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**45** Change for Children
— 45 YEARS · 1976 · 2021 —

# EXTERNAL
# EVALUATION

## MAY 2022

TECHNOLOGY AND TRAINING FOR QUALITY AND EQUALITY
IN REMOTE INDIGENOUS COMMUNITIES, BOSAWAS, NICARAGUA

# ACRONYMS //

**60MG:** 60 Million Girls Foundation

**BOSAWAS:** Bosawas Biosphere Reserve in north-central Nicaragua

**BIE:** Bilingual Intercultural Education

**CF:** Community Facilitators

**CFC:** Change for Children (Canada)

**FAS:** Phonetic Analytic System: A Phonetic Method for Teaching Reading

**FGD:** Focus Group Discussion

**FIT:** Fund for Innovation and Transformation, Canada

**FUNARTE:** Foundation Art

**GR: Girl Rising –** An international organization promoting girls' rights to education

**GTI:** Indigenous Territorial Government

**HR:** Human Resources

**MINED:** Ministry of Education of Nicaragua

**MLL:** Mobile Learning Laboratory (which is a RACHEL + tablets or laptops)

**MITK:** Miskito Indian Tasbaika Kum (name of the Indigenous territory in the Miskito language)

**MOOC:** Massive Open Online Course - in this case an offline teacher training module

**MP:** Mundo Posible (World Possible Guatemala)

**MSC:** Most Significant Changes

**RAAWB:** Upper Wangki Bocay Autonomous Region

**RACHEL:** Remote Area Community Hotspot for Education and Learning (the digital library)

**SEAR:** Translated from Spanish (Education System for Autonomous Regions)

**SRHR:** Sexual and Reproductive Health and Rights

**URACCAN:** University of Autonomous Regions of Nicaragua's Caribbean Atlantic Coast

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# EXECUTIVE SUMMARY

This document provides the external evaluation conducted in May, 2022 of the "Technology and training for quality and equality in remote Indigenous communities" project (hereafter referred to as "the Project") that was implemented in seven pilot Indigenous communities in the BOSAWAS Biosphere Reserve region of Nicaragua from March 2020 – May 2022.

The Project piloted an innovative technology-enabled training program using RACHEL (a digital library and offline server), a suite of classroom laptops, and a MOOC (massive open online course) to improve teacher pedagogy, to increase the diversity and quality of educational resources used in the classroom, to make linguistically and culturally appropriate materials available, and to improve access to materials for teachers and students – including resources sensitive to gender equality and equity.

## Teacher, Student, and Community Outcomes

In total, 4,778 students benefited from access to quality educational resources through technology, and 212 teachers improved their teaching skills through the Project. The reach of the Project significantly surpassed the beneficiary goals established at project outset.

The Project strengthened the local capacities of teachers, students, and women, contributing to the improvement of the living conditions of families through the change of attitude with respect to gender, SRHR, and the use of technological tools.

Significant impacts occurred in the areas of empowerment of women and girls on gender issues and the improvement of pedagogical training and teaching in the classroom through the use of teaching materials appropriate to the cultural and linguistic context.

## Significant Changes

Teachers reported the following positive outcomes from the Project interventions:

- Teachers felt empowered to use technology for educational purposes and to implement engaging teaching strategies.
- Teachers had greater access to official MINED documents, documents in their Miskito mother tongue, and other scientific documents to consult when preparing their daily lesson plans.
- In the classrooms, issues of SRHR (sexual and reproductive health and rights) were addressed with greater openness, as were issues of the rights of women and girls in the community and society in general.
- Teacher training opportunities improved through the use of RACHEL and the MOOC training modules.

## Factors Contributing to Success

- **High Teacher Engagement** – The Project met the beneficiary goals due to the high availability of teachers and students from the core schools and neighboring schools to learn and improve their pedagogy and teaching.
- **Strong Government and Community Involvement** – Excellent coordination between the various key actors (community, communal and territorial government) and accompaniment of the MINED and SEAR in the face-to-face training processes in each of the beneficiary schools.
- **Local Technical Support** – The support and advice provided by the Project technical team in all the processes and actions of the project was critical. The hiring of Community Facilitators native to the territory and fluent in the Miskito language facilitated communication and accessibility for the beneficiaries.
- **Provision of Supplies** – The provision of didactic materials was essential to the success of the Project; schools have few, if any, materials such as paper and paints, to enable teachers to experiment with the new and engaging teaching strategies they were learning.
- **Pedagogy Support** – Having a pedagogy specialist who had knowledge of the use of the technological tools and who was available to develop and facilitate training for teachers and provide mentorship was very important.

## Challenges

- **Remoteness** – Smaller schools outside the main centers lacked economic resources to participate fully in all the training opportunities and had less time to access the technology labs with their students.
- **Limited Capacity of Computer Labs or Mobile Learning Labs (MLLs)** – Each of the seven labs only contained 20 laptops. Due to high student enrollment, not all students had the opportunity to use the laptops at the same time.
- **High student drop-out rates in one community** – Tuburús – due to incidences of mental illness (crazy sickness) and the global pandemic of COVID–19.
- **Multiple Priorities** – It was sometimes difficult to coordinate schedules for the Project classes with technology with the requirements of the Ministry of Education.

## Conclusions

The Project has had a positive impact on the communities where the technology was piloted, which is evidenced by the expected and unexpected results. The most significant changes have occurred in the following areas:

- Empowerment of women and girls on gender issues and their increased participation in the different spaces where they interact;
- Improvement of pedagogical training and teaching in the classroom;
- Improvement in the quality and availability of teaching materials appropriate to the cultural and linguistic context.

The intervention model of the Project has been pertinent and consistent with the proposal and reporting documents of the initiative and with the Sustainable Development Goals of the United Nations that seek to eradicate illiteracy and improve access to education for all by 2030.

The assessments provided by participants within the target group provide evidence of the relevance, effectiveness, efficiency, and viability of the Project intervention and of the achievements and lessons learned as a result of the Project. Likewise, they confirm the high level of performance achieved by teachers, directors, students, and community leaders in the territory of influence during its execution, even in communities where the project did not have a direct presence.

