOs	Government	Academic	International org
		<p>Maternal Infant and Teen Department, General Epidemiology Department</p> <p>Ministry of Education: regional authorities, school directors</p> <p>Others: Emergency Operations Center, National Institute of Student Welfare, municipalities, INAIPI, CECONEZ</p>	<p>Politécnico/ Escuela de Enfermería, CONAVEP, Universidad Tecnológica de Santiago, Pontificia Universidad Católica Madre y Maestra, Universidad Estatal del Valle de Toluca, Johns Hopkins CCP (Breakthrough ACTION, HC3)</p>	

Community Actors

Community actors are defined as local community groups, organizations, volunteers, leaders, students, and other people who supported or were involved in CAZ on a community level. These partnerships formed a volunteer network that represented one of the most important resources in project ownership and empowerment. Community actors were mobilized under volunteers' leadership to promote community and school vector control activities, promote key behaviors as defined by the SBC strategy, implement community surveillance systems, and care and support interventions with contributions from institutional actors. Constant coordination with this group of actors was essential to ensure consistent and concise messaging, collaboration, and efforts.

“The health promoters are a relevant achievement, that structure, those networks of trained volunteers. Many of them already in this third year have specialized technical knowledge in different topics that many other people and authorities, including the Ministry of Health, do not have.”—CAZ Team, Dominican Republic

Although both SC and the RC relied on volunteer organization and leadership to promote community-level actions, they identified, trained and managed these volunteers using different strategies. In most cases, SC identified volunteers from within project communities or through institutional and multisectoral networks and open calls for volunteers. The recruitment process started with community mapping to identify community leaders with support from institutions and multisectoral committees/working groups. CAZ then trained identified volunteers in Zika prevention and control actions and leadership skills.

The RC process was a bit different, given that the Red Cross-National Societies structure relies on a body of volunteers trained for community response. RC already had trained volunteers committed to working in communities in each implementation country as part of the RC volunteer crops; RC trained these groups in specific Zika prevention and control information and actions related to the project.

The process was also different in Nicaragua. Both SC and the RC depended on a network of health promoters and volunteers trained by the Ministry of Health—a group of volunteers already dedicated to community development and trained with the basic skills to promote key health messages.

“There was the organization between the mayor, the health unit, the health committee from my community consisting of 8 people, my volunteers—who were always willing to help, other people in the community who on their own initiative were willing to help and never said no. They were always available to help me and the doctor.”—Medical Assistant, El Salvador

Local NGOs

Collaboration with local NGOs supported project activities in a variety of ways: through meetings to communicate CAZ project objectives, approaches and strategies and to carry out Zika prevention activities; dissemination of key messages, promotion and strengthening participation of different groups; technical collaboration; facilitating games for educational fairs; participation in workshops on Zika and sexual and reproductive health; facilitation of training spaces with

young people and adolescents; providing physical spaces for different project activities; providing materials, among others.

“We work with FECONORI, the Federation of Persons with Disabilities, because one of our components was also to work with this population...There is a series of organizations, the maternity homes in each of the territories, the administrators that are part of the municipal mayor's office and MINSA which supports the doctor who does follow-up at the maternity homes. (All of them) are key actors we have worked with.”—CAZ Team, Nicaragua

Government

Coordination with government entities such as ministries of health and education was another key aspect of the project. Partnerships with ministries of education helped CAZ gain access to schools, facilitated parent participation, assisted in training teachers and children, provided guides for teachers, helped reach agreements regarding prevention activity implementation in schools that ensured their commitment to project strategies, etc. The ministries of health helped coordinate project activities provide work and meeting spaces, volunteer trainings, and entomological support, giving sustainability to the ovitraps pilot projects. Collaboration with ministries of health helped create greater awareness of work being done across implementation countries and strengthened health workers' ownership of the project. Partnerships built with other government actors helped the project integrate into multisectoral working groups. Ongoing meetings with municipal authorities, vector control activity coordination in communities and schools, and development of communication plans were also the result of these partnerships.

“Coordination at the Ministry of Health's central level with the National Health Surveillance Unit was a great contribution...they supported us in carrying out many important project activities at the local level, such as activities related to ovitraps.”—CAZ Team, El Salvador

“The Secretary of Health fully supported (the project) by doing advocacy with multisectoral working group and through coordination with health departments, making environmental health technicians, health promoters, health groups, volunteers and groups of mothers available to the project and although not in all communities, their leadership and ownership of project actions was clear.”—CAZ Team, Honduras

Academic Institutions

Various universities and academic institutions supported vector control activities, promoted key messages, provided student volunteers to support community mobilization (community visits, breeding site elimination campaigns, etc.), helped disseminate results of the KAP survey, and updated, produced and developed new vector control and surveillance materials. Universities also interacted with the project through informational meetings to share experiences and knowledge, supporting research, and in some cases, including community vector control in medical and nursing curriculums.

“Partnerships with universities were fundamental—almost all the different project components had a link with some university: Quindío University, North University,

Cooperative University of Colombia Magdalena, the University of Santander in Cesar, etc.”—CAZ Team, Colombia

International Organizations

International organizations fulfilled a wide variety of roles depending on each country’s context, for example:

- providing information and expertise, supporting project implementation, including implementation of U-Report information systems;
- coordinating monitoring activities, facilitating training workshops for health personnel and promoters, supporting field technicians;
- sharing experiences and communication materials, technical support in reviewing and adapting educational materials, financial resources for printing materials;
- offering technical collaboration in care, support, and counseling related to children and health issues, providing case follow-up, joint work to developing a Zika care referral and counter referral guide between health services and communities, community emotional support networks and early childhood development for families affected by Zika, etc.

D. What was accomplished? Project Achievements

Project results are documented in several ways: CAZ annual reports; the reflection and learning workshops where each country reported achievements as part of the “Learning Agenda” for project closure; interviews and focus group discussions with project participants; KAP studies’ results; and achievement of project targets by indicators. This section presents a summary of results from each of these information sources.

CAZ Implementation Highlights

The following tables summarize key project milestones by country and project year as reported by project teams in the reflection and learning workshops and annual reports.

Table 10. CAZ implementation highlights

Year 1	Year 2	Year 3
Colombia		
<ul style="list-style-type: none"> • Coordination with national and local health and education authorities to guarantee access and public entities’ participation • Collaboration with the National Institute of Health and universities for ovitraps installation and monitoring process • Capacity building with volunteers, staff and communities based on community health and CEA 	<ul style="list-style-type: none"> • Coordination meetings with teachers on vector control activities • Training workshops with teachers/students on vector control activities • Implementation of school health committees • Cleaning and mosquito breeding site elimination campaigns in schools • Purchase and delivery of school cleaning kits 	<ul style="list-style-type: none"> • ToT CHFA-Zika • ToT Vector Control CEA

Year 1	Year 2	Year 3
<ul style="list-style-type: none"> • Workshops and activity coordination with students • Cleaning campaigns, breeding sites mapping, prevention talks and home visits • Validation of key messages with students in some communities • Work with pregnant and new mothers 	<ul style="list-style-type: none"> • Training of trainers in IPC and 6 priority behaviors 	
El Salvador		
<ul style="list-style-type: none"> • Project presentation, establishment of partnerships with institutional and community actors • Zika awareness at regional, national, and local level • Reactivation and training of volunteers • KAP study and reshaping of actions • Start of community vector control actions 	<ul style="list-style-type: none"> • Ovitrap pilot project • Interventions with pregnant couples • Training of MINSA health providers in community mobilization • SBC Strategy adapted and implemented • Implementation of community plans • Mini-KAP study and reshaping of actions • Improvements in risk perception and sexual transmission 	<ul style="list-style-type: none"> • Training of community managers • Training of trainers and volunteers in IPC and 6 priority behaviors • Delivery and training on volunteer pocket guide • Care and support interventions • Protection strategies • Zika360 • Participation in the Entomological Vigilance Forum • Monitoring and sustainability agreement
Honduras		
<ul style="list-style-type: none"> • Reactivation/identification of volunteer network • Project presentation and validation with local authorities/community leaders • Baseline study • Community development plans • Start of ovitrap pilot projects • Teacher and student training • Training of technical teams and volunteers • Establishment of MEAL tools 	<ul style="list-style-type: none"> • Implementation of community and school plans • Community and school fairs, cleaning campaigns • Replicating with teachers, peer education among students • Training and monitoring of pregnancy clubs • Ovitrap pilot project learning • SBC Strategy adapted and implemented • Training of health providers in ovitrap • Installation of school supplies 	<ul style="list-style-type: none"> • Training of COPECO and DECOAS • Training of trainers and training of volunteers in IPC and 6 priority behaviors • Delivery and training on volunteer pocket guide • Volunteer training in care and support and early stimulation circles • Workshops with media sources • KAP final evaluation • Informal exchange of experiences between schools through community events and multi-school activities

Year 1	Year 2	Year 3
	<ul style="list-style-type: none"> • Workshops with media sources • Accountability workshops • Mini-KAP study • Home visits 	<ul style="list-style-type: none"> • Closing events
Nicaragua		
<ul style="list-style-type: none"> • Community mapping • SBCC preliminary material development • Training of health promoters, teachers, maternity home managers, students • Design of the ovitraps pilot program in Achuapa • Community development plan • Institutional strengthening in community-based surveillance and monitoring • ODK App • Baseline study • Coordination with Ministry of Education and Ministry of Health • Health and first aid training • Psychosocial support 	<ul style="list-style-type: none"> • Baseline and presentation of results • Ovitrap training • Change of approach for actions in schools and maternity homes • Empowerment of leaders and community committees in Zika prevention (political secretaries, leaders, health promoters) • Community visits 	<ul style="list-style-type: none"> • Approval and delivery of educational materials to schools and maternity homes • Expansion of recreational activities in schools • Focus on documentation of best practices and lessons learned • Inclusion of vulnerable groups, people with disabilities, older adults • Action plans and vector control in 3 departments (Madriz, Chinandega and Rivas) • Girls and boys as mobilizers and change agents in their homes • Strengthening of schools through creating action plans together with school principals (school mapping, vector control school fairs)
Dominican Republic		
<ul style="list-style-type: none"> • Project presentation/coordination with authorities • Training of technical staff • Training/preparing of volunteers • Identification/training of community committees and leaders • Development of school and community plans • Kit delivery • KAP survey 	<ul style="list-style-type: none"> • Signing of agreements • SRH workshops • Teacher and parent training • SBC Strategy adapted and implemented • Cleaning days • Presentation of KAP results • Psychosocial support • Specific interventions with men 	<ul style="list-style-type: none"> • Training of trainers and volunteers in IPC and 6 priority behaviors • Delivery and training on volunteer pocket guide • Delivery of support circle guide • Delivery of educational material to communities

Advances and delays in project achievements

Although countries reported considerable achievements in project implementation, there were also delays, both of which are detailed below.

Colombia

Key alliances established in Colombia helped advance the project, for example the relationship with the National Health Institute's Entomology Laboratory resulted in training and laboratory space for analyzing eggs found in ovitraps. The National University helped to link CAZ to the GOSI research group who supported research efforts. Different companies working in disposal of hazardous materials helped communities get rid of batteries, damaged electronic equipment and other waste that presented health risks; Johnsons and Johnson donated repellent and other materials to project communities.

In Colombia, there were delays in implementation of the monitoring and evaluation system. IFRC chose to develop a different set of monitoring tools than SC that was compatible with their internal monitoring system. Use of these tools was delayed, which affected tracking project beneficiaries who were not registered until year two and only showed 8% of the target number. There were also delays in developing community plans, however by year three, CAZ Colombia managed to reach project targets by engaging communities through IFRC's "Community Engagement and Accountability" model.

"I became the coordinator when the project had many challenges; in year 1 we had to quickly implement and there was still no specific direction...In year 2, it had been almost a year and we still didn't have goals, how many beneficiaries we had to reach, specific targets...that was one of our internal challenges." –CAZ RC Team, Colombia

El Salvador

The project provided abundant and detailed Zika information to various target groups in El Salvador such as: health committees, informal community groups, schools (teachers and students), health centers, municipal officials, and churches, among others. This information was important for carrying out trainings, cleaning campaigns, home visits and anti-vector monitoring and surveillance activities facilitated by the project. Knowledge about Zika and project actions changed attitudes around Zika transmission, leading to increased interest in identifying existing threats in communities and improved vector-monitoring and surveillance skills. El Salvador highlights that project delays were mostly related to communication material development and approval.

Honduras

In Honduras, as in the other countries, one of the most significant achievements was the amount of vector and Zika prevention knowledge gained by communities, including new attitudes and habits around Zika and prevention and surveillance strategies. This was seen at the municipal level where multisectoral working groups helped improve health services by asking hospitals and other health facilities to give priority to patients with Zika-associated symptoms.

"The project was able to start raising awareness in the population; the project was challenged to change poor practices implemented by communities for generations by

encouraging them to identify and accept that they had a problem and associate that problem with a solution: cleanliness. SC worked to empower communities and their leaders in knowledge and timely messages that will eventually generate behavior change.”—CAZ Team, Honduras

Delays in Honduras were related to the post-electoral political crisis that caused protests, especially in the northern part of the country where the RC was working, and the nationwide education and health sector protests during year 3. In this same year, there was a change in the number of communities covered by the RC as 11 of them were determined to not be an epidemiologic priority concerning Zika by the multisectoral working group, which had to be approved by the Federation and USAID resulting in delays in 2019 project implementation.

Nicaragua

Achievements in Nicaragua are reflected in the level of training and knowledge that communities and schools now have and new preventive behaviors they have adopted in homes (cleaning of wash basins, getting rid of unnecessary waste), in schools (preparation of informative murals with practical and simple prevention measures, depositing garbage in correct location), and in communities (cleaning of vacant lots, garbage collection and organic fumigation).

The socio-political situation caused delays and changes in project activities in Nicaragua. Project activities were carried out as planned at the beginning of the project, but changed as the project developed; for example, informational materials for the health promoters and the ABC guides for teachers developed in year 1 could not be used until year 3. There were also delays in communication material approval whereby key messages had to be adjusted to meet technical criteria established by USAID.

Dominican Republic

In general, achievements in the Dominican Republic focused on changes in habits and behaviors, for example, in breeding site elimination, community cleaning and proper care of water tanks. Project staff have reported that different community members are now more vigilant, including children and their parents who show more cleanliness in schools and their homes; mothers have also shown better relationships with their babies and understand how to better care for them.

Delays in Dominican Republic were related to strikes in the education sector and in some regions insufficient participation of authorities, which meant timelines and planned activities had to be adjusted. There were also significant delays in project implementation and hiring personnel at the beginning of the project. The regional dynamics of the project also caused difficulties and delays due to the time lag between necessary approvals and communications between various actors.

“It is necessary to unify different partners’ visions at the regional level when working on a regional project and definitely build plans together so that when they (the plans) reach the countries, there can be consensus and efforts can be unified in every way. It is important to have a comprehensive vision with the other partners to make one integrated communication plan to carry out between the different countries.”—CAZ Team, Dominican Republic

Changes Reported by Project Participants

Using community surveys in El Salvador, Honduras, Nicaragua, and the Dominican Republic, 108 project participants, including community members and volunteers, were interviewed to gather feedback on the effect of the CAZ project in their communities. These results are qualitative and do not reflect a representative sample; rather they complement the KAP surveys' results. The following table summarizes the demographic profile and a sampling of those interviewed.