## Key Recommendations

- **Ensure Sustainability** – With the support of social organizations and in coordination with the Indigenous Territorial Governments, define a medium- and long-term Action Plan to guarantee the visibility and sustainability of the processes promoted.
- **Teacher Professionalization** – As part of the sustainability of the efforts and investment in human resources made by the project, the professionalization of the lay teachers and the young graduates of the territory is critical. This should be considered in coordination with social organizations and the Ministry of Education as guarantor of education in the country.
- **Gender, Culture, and the Environment** – Continue strengthening the components of gender, climate change, and intercultural bilingual education in future development projects. Target groups should also include parents, religious leaders and women's organizations.
- **Peer-to-Peer Training** – Define selection criteria for choosing beneficiaries who have completed training to replicate it with their peers as part of a sustainability effort.

# 01. INTRODUCTION

## 1.1. Background

Change for Children (CFC) has been implementing projects that use technology to improve education in the communities of the BOSAWAS Biosphere Reserve in Northeast Nicaragua since early 2020. Phase I, with funding from the Fund for Innovation and Transformation (FIT) Canada from February 2020 to July 2021, included four core communities and surrounding villages along the Coco River[1]. Phase II, with funding from the 60 Million Girls Foundation, expanded the project to include three additional core communities and surrounding villages[2] from February 2021 to May 2022. In the seven core communities, the schools were equipped with solar panels and batteries to power the MLLs (RACHEL - an offline digital library with wifi - and a classroom set of Chromebook laptops).

The project aims to address the challenges of providing quality education in remote Indigenous communities through the use of Mobile Learning Labs (MLLs) by providing:

1) Access to high-quality educational materials that are culturally and linguistically appropriate and gender-sensitive;

2) Capacity-building for teachers on how to use technology for teaching and on 21st Century pedagogy techniques.

CFC implemented these projects in coordination with the Indigenous Territorial Government (GTI) and URACCAN University, its partner organizations in Nicaragua. Additional partner organizations such as Mundo Possible (MP), FUNARTE, and Girl Rising (GR) contributed to various components.

## 1.2. Objective and Scope of Evaluation

The objective of this evaluation is to evaluate the achievements and effectiveness of the strategies and the relevance of the project intervention based on the feedback and assessment of the beneficiaries and key social actors. The scope of the evaluation covers the complete activities from February 2020 - May 2022 in a sample of four of the participating communities.

The key evaluation questions were:

1) **Relevance** – How relevant or pertinent are the objectives, results, and activities of the project with respect to the context of the communities and the specific needs of the beneficiaries, especially girl students and women teachers?

2) **Results** – To what extent has the project achieved the expected immediate and intermediate results?

3) **Favorable Factors** – What key factors contributed to the achievement of the results obtained?

4) **Challenges and Adaptations** – What key factors hindered the achievement of the expected results? What adaptations did you implement to respond to negative factors and challenges?

5) **Lessons Learned** – What are the main lessons learned from the Project?

6) **Recommendations** – What recommendations do participants have for next steps and future initiatives?

## 1.3. Methodology and Approach

The evaluation of the Project utilized participatory and gender-sensitive methodologies and was conducted in accordance with the OECD/DAC Quality Standards for Development Evaluation (2010) and best practices in evaluation according to the Terms of Reference.

The data was disaggregated by relevant criteria (age, sex, geographical area, empirical/lay and trained teachers, etc.) whenever possible. The assessment aimed to be sensitive to fair power relations between stakeholders (particularly girls, women, and marginalized groups).

The evaluation included: a desk-review of project documents and a field visit in May, 2022. Data was collected through focus groups, key informant interviews, and Most Significant Change Stories. Focus Group discussion sessions (FGD) and interviews were carried out in a sample of four of the seven educational centers participating in the project: San Andrés (Phase I), Walakitang, Tuburús and Yakalpanani (Phase II). Audio and video recordings were transcribed and translated from Miskito to Spanish as necessary.

In each of the communities, the Prior, Free and Informed Consent of the Miskito Indian Tasbaika Kum Indigenous Territorial Government (MITK) and the Communal Government was requested through a Consent Act[3] in compliance with the Rights of the Indigenous Peoples to Prior, Free and Informed Consultation. In the case of the focus groups[4] and the interviews, consent was requested orally before starting the consultation.

# 02. EVALUATION RESULTS

*"The relevance of the Project to education in and for the Indigenous Peoples is of vital importance since it tries to rescue and deepen an education with sociocultural and linguistic identity. The objectives of this Project, to a great extent, cover the attention gap with tools, technology, and teacher training and support processes that ensure quality in student learning at all levels and educational modalities in the territory of the Upper Wangki Bocay. The use of technology as a didactic tool by teachers and especially by students from the educational centers of San Andrés, Pamkawás, Siminka, Aniwás, Walakitang, Tuburus, and Yakalpanani in the MITK territory, came to strengthen the scientific and technical knowledge of teachers, as well as the implementation of various strategies of scientific learning."*
**(Dr. Edgar Salazar Francis, General Director, MINED – SEAR)**

## 2.1 Project Relevance

Based on the project documents of the "Technology and Training for the Quality and Equality in Remote Indigenous Communities, BOSAWAS" Project and the testimonies of the direct beneficiaries and key informants, the Project has taken into account the needs and demands of the beneficiary population during its intervention for both Phases I and II. Its design, objectives, expected results, and implementation were pertinent to the context and to the needs of the beneficiaries of the territory of Alto Wangki and Bocay, Miskito Indian Tasbaika Kum (MITK territory) of Nicaragua in relation to education and gender equality.

An important element was the preparation of the Baseline Study at the beginning of the Project that allowed the planning and monitoring of the progress of the execution of the activities and expected results within the project timeline.

According to the testimonies of the teachers, students and leaders interviewed, the Project has been of great relevance for education in their communities and educational centers, since it has contributed to improving their pedagogical training and teaching methods through the massive open online course (MOOC) adapted to the cultural and linguistic context.

The Project increased the depth of knowledge for empirical or lay teachers (who are mostly women). In this sense, it can be said that after their active participation in the Project, the empirical teachers have reached the level of a trained teacher with professional credentials.

The RACHEL digital library has been a cost-effective way to provide educational resources to these remote and isolated communities. Materials were provided and the curriculum was adapted to the cultural and linguistic particularities of the Miskito Indigenous communities and their SEAR educational system – specifically to Bilingual Intercultural Education (BIE). In this way, the Project respected the individual and collective rights of the Indigenous Peoples to exercise the use and conservation of their languages in accordance with Nicaragua Law number 162 "Law of official use of the languages of the communities of the Atlantic Coast of Nicaragua."

Finally, with the development of workshops on gender, it was possible to sensitize and raise awareness among men and women with respect to the rights of women to greater and better opportunities and to participation in the different decision-making spaces in their communities and territory. This contributed to girls and adolescent women returning to their classes and increasing school enrollment in the educational centers participating in the Project.

Also, in promotion of gender equality and equity, the Project increased opportunities for female teachers who, on average, have less education and face more barriers to advancing their careers than men. This was achieved through facilitating access to high-quality professional development in their home communities and strategically promoting within the classroom the use of innovative resource materials available on RACHEL that foster awareness of human rights, SRHR, and the right to live free of gender-based violence.

## Logic, Coherence and Reach of the Project

The Project was framed to provide technical and pedagogical training and ongoing support to schools and teachers in the seven communities to maximize the potential for better learning both in teacher-led instructional time and in self-directed learning opportunities for students after school with the supervision of technology facilitators. The Project curated and developed content for inclusion on RACHEL that promotes the improvement of education, gender equality, and SRHR. Translation into the local Indigenous language and video production with local community members were key components of the Project.

The digital information tracking function of the technology included in the project allowed facilitators to continuously collect and update disaggregated data on participating teachers and students to monitor their achievements in cognitive education, skills development, and gender equality goals. This data can then be used to present to governments, universities (offering a wide variety of training and scholarship opportunities), civil society funding agencies, and multilateral institutions, highlighting the marginalization of students in the Indigenous territories of BOSAWAS.

**The objectives** of the Project served as the basis to guide the processes and program activities. Processes such as the preparation of the baseline, the visibility of activities (project launch), and achievements through community assemblies and quarterly narrative reports were integrated into the Project. Training for the technical team, community facilitators, representatives from partner organizations in Nicaragua, and community and territorial leaders was undertaken.

Regarding the **design** of the Project, coherence exists in the general logic model of the Project, which started from a process of elaboration of the baseline, followed by orderly **planning**, with clearly defined and quantifiable indicators that guided the execution and follow-up of the activities and has, in turn, facilitated the evaluation process.

The **Project team** is a multidisciplinary technical team made up of: the pedagogy specialist, the logistics coordinator, the monitoring and communications coordinator (who lives in the region and visits and communicates with all schools continuously), and a native community facilitator from each community that accompanied and provided technical advice to teachers and students in all the activities and processes of the project.

The members of **the technical team** have the training, knowledge, experience, and capacity required to assume the functions included in the framework of the Project. In addition, they are characterized by having the values and qualities necessary to interact with a variety of social actors, particularly with grassroots groups, which is essential in awareness-raising processes.

Regarding the Project **activities**, appropriate methodologies and tools such as methodological guides and educational materials that served as support in the training, advisory, and feedback processes were used.

A positive element that stands out in the Project is the **Induction and Planning Workshops** with the technical team, which provided a strong starting point for the development of the different processes. This allowed consensus among all the members of the technical team, the proper management of the execution and intervention modalities, and the development of methodologies and strategies to successfully implement activities and to monitor and evaluate them.

## Coherence and Integration of Gender Equality within the Project

The Indigenous Miskito culture has a deeply ingrained division of roles and responsibilities based on gender — dominant social norms that privilege men over women and support gender inequalities in areas such as access to education, control of money and resources, and decision-making within the family and community. The components and actions launched by the Project in the territory of influence had a strong focus on gender and intercultural perspectives based on the goal of strengthening local capacities for the Indigenous development of the communities with the participation of the entire (m/f) population.

In the desk review of the Project documents and the interviews with participants, the integration of gender equality stands out as an essential characteristic, both as a transversal axis and as a basic principle applied by the members of the Project's technical team. It was also evident in focus group discussions where the importance of the participation of women and girls and their contributions, perspectives, and needs were emphasized. The men (teachers and community leaders) have become more aware of the importance of gender equality and have put into practice what they learned in the training workshops.

"

*"With the training we received, we learned a great deal about the topics they addressed: gender equality and gender discrimination. With the project we have achieved very important life goals with the issue of gender, the empowerment of women and girls, the practices used through technology, and the practice of sexual and reproductive health training to teach students." (Female Teacher, Tuburús)*

*"This Project has taught teachers and leaders that part of gender equality is that women and men have the same right to participate in all areas. The Project not only saw the increased use of technology, but also the increased participation of women, girls, and adolescents learning about early pregnancies — there are many here, so that is one thing we are dealing with in this project." (Primitivo Centeno Perez; President GTI-MITK)*

## Contribution of Local Authorities and Target Groups

The Indigenous government, representatives of MINED at the national and regional levels, as well as teachers and parents of families of children and adolescents played an active role in the accompaniment of the Project activities and in local community organization, which is in compliance with the indicators and results expected by the Project and in local community organization. This increased the Project's relevance, results, and sustainability.



### 2.2 Project Efficiency

● **Project progress compared to what was initially planned**

The execution of the Project was efficient in terms of its **timing** according to the period planned for Phase I (February 2020 - July 2021) and Phase II (February 2021 - May 2022) and in terms of its **coverage**, which included seven educational centers/core schools in Miskito Indigenous communities: Siminka, Pamkawás, San Andrés, Aniwás, Yakalpanani, Tuburús and Walakitang in the MITK territory. The first four communities were included in Phase I and the last three in Phase II. **The objectives** (improving teacher pedagogy and teaching methods, providing access to educational resources for better quality for teaching all subjects, and strengthening specific issues such as gender equality, SRHR and learning of the Miskito culture and language) were **relevant** and addressed by different organizations. Training, formation, support, and coordination processes used Operational Plans as a guide-instrument, and activities were executed according to the programmed timelines and according to available resources. The Project concluded in the foreseen time, with the pertinent external evaluation.

● **Efficiency in the number of Beneficiaries served**

The project has satisfactorily complided to comply with the projected objectives in its Phase I and II[5] with respect to its coverage and target population. **Table 1 and Table 2** summarize the teacher participants of Phase I.