Table 11. Demographics of CAZ project participants interviewed

Demographic	Sample
Country: ¹¹	El Salvador: 37 (34%) Honduras: 27 (25%) Nicaragua: 22 (20%) Dominican Republic: 22 (20%)
Gender:	Women: 81 (75%) Men: 27 (25%)
Profile:	Community member: 6 (6%) Community leader: 26 (26%) Project volunteer: 57 (58%) Health promoter: 3 (3%) Teacher: 7 (7%)
Time participating in the CAZ project	Less than 6 months: 10 (9%) 6-12 months: 27 (25%) More than a year: 71 (66%)
Age	Teenagers 15-19 years old: 10 (9%) Young adults 20-34 years old: 34 (31%) Adults 35-69 years old: 60 (56%) Elderly 70+ years old: 4 (4%)

The community surveys asked the following questions:

- What changes did you notice in your home as a result of CAZ project actions?
- What changes did you notice in your community as a result of CAZ project actions?
- What changes did you notice in health services as a result of CAZ project actions?
- Which changes were the most impactful/important?

The following graphs show results per country.

¹¹ There were no interviews with project participants in Colombia because the IFRC project systematization includes feedback from project teams and participants and relevant results from this study have been incorporated throughout this document.

Figure 6. Changes in the home reported by participants

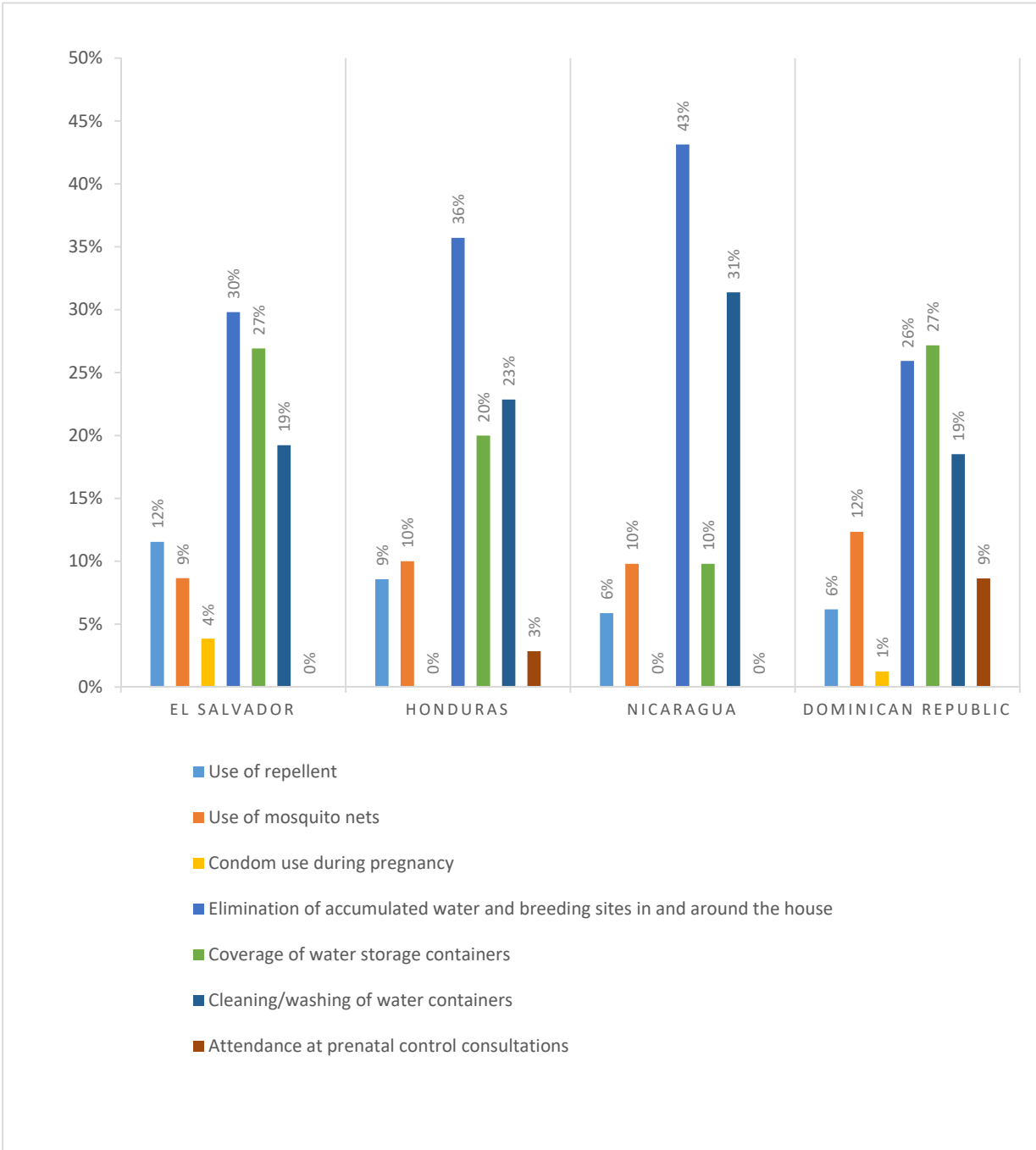


Figure 7. Changes in the community reported by participants

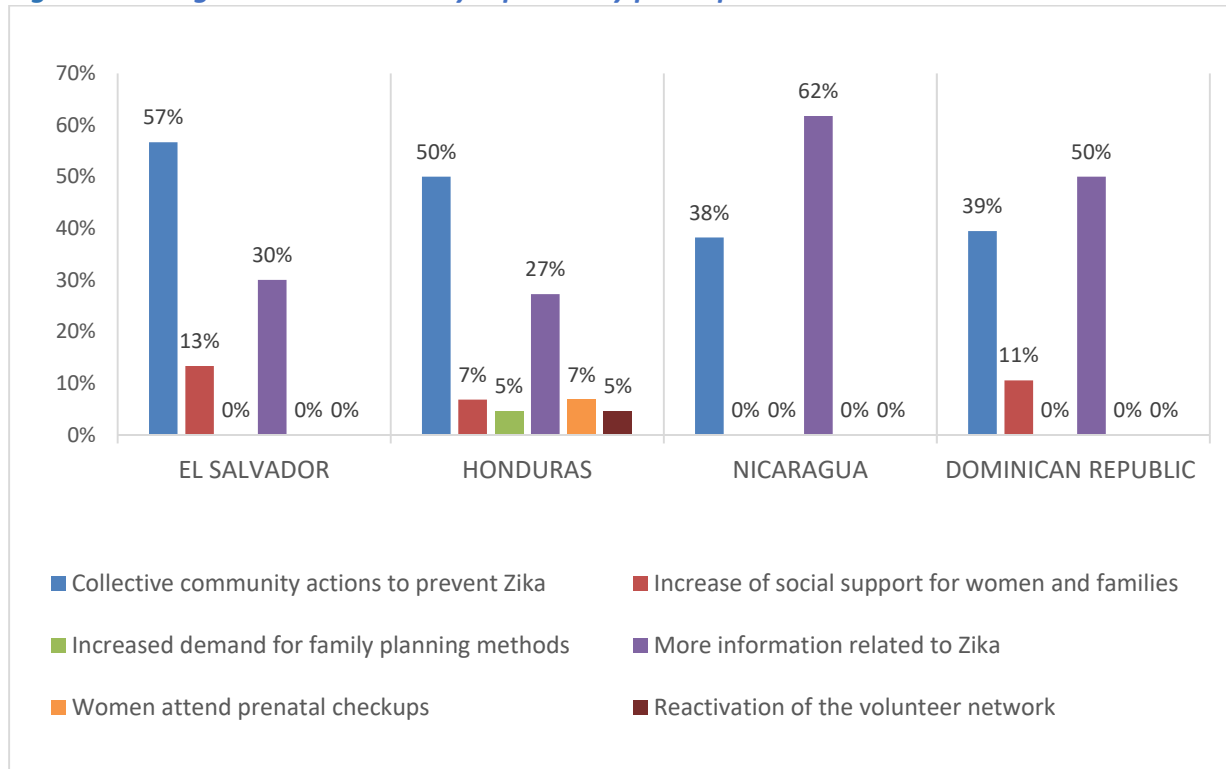
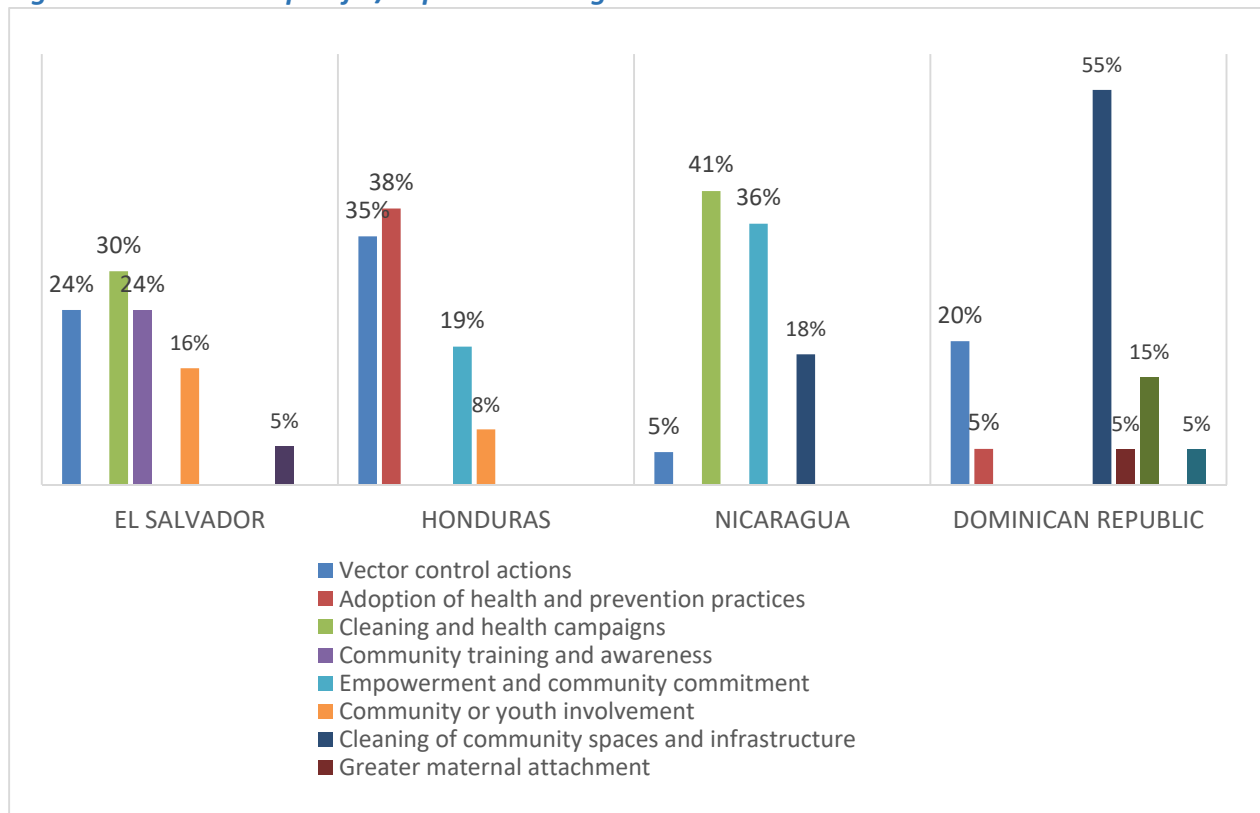


Figure 8. The most impactful/important changes mentioned



KAP Study Results

CAZ conducted knowledge, attitudes and practices (KAP) surveys three times during the project to measure changes over the course of the three years. The baseline was carried out in the five countries in August 2017, gathering information from 1,696 women of reproductive age. In July 2018, information was gathered