*Teacher Characteristics (Start) Phase I*

| TABLE 1 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Total neighboring schools | Classroom teachers | | Administrative staff | | Total staff | Empirical teachers | | | Qualified teachers | | |
| | | | M | F | M | F | | M | F | Total | M | F | Total |
| 01 | Siminka | 8 | 7 | 15 | 1 | 1 | 24 | 5 | 13 | 18 | 4 | 2 | 6 |
| 02 | Pamkawás | 7 | 10 | 17 | 2 | | 29 | 8 | 16 | 24 | 5 | 0 | 5 |
| 03 | San Andres | 5 | 14 | 22 | 2 | 2 | 40 | 6 | 16 | 22 | 10 | 8 | 18 |
| 04 | Aniwás | 4 | 9 | 12 | 2 | | 23 | 6 | 12 | 18 | 5 | 0 | 5 |
| Total | 4 | 24 | 40 | 66 | 7 | 3 | 116 | 25 | 57 | 82 | 24 | 10 | 34 |

*Teacher Characteristics (Completion) Phase I*

| TABLE 2 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Total neighboring schools | Classroom teachers | | Administrative staff | | Total staff | Empirical teachers | | | Graduated teachers | | |
| | | | M | F | M | F | | M | F | Total | M | F | Total |
| 01 | Siminka | 8 | 7 | 15 | 1 | 1 | 24 | 5 | 13 | 18 | 4 | 2 | 6 |
| 02 | Pamkawás | 7 | 10 | 17 | 2 | | 29 | 8 | 16 | 24 | 5 | 0 | 5 |
| 03 | San Andres | 5 | 14 | 22 | 2 | 2 | 40 | 6 | 16 | 22 | 10 | 8 | 18 |
| 04 | Aniwás | 4 | 9 | 12 | 2 | | 23 | 6 | 12 | 18 | 5 | 0 | 5 |
| Total | 4 | 24 | 40 | 66 | 7 | 3 | 116 | 25 | 57 | 82 | 24 | 10 | 34 |

For the target Teacher population (Phase I), when designing the project, a total of 80 teachers were projected to benefit in four intervention communities. However, its implementation began with 116 teachers, of which 69 (59%) were women. With respect to the academic level of participating teachers, 82 teachers were empirical/lay and 34 were qualified teachers.

At the end of Phase I, the 116 teachers participating at project start-up benefitted from an improved pedagogy through education with technology, representing 145% of the Project goals. With respect to coverage, four core schools benefited directly and 24 neighboring schools benefitted indirectly, all belonging to the Miskito Indigenous communities of the territory of MITK.

**Table 3 and Table 4** summarize the Student participants of Phase I at the beginning and end of the phase, respectively.

*Student Characteristics (Start) Phase I*

| TABLE 3 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Core school students | | | Neighboring school students | | | Total students | | |
| | | M | F | Total | M | F | Total | M | F | Total |
| 01 | Siminka | 59 | 70 | 129 | 147 | 113 | 260 | 206 | 183 | 389 |
| 02 | Pamkawás | 151 | 138 | 289 | 149 | 147 | 296 | 300 | 285 | 585 |
| 03 | Saint Andrew | 184 | 175 | 359 | 76 | 55 | 131 | 260 | 230 | 490 |
| 04 | Aniwás | 114 | 134 | 248 | 69 | 75 | 144 | 183 | 209 | 392 |
| Total | | 508 | 517 | 1025 | 441 | 390 | 831 | 949 | 907 | 1856 |

*Student Characteristics (Completion) Phase I*

| TABLE 4 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Core school students | | | Neighboring school students | | | Total students | | |
| | | M | F | Total | M | F | Total | M | F | Total |
| 01 | Siminka | 49 | 65 | 114 | 197 | 143 | 340 | 246 | 208 | 454 |
| 02 | Pamkawás | 151 | 138 | 289 | 214 | 187 | 401 | 365 | 325 | 690 |
| 03 | Saint Andrew | 238 | 235 | 473 | 79 | 52 | 131 | 317 | 287 | 604 |
| 04 | Aniwás | 138 | 154 | 292 | 99 | 105 | 204 | 237 | 259 | 496 |
| Grand total | | 576 | 592 | 1168 | 589 | 487 | 1076 | 1165 | 1079 | 2244 |

In the case of the target Student population (Phase I), the project had a goal of reaching 1,856 students, with a high percentage of students in primary grades. The project began with the projected 1,856 students, of which 907 (49%) were girls.

Phase I closed with a total of 2,244 students (48% girls) improving their learning and skills through the use of technology (RACHEL, MLL) as a result of the intervention, achieving 121% of the expected student achievement.

A total of 1,168 students were directly served through the four core schools, while 1,076 students from 24 neighboring schools were indirectly assisted.

**Table 5 and Table 6** summarize the Teacher participants of Phase II at the beginning and end of the phase, respectively.

*Teacher Characteristics (Start) Phase II*

| TABLE 5 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Total neighboring schools | Classroom teachers | | Administrative staff | | Total staff | Empirical teachersl | | | Graduated teachers | | |
| | | | M | F | M | F | | M | F | Total | M | F | Total |
| 01 | Yakalpanani | 4 | 10 | 17 | 2 | 0 | 29 | 7 | 16 | | 5 | 1 | 6 |
| 02 | Tuburús | 0 | 5 | 8 | 2 | 0 | 15 | 4 | 7 | 11 | 3 | 1 | 4 |
| 03 | Walakitang | 7 | 24 | 26 | 3 | 0 | 53 | 14 | 21 | 35 | 11 | 7 | 18 |
| Total | 3 | 11 | 39 | 51 | 7 | 0 | 97 | 27 | 42 | 69 | 19 | 9 | 28 |

*Teacher Characteristics (Completion) Phase II*

| TABLE 6 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. | Core school | Total neighboring schools | Classroom teachers | | Administrative staff | | Total staff | Empirical teachers | | | Graduated teachers | | |
| | | | M | F | M | F | | M | F | Total | M | F | Total |
| 01 | Yakalpanani | 4 | 10 | 17 | 2 | 0 | 29 | 7 | 16 | | 5 | 1 | 6 |
| 02 | Tuburús | 0 | 5 | 8 | 2 | 0 | 15 | 4 | 7 | 11 | 3 | 1 | 4 |
| 03 | Roger Salgado Walakitang | 7 | | 26 | 3 | 0 | 52 | 13 | 21 | 3. 4 | 11 | 7 | 18 |
| Total | 3 | 11 | 38 | 51 | 7 | 0 | 96 | 26 | 42 | 68 | 19 | 9 | 28 |

For the target Teacher population (Phase II), the project began with a goal of 105 participating teachers. Phase II was initiated with the participation of 97 teachers, of which 51 (53%) were women.