through a mini-KAP survey on fewer variables from a smaller sample of 669 women. The final evaluation was carried out in four countries (Colombia, El Salvador, Honduras, and the Dominican Republic) in March 2019 with 1,235 women of reproductive age. Baseline and final evaluation samples are comparable. The following is a summary of the results as presented in the full report of results in the final KAP study report (11).

Regarding results related to the social environment, the following were found:

- The percentage of women that reported participation of children and adolescents in Zika prevention community activities increased nearly doubled in the final evaluation sample in El Salvador and Honduras.
- There was an increase of the percentage of women who received visits from health workers/volunteers in Colombia.

Significant changes in knowledge between the base line and final evaluation

Changes in **knowledge about Zika transmission** and general vector characteristics include the following:

- Increase in the number of women who indicated that Zika is a disease transmitted by mosquitos and increase in those that understand that it is a sexually transmitted;
- increase in the number of women who indicated keeping water storage containers clean and increase in eliminating standing water as measures to reduce/eliminate the vector;
- decrease in the number of women who indicated fumigation, use of larvicides, cleaning, and removing trash as measures to reduce/eliminate the vector;
- decrease in knowledge of blood transmission and mother/child transmission during pregnancy in the final evaluation; and
- increase in the number of women who know that anyone can get Zika.

Figure 9. Changes in knowledge about mosquito borne transmission between base line and final evaluation (12)

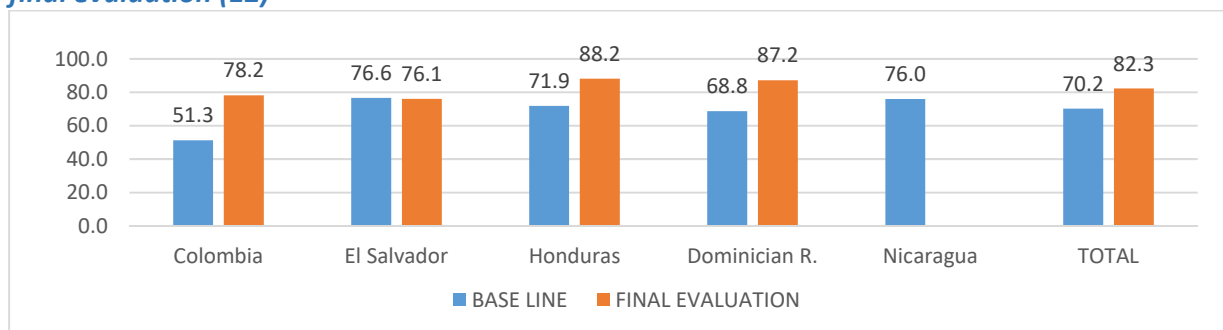
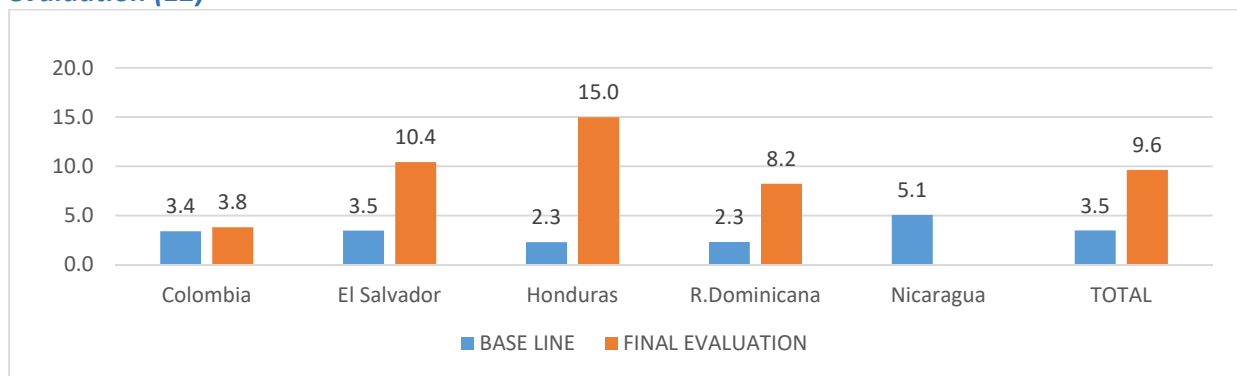


Figure 10. Changes in knowledge about sexual transmission between base line and final evaluation (12)

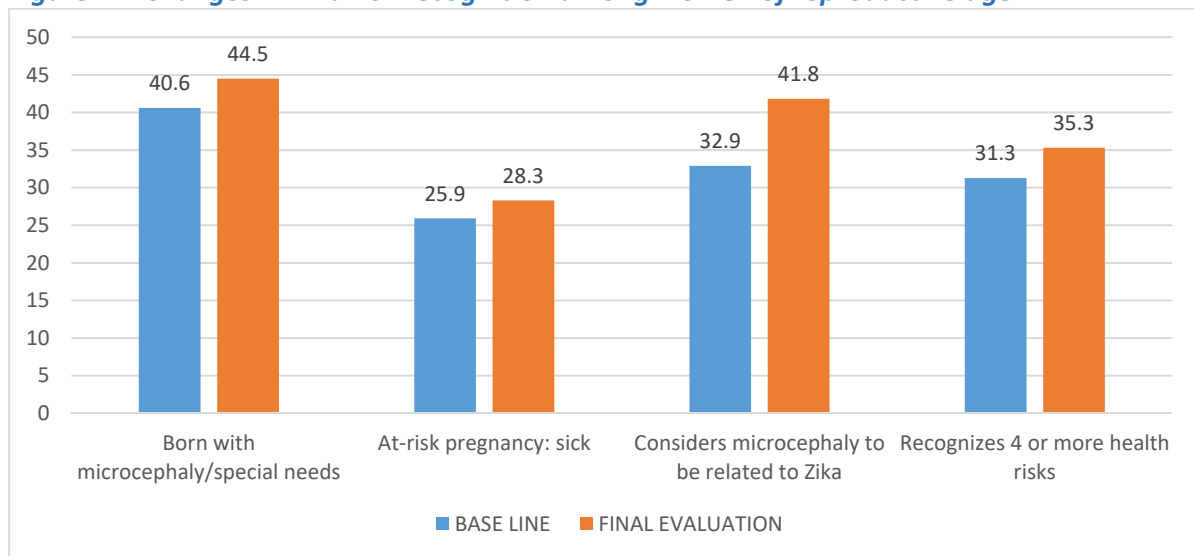


Source: KAP study report, 2019

Changes in knowledge about Zika risks include:

- Increase in the number of women who believe that microcephaly is related to the Zika virus;
- Increase in knowledge regarding Zika risks for pregnant women in the DR; and
- Increase in the number of women who recognized at least four health risks caused by the Zika virus in Honduras.

Figure 11. Changes in Zika risk recognition among women of reproductive age



Source: KAP study report, 2109

Changes in knowledge about forms of Zika prevention include:

- increase in the number of women who indicated that prevention measures include the following: repellent and condom use, cleaning water storage containers, using cleaning kits, and use of larvicides: eliminating mosquito breeding sites was the most recognized prevention measure;
- increase in knowledge of four or more prevention measures in Dominican Republic and Colombia; and
- Increase of knowledge among the total sample of condom use as a Zika-prevention method during pregnancy.

Changes in attitudes between the base line and final evaluation

Changes in attitudes related to Zika prevention and risk perception include:

- high acceptability of care and prevention for a range of different attitudes in the baseline, which remained the same or increased in the final evaluation;
- increase in the perception that the Zika virus is a serious health condition and that Zika is dangerous during pregnancy in the total sample; and

- increase in the number of women who consider it necessary to use a condom to prevent the spread of Zika.

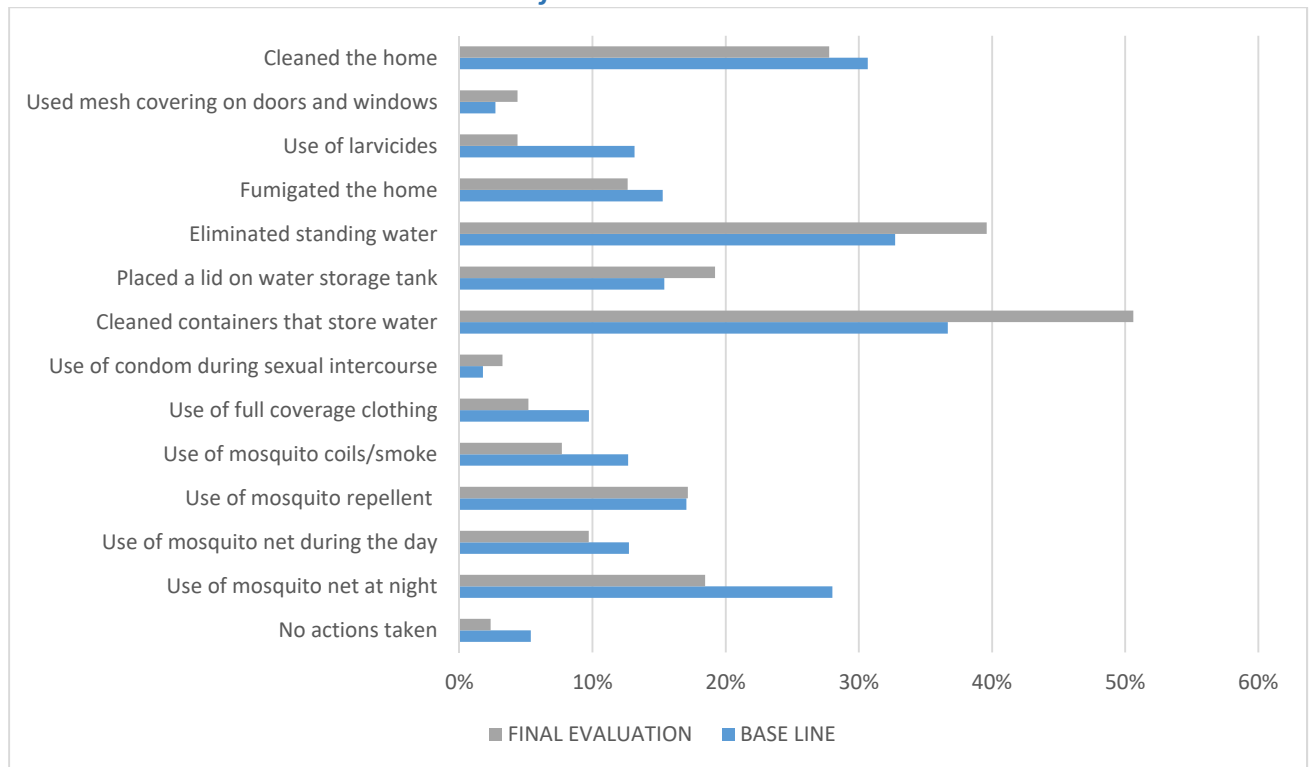
Changes in practices between the base line and final evaluation

Changes in practices related to Zika prevention and care include:

- Increase in the number of women who report applying prevention measures to prevent and eliminate mosquitoes breeding sites in homes and in the communities: cleaning water storage containers; eliminated standing water, place a lid on water storage tank.
- The use of mosquito nets, repellent, clothing covering the entire body, application of larvicides and fumigation reported no increase.