Phase II closed with a total of 96 teachers trained in education with technology and actively participating by making use of the technological tools provided by the project, representing 91% of the projected reach. With respect to the academic level of participating teachers, pedagogy was improved for 68 empirical teachers and 28 qualified teachers.

**Table 7 and Table 8** summarize the Student participants of Phase II at the beginning and end of the phase, respectively.

*Student Characteristics (Start) Phase I*

| No. | Core schools | Core schools students | | | Neighboring schools students | | | Total student | | |
|-----|-------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| **TABLE 7** | | | | | | | | | | |
| | | M | F | Total | M | F | Total | M | F | Total |
| 01 | Yakalpanani | 184 | 190 | 374 | 126 | 105 | 231 | 310 | 295 | 605 |
| 02 | Tuburús | 123 | 160 | 283 | 0 | 0 | 0 | 123 | 160 | 283 |
| 03 | Walakitang | 446 | 321 | 767 | 144 | 127 | 271 | 590 | 448 | 1038 |
| **Total** | | **753** | **671** | **1424** | **270** | **232** | **502** | **1023** | **903** | **1926** |

*Student Characteristics (Completion) Phase II*

| No. | Core school | Core schools students | | | Neighbouring schools students | | | Total student | | |
|-----|-------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| **TABLE 8** | | | | | | | | | | |
| | | M | F | Total | M | F | Total | M | F | Total |
| 01 | Yakalpanani | 299 | 287 | 586 | 102 | 85 | 187 | 401 | 372 | 773 |
| 02 | Tuburús | 116 | 133 | 249 | 0 | 0 | 0 | 116 | 133 | 249 |
| 03 | Walakitang | 626 | 557 | 1,183 | 191 | 138 | 329 | 817 | 695 | 1512 |
| **Total** | | **1041** | **977** | **2018** | **293** | **223** | **516** | **1334** | **1200** | **2534** |

In the case of the target Student population (Phase II), Phase II began with a goal of reaching 700 students. Phase II was initiated with the participation of 1,926 enrolled students (903 (47%) girls) from the three core schools and eleven schools from neighboring communities.

At the end of Phase II, a total of 2,534 students (1,200 girls - 47%) improved their learning and skills in the use of technology using the virtual library (RACHEL) and the Laboratory (computers-monitors), representing 362% of the projected reach of 700 students.

The participation of girls (1,200 girls) exceeded the goal of 350, which is credited as a result of the gender training workshops.

## Evaluation of Efficiency in the Number of Beneficiaries Served

The Project met the beneficiary goals due to the high availability of teachers and students from the core schools and neighboring schools to learn and improve their pedagogy and teaching. Another key factor that contributed was the role played by the technical team in the support and technical advice in all the processes and actions of the Project. The hiring of human resources (HR) native to the territory and of the Indigenous mother tongue played a significant role in the success of the intervention. Likewise, the accompaniment of the MITK Indigenous Territorial Government through its president (Primitivo Centeno Pérez) and the community leaders also contributed to the Project's efficiency.

● **Relevance of the Model and Intervention Methodologies**

In the training and education processes, **Participatory Methodologies were used** based on the knowledge of the beneficiaries, emphasizing the participation of women and girls.

The Project had the necessary tools and instruments for the **Planning** of the activities including work plans and semi-annual reports. The facilitators and the technical team delivered their collected data on a monthly basis, data that was used to prepare a consolidated report delivered to CFC, the GTI, and MINED.

Regarding the **Monitoring-Follow-up and Evaluation (M&E) processes**, the Project had mechanisms and instruments in place. During the evaluation process, it was possible to confirm the existence of various sources of project verification methodologies which included description, detail, or conceptualization of the activities, signatures of those involved, dates of execution and/or receipts.

With the target groups, quarterly surveys were implemented to teachers, students, and community leaders when it came to obtaining opinions from the beneficiaries focused on evaluating the technological capacities acquired, the pedagogical improvements, the improved abilities to teach in the mother tongue, the inclusion of gender issues in their teachings, and the changes in attitudes reported as a result of participation in the workshops. The surveys considered the age group, sex, and academic level.

The base documents (project proposals and reports) of the Project have the quality required to carry out the analysis and assessment of compliance, having as a point of reference, expected results and clearly defined indicators, in accordance with the ultimate objective.

## Added value of the Change for Children (CFC) team in the management, execution and monitoring of the Project

The CFC technical field team provided added value to the management, execution and monitoring of the project, with its experience, knowledge and charisma. Having human resources native to the territory (i.e. the person in charge of monitoring and communication and the community facilitators) allowed greater accessibility for the beneficiary population and constant monitoring of the processes. Likewise, the hiring of a specialist (woman) and speaker of the Miskito Indigenous language contributed significantly to the incorporation and implementation of the activities promoting gender equality within the Project, with a combination of the different existing approaches on this subject, such as: greater access to training and resources for women; the emphasis on practical needs; the economic well-being and improvement of the quality of life of women, their families and the community, among other elements. The inclusion of a gender equality approach in the educational curricula/training modules in the MOOC in the Miskito language added significant value to the Project.

## 2.3 Project Effectiveness: Achievements and Successes

In this section, the Project results are evaluated based on the original project objectives.

**Ultimate Objective:** To improve the quality of education in remote Indigenous communities using educational technology.

The project purpose is very relevant for the Miskito Indigenous Peoples of this region. Education is the strongest pillar of the project with a transversal approach to gender equality and intercultural bilingual education. Training workshops prioritized the active participation of teachers, students, and community members, with a focus on gender equality and girls' right to education. Didactic materials were created and adapted in the Miskito mother tongue, which were appreciated by teachers and students.

At the end of the Project, a total of 212 teachers (118 women) have an improved pedagogy and actively participate in the use of technological tools provided by the Project (exceeding the goal of reaching 185 teachers). In relation to the academic level, a total of 150 lay teachers and 62 qualified teachers from seven educational centers and 35 neighboring schools benefitted. A total of 4,778 students were served, of which 2,279 (48%) are girls.