The following figure shows the changes in the percentage of women who reported applying certain practices to reduce Zika transmission between baseline and final evaluation.

Figure 12. Percentage of women of reproductive age who reported practices behaviors, to reduce Zika transmission at baseline and final evaluations¹²



Source: KAP study report, 2019

E. What did we learn? Lessons Learned

Lessons learned emerged from unexpected challenges and circumstances over the course of the project, including when some project components did not go as expected or when something

¹² These practices were given as close-end options

worked much better than expected. The following lessons, presented by project component, include what was reported by CAZ teams, CAZ reports, and the systematizations carried out by consultants.

Community and School Vector Control

- Children and adolescents were important change agents: they shared information about vector control in their homes through replicating vector control actions and activities learned in school; the use of ovitraps was especially effective for this.
- Comprehensive volunteer identification and training was crucial: a volunteer profile should have been established early on to identify people with the necessary skills and conditions required to implement project activities. Volunteers needed training not only on Zika technical aspects, but also how to best transfer knowledge and promote behavior change with IPC skills.
- Volunteers needed extra incentives to respond to project demands: CAZ had wide coverage with small technical field staff, requiring volunteers to be heavily involved in project actions. Incentives for volunteers could include recognizing and valuing volunteer work throughout the project, improving working relationships between health center staff and volunteers, offering regular trainings, and providing them with extra materials, tools and resources.
- It was important to seek national authorities' commitment to collaborate from the start: local and regional health center actors needed endorsement by central authorities to agree to collaborate with project staff.
- Creativity in recreational activities: using comics, stories, drawings, puppet theater and plays helped to reach a wider student population in primary and secondary schools.
- Strategic communication on project objectives: connecting the project to water and sanitation issues, or other issues prioritized by communities, and/or topics related to other vector-borne diseases helped to counter-act a decrease in risk perception.

SBC

- Creative communication strategies according to the context: there was a need to expand and include alternative media (social media, multi-media, and community events) due to low interest in traditional print media; use of technology had to be adapted as it presented a personnel security threat in some places.
- Strategic partnerships with traditional or digital media: building these partnerships helped achieve widespread distribution of project messages and raises awareness about Zika and the project.
- Need to adjust messages according to changes in the context/emergency; given the changes in the Zika outbreak, SBCC materials and messages had to be adapted to ensure technical accuracy and to maintain relevance with different audiences. The messages were simplified to be better understood and received by communities and took a behavior change promotion approach.

- Defining and adopting a limited set of key behaviors: this facilitated development and use of communication strategies with simplified materials and messages.
- Concise key messages are more effective: using printed materials with concise messages and information was effective for home visits; support material must be developed from the beginning of a behavior change project.
- Appropriate design of teaching materials for each target population allowed for better assimilation of information and implementation.
- Established relationships with government authorities helped expedite material approval.
- The work and scope with pregnant women directly through pregnancy clubs organized by health facilities showed great effectiveness: pregnant women were more receptive to messages because of the risks they perceived for their babies.
- Working with pregnant women is more effective if started from the beginning of pregnancy: by introducing key behaviors with women at maternity homes, transmission was prevented only later on in the pregnancy, however, working in maternity homes was still a very effective way to reach pregnant women and their partners.
- Need to raise awareness about sexual transmission of Zika: many health service providers were unaware of this transmission route which required more effort to raise awareness.
- Greater involvement of men: to generate more male participation, activities must be organized based on their interests and offered during days and times when they are available (at sporting events, moto-taxi stops, community gathering spaces, etc.).

Community-based Vector Surveillance

- It was important to have people with necessary skills to read and report ovitrap results and organize community action together with the vector control committees.
- Advocacy and awareness should be part of the work with authorities: due to these efforts, the project ensured health ministries' commitment to supporting and responsibility of ovitrap monitoring.
- The use of ovitraps in schools promoted community surveillance and leadership and initiative in children to help raise awareness about the epidemic in their homes and the community.
- Including a pilot testing phase in the ovitrap strategy provided evidence of its effectiveness: important learning came out of the pilot phase that helped improve implementation in communities and schools later on; more involvement of health ministries can ensure follow-up and sustainability.

Care and Support

- Care and support services went beyond supporting families with children with CZS or microcephaly: identified cases of children with CZS or Zika-related microcephaly were few and often outside the project target area. There was also an expressed need for psychosocial support services for families with children with a wide variety non-Zika

related cognitive and physical disabilities. CAZ held early stimulation circles with psychological support for families in both of these cases, which responded to a great psychosocial support need.

- Care and support interventions were not in the original project design: given participant interest and reported success of this strategy, this component could have been integrated into project design and prioritized beginning in year 1.
- Methodologies and experiences of other projects provided valuable inputs for an adapted strategy: SC's experience in early childhood development, psychosocial services offered by IFRC, and other valuable methodologies for responding with psychosocial services in an emergency context were adapted to the Zika context.

Monitoring, Evaluation, Learning and Accountability

- The development, application, and adaptation of an operational monitoring and evaluation (M&E) plan: CAZ developed a M&E system that collected information generated from the work of CAZ staff and volunteers in communities and schools. To facilitate the use of this M&E system, CAZ developed a manual, guides, and standardized forms for data collection in the field, and a mechanism for automatic reporting on the progress toward project targets. These tools with continued accompaniment and training helped country teams to better adopt the M&E system.
- Maintaining regional consistency while allowing for country-specific adaptability: this was a challenge for an M&E system given the importance of consistent data collection and consolidation to ensure data quality and comparability yet allow for adaptability by country context. CAZ was able to accommodate this was allowing the flexibility for countries to use data sources that were more compatible with their context, yet still report the information in a systematic way. This was specifically the case for Nicaragua, where the Nicaragua team relied on field reports and data collection based on the national health outreach program.
- Evaluation and feedback sessions with participants: these sessions held periodically throughout the project, were a good way to take pulse of project strategies and identify difficulties early on. They also encouraged community ownership of the project as community members were involved in the problem solving and strategy sessions to continually improve.
- Government entities' involvement from the beginning helped ensure their interest over the long-term: including government entities in the project drafting phase helped socialize project strategies and increase their interest in being involved in the project.

F. What is the way forward? Sustainability

CAZ field teams, key community leaders, and project beneficiaries expressed the need for follow-up to ensure long-term sustainability of project efforts. However, they also identified elements and evidence of sustainability in the following four areas: sustained resources, sustained partnerships, sustained capacities/knowledge, and sustained motivations. The following points

show that even though the CAZ project has ended, sustained and significant changes remain in the communities and institutions where the project was implemented.

Sustained Resources

Examples of sustained resources across the different countries include:

- Communities now have trained and organized teachers, leaders, fathers and mothers, health personnel, children, youth, and volunteer/health promoter networks with the knowledge and capacity to promote good practices, equipped with educational materials to incorporate into their ongoing activities.
- Strengthened institutions: maternity homes can now address issues of Zika transmission prevention; multisectoral working groups can plan and carry out vector control actions in communities; mayors, health services, schools, etc., are now aware and committed to continuing to promote actions and good inter-institutional and government relations.
- Materials remain in communities and schools, including programmatic and financial monitoring plans, ovitrap software, and project methodologies and strategies.
- In the case of IFRC, they have secured funding from other resources to continue project initiatives on a smaller scale.