According to the Ministry of Education, the overall quality of education has improved as a result of the Project:

> "The main achievement that is made visible is in the quality of student learning. In addition, teachers have improved their daily class planning system, making use of technological tools. Students carry out various investigations and inquiries in the digital archives housed in the RACHEL library. Teachers develop various types of teaching materials with the help of the information they obtain from RACHEL's library. Mothers and fathers are motivated and accompany their children in their educational process." *(Dr. Edgar Salazar Francis, General Director MINED-SEAR)*







## Specific Objective 1: Improved teacher pedagogy

The contribution of the Project translates into the processes of formation, training, and technical support, promoted with a diversity of social actors and members of the target group. The activities developed focus on **an immediate result and three performance indicators[6]**.

Below are the achievements identified by the informants in the focus group discussions and interviews with key actors.

> "With the arrival of the Project in the educational centers and neighboring communities, the teachers' pedagogy has been improved, including the ability to emphasize 21st century skills in their classrooms. One of the teacher training courses in pedagogy was the MOOC, training teachers in pedagogical strategies that motivate effective student learning, while seeking to exploit the skills of analysis, critical thinking, communication, creativity and teamwork among others." *(Eduardo Palma Fajardo, Community Facilitator, Walakitang)*

> "I am a regular secondary education teacher. As a teacher, I have had a change in methodology. Before, due to lack of information and training, we were quite cold as teachers. With this Project, it has helped us a lot, and we developed our work plan with greater security. This is an achievement and a change in teaching and learning knowledge, because we learned 7 methods, and this is an achievement for me. I have acquired the knowledge of how to use the computer. This is of great importance for our professional life, the use of computers. For me, it was very important to have obtained knowledge about gender equality. I value the knowledge we have acquired at 100%. The topics were very well explained and, what we did not understand, now we manage to understand and put it into practice, and I feel that I have improved." *(Male Teacher, Tuburús community)*

> "Before, we had difficulty doing research assigned to students. Teaching strategies and techniques were more complicated." *(Female Teacher, San Andrés)*

> "Currently, we apply teaching with different techniques (videos) and strategies. We have access to textbooks in RACHEL's library. Gender equality is practiced inside and outside the classrooms. High School graduates have shown their abilities much better than the previous year, thanks to the support of the technological tools." *(Male Teacher, Walakitang)*

> "We have learned the technologies, methodologies through the RACHEL, and the students easily investigate by finding information on Wikipedia. With this new technology, we have learned a lot." *(Female Teacher, Walakitang)*

As a result of the intervention of the Project in the Walakitang school, enrollment increased greatly. The directors, teachers, and project facilitator have reported that the students who had dropped out of school have returned to their studies, and students from neighboring schools have moved to the Walakitang school, with the aim of being able to benefit more directly from the Project. Another factor that has favored the increase in enrollment is that, since the implementation of the project, Honduran boys and girls who live on the banks of the Rio Coco have enrolled and have been accepted in the school.

## Specific Objective 2: Increased diversity and quality of educational resources

The Project proposed to provide curricular didactic materials in the offline digital library and computers powered by solar panels in each of the communities.

According to the latest performance compliance indicators report, 98% (209/212) of teachers actively use RACHEL resources at least 3 times a week to improve student learning in the classroom. Seven educational centers were equipped with a Mobile Learning Laboratory (MLL) which is a RACHEL and laptops.

Teachers are using RACHEL to plan their school lessons. Teachers from neighboring settlements use RACHEL once or twice a week making their weekly plans. Teachers are using new teaching methods, reporting new skills and pedagogical strategies using RACHEL resources, including using Miskito and SRHR resources. There is the RACHEL Massive Open Online Course (MOOC) that contains seven (7) pedagogical methods and more than eight pedagogy strategies to teach 21st century skills.

With this innovative Project, the dream of many teachers and students has come true, to be able to use and manipulate a computer and even more so a digital library. A significant achievement is that students are making use of the Mobile Learning Laboratory to carry out their research work, enriching their technical vocabularies through the use of digital Wikipedia.

The participants of the focus groups and interviews expressed the following:

*"By accompanying the development of the Project in these schools, MINED, through the Alto Wangki Bocay Delegation, highlights the importance of the content developed with Indigenous students, since it is developed in the Miskito mother tongue of the teachers and students." (Dr. Edgar Salazar Francis, Director General, MINED – SEAR)*

*"Before, we worked empirically. We did not have many of the materials as support to teach the classes to the children or books to be able to read to orient ourselves in the contents to develop in the class. We could do self-training, but we had nothing to read and nowhere to go. With the little bit of our own knowledge, we taught the children. With our own creativity and a book, we looked for the themes to develop. From there, we looked for questions for the students. We carried out some research topics in this way. We developed the classes, we had many difficulties, it was impossible to provide quality teaching, because the challenges as teachers were great." (Female Teacher, Yakalpanani)*

The Project promoted a training program aimed at teachers, community leaders, and parents on issues of gender, and SRHR.

The training workshops on gender began with the technical staff of CFC in Nicaragua, facilitated by Girl Rising. With the development of training workshops on gender equality and equity, direct and indirect beneficiaries and community leaders have been sensitized, and awareness has been created, making it possible to reduce violence and discrimination in schools, at home, and in the community. In the consultation process of the external evaluation, the awareness of men towards gender equity and respect for the individual and collective rights of women and girls was observed. Printed and digital materials were provided with awareness-raising topics on gender equality and the rights of women and girls with an intercultural approach.

With the Project, access to educational resources of better quality in all subjects has been provided on the RACHEL digital library. At the end of the Project, there are more than 19 modules, of which 11 correspond to culturally and linguistically appropriate language teaching materials appropriate to the context of the Indigenous communities of the territory. This content includes: elementary school textbooks in Miskito; children's songs in Miskito for the first grades; informative videos on climate change with an Indigenous perspective; textbooks for secondary school, cultural presentations, and gender resources.

An important factor that has contributed to raising awareness and applying the topics of gender and SRHR has been the follow-up and monitoring by community facilitators of teachers in the classroom. As a result of the above, girls and boys share the role of cleaning in the school, something that was not seen before. In addition, it was observed that girls and adolescents have lost their fear and shyness in doing mixed group work.

In order to make parents and community leaders aware of the importance of putting gender equality into practice at home and in the community, seven workshops for parents and leaders on gender and SRHR were held. The workshops with parents was not originally planned in the Project; it was something that arose during the implementation period when the need was recognized for the importance of addressing gender equality and sexual and reproductive rights at the community level.

With the intervention of the project, the educational quality in the beneficiary schools has improved significantly, as well as the pedagogical training of the teachers, now incorporating the teachings on gender, SRHR, materials in Miskito, and the MOOC digital pedagogy tools.

*"I am a preschool teacher with the Project. We increased knowledge of different methods and gender equity, and from RACHEL we learned many more things. We thank the technical staff of the project and the CFC funders of the project." (Female Teacher, Yakalpanani)*

*"With the methodology that we have learned, we are working in the classroom. Before, we could say that we worked in a traditional way. We felt it was very difficult to go to the classroom and teach the students in the best way possible. Now, we have everything accessible, and we are proud to be able to bring educational quality teaching to students through the different methodologies that we have learned, and that has made teaching easier for us. Children also have the privilege of knowing cognitively the content which we are advancing." (Male Teacher, Yakalpanani)*

## Factors contributing to Success:

*"One of the key factors that contributed to the achievement of the results obtained from the Project in its first and second phases was the good coordination between the various key actors (community, communal and territorial government), support from MINED and SEAR in the processes of face-to-face training in each of the benefited schools, and availability of teachers and educators in each core school and neighboring schools. The available resources assigned by the Project served in the development of the activities in each of the schools in the community." (Dr. Edgar Salazar Francis, Director General, MINED – SEAR)*

*"We have noticed considerable support. At the time we need to move forward in a process that we are having difficulties with, we coordinate from the director of the Project, to the community facilitator, to director, to teacher and student – that was the chain of operation of this Project. The entire application process of this Project has been joint. The director was involved in demanding teachers and students to always participate and meet the schedule and thus carry out the achievement and scope of the objectives of this Project." (Eduardo Palma Fajardo, community facilitator, Walakitang core school)*

## Challenges

> "In the case of the community of Tuburús, there is a high dropout rate of students. This is due to the crazy sickness disease that has been affecting the girls, boys, adolescents, and young people of the community since the beginning of the project, which is why many parents have withdrawn their sons and daughters from school as a protection mechanism, since they can be attacked by the young people affected. Many of the students have been transferred to other schools in the territory or are hidden in neighboring communities where they cannot be attacked and to prevent them from getting sick, just like the young people already affected by this mental illness." *(Lic. Edda Muller, Pedagogy Specialist)*

> "One of the factors that hindered the implementation process of the project was the distance of some of the teachers from the core communities/central schools. We do not only work with the teachers of the core communities or educational centers where the technology is installed, but we also worked with the teachers from the distant or the neighboring communities. Sometimes the teachers from the most distant communities did not participate regularly because in the rainy season they cannot move due to boat problems, and if they had to walk they had to walk four hours just to get there and vice versa. This meant that they could not participate." *(Tony Llorente, Project Staff)*

> "One of the obstacles was the global pandemic – covid-19. This hindered the Project from being sped-up. There were many difficulties, but with the good relations and coordination between the GTI and the national government and community leaders, the Project entered the territory, and subsequently its execution was achieved. One difficulty was that there was no good coordination and consensus in class schedules, because there was overlap between class activities and Project activities." *(Teacher, Yakalpanani)*

## 2.4   Impacts: Most Significant Change Stories

The impacts produced within the framework of the Project are evidenced in the stories of Most Significant Changes (MSC) of the beneficiaries and key social actors.

### Improved Gender Equality

> "I am a first-grade primary school teacher. The changes that I have had after my participation in the Project have been in the classroom with the children with the issue of gender and in sitting the boys and girls together and giving them the same rights. Before, due to ignorance, I used to separate girls and boys to do different jobs [in the classroom]. But now I don't make a difference. The work is distributed equitably." *(Auralila Hodgson Mendez, Teacher, Tuburús)*

> "The partner of a teacher who has received training workshops on gender asked me what kinds of workshops do you give with the Project? I asked her why she asked me that. She replied that her husband has changed quite a bit: before, he did not help at all with the housework, now he does, and when I go to wash clothes in the river, he cooks and brings me my food. Before he did not do that!" *(Novilda Pereira López, Teacher, San Andres)*

### New Computer Skills

> "We put all our efforts and interest into learning. Sometimes, we stayed after class even though we were hungry. But we were interested in learning and mastering the computer well. I am grateful because I have learned now. I feel more confident, and it is an advantage for me, because when I take a trip to another place, I am already with knowledge in the use of computers." *(Male Student, Tuburús)*

> "I am a regular secondary education teacher by profession, Social Studies. There has been a change in my work life, facilitating how I teach students, making it easier for me. I feel like I am up to date with technology; before, we did not know anything or understand this technology. Now we know and understand." *(Lenin Rojas Granado, Teacher, Tuburús)*

## Improved Instruction and Learning

*"The changes that we have observed since the Project arrived are that, before, there were many difficulties in their studies, but now since the Project began, all the students learn more easily. Our knowledge of learning and in the handling of technology has expanded, and we give thanks to our leaders and to CFC."* **(Teacher, Yakalpanani)**

*"My life has also changed by learning new educational technology and learning to navigate with the proper use of the internet and more scientific knowledge. I did not know how to access the internet before. With this Project, I have learned many things and that has been a change in my life, because I have acquired greater knowledge of learning to develop the classes with the children."* **(Auralila Hodgson Mendez, Teacher, Tuburús)**

*"We, as the authority of the territory, value that we have greatly improved the quality of education. The participation of secondary school students as well as primary school is more active. The Project offered several methods using the technology. The students showed great enthusiasm to study using the computer, which was not known in the communities before. Teachers have improved their way and quality of teaching – now they do it with educational and cultural videos, music and dance, which has made the Project interesting for children and adolescents."* **(Primitivo Centeno Perez, President GTI MITK)**

*"As a result of the intervention of the Project, school retention improved and a high percentage of enrollment in the schools of the territory was achieved. The region achieved a recognition granted by MINED for being one of the territories of the country to reach 100 percent of school enrollment during the year 2022."* **(Edda Müller, Pedagogy Specialist, Project Staff)**

*"The main change, from my point of view, in teachers is that the new methodologies are more modern, and the attitudes of teachers are more creative, because they seek ways to make content engaging through drawing, drama, music; that change for me is very important because the children no longer find classes boring and they like them."* **(Eduardo Palma Fajardo, Community Facilitator, Walakitang)**

### 2.5   Lessons Learned

From the perspective of the technical team of the Project, the following were identified as lessons learned:

1) Employing strategies and methodologies appropriate to the social, cultural, and linguistic context of the beneficiaries facilitated the understanding and success of the training process for both the Miskito Indigenous teachers and students.