“Actions by trained volunteers will drive initiatives in communities and will be supported by community groups and organizations represented in the multisectoral working groups. The community now has trained staff, including teachers, leaders, youth, health personnel at local and regional levels, and parents, among others, who participated in trainings.”—CAZ Team, Honduras

“We managed to convince another internal partner - the Italian Red Cross and Spanish Red Cross - who were watching the Zika project from the outside and have requested a small Zika initiative to continue working together on the issue.”—CAZ Team, Nicaragua

Sustained Partnerships

Examples of sustained partnerships across the different countries include:

- Multisectoral working groups formed by authorities aware of the importance of vector control.
- Coordination and relationships built with ministries of health and ministries of education.
- Linkages between volunteers, civil protection teams, and different actors from ministries and governments to perform vector control activities in a collaborative way.
- Institutionalization of project actions: vector control information has been added to education curriculums, project materials have been incorporated into health ministries’ resources, surveillance tools are being used by health ministries, care and support methodologies have been adopted by social workers, etc.

- Partnerships between universities, local governments, and international organizations that strengthen current and future collaborative relationships.

“Government authorities that supported the project, such as the Mayor’s office, Community Health Unit, and schools, among others, indicate that this is an issue that the community should continue to initiate and that regardless of there being another project, actions will continue to be promoted.”—CAZ Team, El Salvador

“The greatest strength that we have is the multisectoral working group because that is where we address all the problems as a municipality with every organization that comes in with any project ... we define that if it related to education, we in education will work with the project, if it related to health, we in health will work with it – new projects are presented to the working group which allows for greater coordination and better results.”—Health Coordinator, Honduras

The need to strengthen the link between government authorities and communities was identified during year two. In response, the Regional Center for Institutional Disaster Preparedness from IFRC developed a strategy that empowered community health initiatives, through community managers, to monitor project implementation in a sustained way, even in the absence of volunteer staff (2).

Sustained Capacities/Knowledge

“The primary resource, the greatest legacy left to us by the project is knowledge and training... we are left with all of this learning.”—Education Center Director, Nicaragua

Examples of capacities and knowledge sustained across the different countries include:

- Community volunteer networks trained and prepared to implement vector control and surveillance activities and knowledge and protocols for use of prevention tools.
- Leaders with strengthened capacities, recognized by the communities, and connected to multisectoral working groups.
- Increased capacities of local consultants and community leadership to promote key behaviors.
- Increased knowledge of SBC, SBC Strategy development, use, and implementation by SC, RC, and IFRC. Prior to CAZ, there was less capacity and knowledge of how to design and implement an SBC Strategy; project helped to increase this capacity in the region, which will be useful for future health issues and responses.

“The volunteers received community recognition and are now seen as social entrepreneurs in their communities; the project gave them the knowledge and experience insert themselves in other programs... The trained volunteers have been able to participate in the SAC project through field work – the (CAZ) methodology allowed for this and strengthened volunteer networks and their sense of permanence.”—CAZ Team, Dominican Republic

“Red Cross Nicaragua strengthened volunteer capacity... there is human talent installed in the municipalities and knowledge can be replicated by these trained volunteers who

now know how to train others which prepares us to continue project actions.”— CAZ Team, Nicaragua

Sustained Motivations

Examples of sustained motivations across the different countries include:

- Motivated communities who have an increased awareness of the effects of Zika, the importance of prevention measures, and who are motivated to work together to prevent other outbreaks and frequent epidemics.
- Students motivated to share information with their peers and their families.
- Motivated volunteers to continue promoting vector control in schools and communities.
- Sustained motivation in schools through teacher and student initiatives.
- Community leaders committed to improving the population’s living conditions.

“Actions will continue with or without a project because the community benefit is enormous; however, actions will not have the same desired consistency due to limited resources required to guarantee implementation of community activities... Actions in homes are expected to continue due to the motivation and awareness that people now have of how these actions can benefit them.”—CAZ Team, El Salvador

“Some follow-up committees were defined in each area... We have a representative from the Ministry of Education, from the maternity centers, from disability groups - they have already begun to gather. People are motivated to continue, and they are strategic alliances for us that can be very useful for project follow-up.”—CAZ Red Cross Team, Nicaragua

“We cannot ignore the greatest motivation which, paradoxically, is fear, and it must be said: the fear of being affected by this disease motivates us to continue working and doing prevention campaigns.”—Education Center Director, Honduras

IV. CONCLUSIONS AND RECOMMENDATIONS

Community Vector Control

In summary, community vector control includes all actions that mobilize community members to prevent Zika transmission through collective action to eliminate breeding sites and improve hygiene, water, and community sanitation to reduce vector reproduction. These actions were promoted by volunteers committed to improvements in their communities and carried out based on mapping needs and developing community plans with support from the CAZ team. The effect of these actions goes far beyond elimination of breeding sites. When community actors organize, plan, and carry out joint activities for the good of the community, a social network is created that strengthens the community against other epidemics and has a positive impact on many aspects of community development. As an added value, CAZ promoted participation of young people and women, in these actions, which generated inclusivity and new leadership in the process.

Although dependence on volunteers to boost project activities encouraged local ownership and relevance, it also came with a price. Community volunteers were not always available to respond according to project demands and there was a high turnover, which required frequent training. In contrast, RC volunteers came from a previously trained and committed cadre of RC volunteers so there was less difficulty in their availability and dedication to work. However, RC volunteers were not necessarily from the same intervention communities, so there is no increased capacity or leadership left within these communities with project closure.

Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- There is untapped potential in creating connections with private and academic sectors: establish an advocacy plan with political actors and the private sector to position the issue at the national level and to leverage further resources.
- Strengthen advocacy efforts with governmental entities: guided by an advocacy plan, more local government support and ownership could further contribute to Zika prevention and related community development efforts. This could include support for water systems, improving waste disposal systems, solid waste management, promoting recycling programs, among others.
- Some communities already practice biological vector control, i.e., fish that eat larvae in wash basins. Identify the existing vector control practices and promote those that are effective.
- Develop strategies to maintain volunteer motivation with non-monetary incentives: certification, educational and professional development opportunities, psychological support, increased community visibility and recognition.
- Use a sub-awards mechanism for community projects so that they can implement community-designed projects designed in their community plans.
- Work more closely with national emergency response agencies.

Vector Control in Schools

Vector control in schools reflects the same type of activities as community vector control but led by students in and out of the classroom. One of the most important results was students' enthusiasm and ability to engage in prevention and vector control activities and then promote these practices in their homes, communities, and among their peers. In many cases, it was the students who were able to promote vector control practices in homes more effectively than the projects' direct efforts in communities.

Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- Recognize leadership and potential of organized youth and their ability to influence the general population.

- Build youth capacities to be leaders by providing training in essential leadership skills including public speaking, interpersonal communication, planning, etc.
- Implement actions in schools using materials that can be easily replicated and duplicated with few resources.
- Incorporate key materials and messages into existing school activities and educational curriculum.

SBC

The SBC Strategy guided project actions by identifying key audiences using a behavioral framework and evidence of its effectiveness. However, the strategy was developed midway through the project and implemented after much of the planning and execution of project actions had already begun. Based on the identification of 6 – 7 key behaviors from Breakthrough ACTION and Breakthrough RESEARCH, together with USAID and the consortium of USAID partners, the SBC Strategy was adjusted to promote 6 of these key behaviors with communities. Although these key behaviors were established midway through the project, the CAZ country teams saw the value of incorporating fewer messages into their programming, thus adjusting their SBCC materials. There was a wide range of SBCC materials used in the project between existing materials from the Zika response before CAZ, from previous programs, materials developed by individual countries, and general materials developed by the region. The teams used a balance of locally developed material to encourage ownership of its use and regional materials with technically validated information and graphics.

Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- Strategies to engage men were included in the SBC country strategies, however implementation was a challenge for reasons including men’s schedules conflicting with volunteers’ schedules, men’s availability in the communities, etc.; deeper conversations, communication, and community engagement is recommended to identify better ways to engage men.
- Adapt and use existing SBCC materials whenever possible to avoid delays in material development, validation, and approval. Also establish from the beginning the minimum criteria required for design and technical standards that all materials must comply when developing any new materials.
- Develop materials that are appropriate, whether in the local language, as in Creole in parts of the Dominican Republic, or for low literacy populations.
- Involve communities more in the design of SBC approaches and material development.
- Create a project-level knowledge management platform, where teams from each country can upload their materials for sharing and replicating in other countries.
- Consult early with donor and ministries for material review and approval to help streamline approval processes as possible.

Community-based Vector Surveillance

The CB-VESCO system implemented by CAZ allowed communities to respond with targeted actions to eliminate breeding sites. Once ministries of health provided necessary permissions and support, ovitrap implementation was an effective way to generate interest in vector control and inform communities about areas with high mosquito reproduction to better focus vector control actions. An unexpected result of ovitrap implementation was the enthusiasm by which children and adolescents used the ovitraps. It was an effective teaching method to raise awareness among young people and encouraged them to replicate the information in their homes.

Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- Improve coordination between USAID partners using ovitraps with exchange and learning events.
- Ensure flexibility in coverage areas to be able to promptly respond to areas with Zika outbreaks and other vector borne diseases.
- Consolidate this action model so that it becomes the community's responsibility to replicate it through community leaders and members' initiative.
- Take more advantage of information collected for decision-making or for informing public policies, improving health services, etc.
- Integrate more climate change issues and their impact on the community-based vector surveillance and control system.

Care and Support

Care and support actions were implemented with families with children with congenital Zika-related conditions through psychosocial actions and preventatives measures were taken through early stimulation exercises for children with suspected cases of cognitive or physical developmental needs. Care and support actions had a broad effect in reducing the stigma associated with disabilities as they generated discussions between affected families and communities and offered spaces for families to share with others in similar situations. Care circles were often much more beneficial for caregivers than affected children, providing caregivers with a space to share their emotions and receive mutual support.

Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- Establish psychosocial support circle practices within health services.
- Integrate referral and counter referral routes for suspected cases of microcephaly into national referral and response systems.
- Consider that many vulnerable families under report cases of microcephaly and CZS; therefore, identification of these cases should go beyond references from health services.

- Take more advantage of SC and RC experiences and materials in child development interventions and early stimulation in new project design.

Administration/Operations

Apart from the recommendations for project strategies, there were also several related to CAZ administration and operations:

- More flexibility in adapting strategies to respond with context-appropriate actions.
- Include a contingency plan for socio-political situations as part of project design.
- Improve communication channels between partners nationwide; promote more in-country exchange.
- Establish a sustainability and operational plan from the beginning of the project that includes implications for executing project actions.
- Plan for the right amount of technical field teams needed for the entire life of the project to maintain more presence in communities and provide more opportunity to reinforce key behaviors.

Monitoring, evaluation, accountability and learning

The CAZ M&E system was developed as a regional strategy with standardized manuals, guides, and data collection tools. CAZ regional staff regularly communicated with country project teams to support the use of the system for reporting data on project indicators. Given the varying contexts in each country, it was a challenge at times to use standardized regional tools; and therefore, these were adapted as necessary. Based on this experience and consultation with a variety of actors, the following is recommended for future projects:

- An M&E system that adapts through the implementation of the project: Given the reality of the variety of contexts and the changing epidemic, the M&E system needs to be more responsive to this dynamic and allow for more flexibility. For example, the targets and indicators should be adjusted as the intervention evolves to focus on emerging or more relevant areas. Also, different country teams or areas could focus on a certain set of indicators where their interventions are focused and not necessarily be responsible for reporting on all indicators.
- Distinguish the measurement of activities and results with different data sources: The M&E system collected and reported information on both process indicators and results-based indicators; however, many of the results-based indicators were defined as the completion of a series of activities that were also measured with the process indicators. Rather, it would have been better to measure the activities with the process indicators and use different data sources that periodically measured results-based indicators to show higher-level impact.
- Include indicators on institutional sustainability: Although many country teams achieved a degree of institutionalization of key strategies, these were not measured and reported

consistently. Having key indicators that measure stakeholder buy-in and adoption would also motivate teams to focus on this aspect.

- Identify and integrate local, existing information sources: When existing data sources were available, CAZ adopted or replaced data collection tools with these. For example, in Nicaragua, many of the community-based activities conducted by health volunteers from the Ministry of Health were reported to the ministry on their forms. This was also the case in other countries for the vector surveillance activities—integrating data monitoring systems into existing ones. A mapping of these existing resources in the design of the M&E system would have been a better way to integrate them from the beginning.
- Better integrate the project M&E system into country offices' M&E systems: Many country offices of SC and IFRC had pre-existing M&E data collection and reporting systems. Rather than asking them to use a parallel system, they should embed project indicators and data collection tools into their existing platforms.
- Integrating authorities and communities in the presentation of project results: CAZ successfully carried out periodic evaluation, feedback and accountability sessions, a participatory strategy that allowed for dialogue between different actors and ownership of expected project results.

V. FINAL NOTE

This document reflects information gathered from CAZ regional and country teams and interviews with project participants and key contacts, including representatives from local governments, USAID and Save the Children U.S. It also incorporates results and findings from other studies conducted by SC and IFRC as part of the CAZ learning documentation effort. The consultant team that worked to consolidate information for this report would like to thank Save the Children, IFRC, and the Red Cross-National Societies for sharing their experiences and learning throughout this ambitious and challenging project. It is evident that the achievements toward reduced Zika transmission and its effects is the result of the efforts of many.

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VII. ANNEXES

A. Reports on results from the reflection and learning workshops

These annexed reports offer a summary of the discussions held during the reflection and learning workshops with the country CAZ teams. Reflection and learning workshops were held in

Dominican Republic, El Salvador, Honduras, and Nicaragua where CAZ country teams shared about their experiences and lessons learned following the sequence *What did we do? How did we do it? Who did we work with? What was produced? What did we learn? And what is the way forward?* Information gathered at these workshops was incorporated into this systematization document.

B. Presentations of project result summaries per country and per project component

The consulting team prepared summaries of key information gathered through the reflection and learning workshops with CAZ teams, data collected through community questionnaires, and interviews with key contacts. The country-specific presentations were used in validation workshops held in the Dominican Republic, El Salvador, Honduras, and Nicaragua and the component specific presentations were used during a regional learning and reflection workshop in Panama.

C. List of key CAZ team contacts and representatives interviewed

The consultant team conducted a total of 92 interviews with CAZ regional and country teams, project participants and key contacts, including representatives from local governments, USAID and Save the Children U.S. This Annex shows the breakdown for the number of interviews per profile and country.

D. List of educational materials developed

Annex G is a list of the instruments, educational materials, protocols and tools developed by CAZ and used to implement key strategies both at the regional level and in each country. As mentioned throughout this systematization, the CAZ project made an extraordinary effort in this area, including creating an online repository where materials are organized by country and can be downloaded for use in future projects, serving as a visual memory of these efforts.

<https://savethechildrenzika.org/>