2) Hiring technical staff of the same language and ethnic group facilitated communication and accessibility for the target group and the population.

3) The Project was planned and executed with an appropriate approach for the development of training aimed at teachers and students, intervening significantly in organization, planning and training processes, with an emphasis on gender and intercultural values.

4) More time should be considered for training processes for a better understanding of the content of training workshops, especially in contexts of low quality education. The content of the training workshops were very intense in relation to the time and number of teachers to be trained.

# 03. CONCLUSIONS



In total, 212 teachers were able to improve their teaching skills through the Project. In Phase I, there were 116 teachers (69 women) actively using the technological tools provided by the project and who improved their pedagogical practices through education provided through the use of technology. This represents an achievement of more than the Phase I goal of reaching 80 teachers. Phase II provided training for 96 teachers (51 women), achieving 91% of the goal of 105 teachers trained. Of the 96 teachers with improved pedagogical practices in Phase II, 68 of the teachers are lay teachers and 28 are qualified teachers.

In total, 4,778 students benefited from access to quality educational resources through technology. In Phase I, a total of 2,244 students (1079 girls) improved their learning and skills through the use of technology (RACHEL, MLL), exceeding the Phase I goal of 1,856 students reached by 21%. In Phase II, a total of 2,534 students (1,200 girls (47%)) participated, exceeding the Phase II goal of 700 students – representing 362% of the projected goal.

The Project has had an impact on the participating communities, which is evidenced by the expected and unexpected positive effects and the most significant changes that have occurred in the following areas:

 a) Empowerment of women and girls: their participation in the different spaces in the environments where they interact;

 b) Improvement of pedagogical training and teaching in the classroom through the use of the teaching materials that were appropriate in the cultural and linguistic context.

The Project has contributed to strengthening the local capacities of teachers, students, and women, contributing to the improvement of the living conditions of families in the territory of influence through the change of attitude with respect to gender, SRHR, and the use of technological tools.

The intervention model of the Project has been pertinent and consistent with the base documents of the initiative and the 2030 Sustainable Development Goals of the United Nations that seek to eradicate illiteracy and improve access to education by 2030.

The Most Significant Change Method (MSC) applied in this evaluation allowed reflection with the Project's beneficiaries around achievements, positive and negative factors, and significant changes that occurred during the execution of the Project. With this, the foundations are laid for future processes that come to enrich the inputs, contributions, and qualitative assessments of the target group, for example, the systematization of experiences.

The assessments of the representative actors of the target groups provided evidence of the achievements, relevance, effectiveness, efficiency, viability, and lessons learned from the Project including technical advice, training, accompaniment, and support provided by the Project. Likewise, they confirm the high level of performance achieved by teachers, directors, students, and community leaders in the territory of influence during its execution.
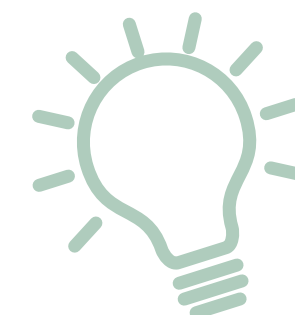
# 04. RECOMMENDATIONS

Based on this study, the evaluation consultant provides the following recommendations for future projects:

- Continue its **relationship of coordination and articulation** with the Indigenous Territorial Governments of the Upper Wangki and Bocay area and with the development institutions that were involved in the Project, who are willing to continue supporting the processes of managing the territory, with a good level of credibility in the process initiated by CFC.

- Follow up on the **implementation of the gender and intercultural approach**, through its partner organizations or other longer-term initiatives. Take into account the issue of territorial governance and the resilience of the Indigenous peoples of the Autonomous Regions of Nicaragua, especially the Alto Wangki and Bocay region. All this with a focus on improved livelihoods / quality of life for Indigenous peoples.

- Significant achievements were made in the Project in the areas of teacher training and student engagement and learning. The Project particularly benefitted the empirical or lay teachers of both sexes from these remote communities that are difficult to access and poorly served by the programs and projects promoted by the National Government of Nicaragua. Therefore, it is recommended that CFC and its partner organizations direct their resources and efforts to **improve the quality of life** of the less favored and marginalized, particularly schools in extremely remote areas and teachers with no professional credentials.

- In future initiatives, design a specific proposal in coordination with the authorities to guarantee the **sustainability** of the processes promoted in the communities and give continuity to the achievements, effects, and significant changes that have occurred within the framework of the intervention with the beneficiary population and the territory of influence of the Project.

- Define a medium- and long-term **Action Plan** to guarantee the visibility and sustainability of the processes promoted with the support of social organizations in coordination with the Indigenous Territorial Government.

- Extend the **implementation time** of the next initiative, especially when it comes to training, because changes in individual attitudes and skills take longer than one year.

- The issue of the rights of Indigenous women and girls is an area of high importance. The need to continue to prioritize the education and **empowerment of women and girls**, and also to work with parents, families, and the territorial and communal authorities with respect to gender equality education and awareness, has been identified.

# END NOTES //

[1] Phase I benefited the Indigenous communities of: Siminka, Pamkawás, San Andrés and Aniwás.

[2] Phase II benefited the Indigenous communities of: Walakitang, Tuburús and Yakalpanani.

[3] Act of Prior, Free and Informed Consent in accordance with agreement 169, based on articles 5 and 181 of the Political Constitution, article 9 of the Statute of Autonomy (Law 28), article 24. Letter e) of Decree 3584 of the National Assembly "Regulation of Statute of Autonomy" and articles 16, 17 and 18 of law No. 445. Act that is part of the annexes.

[4] The participants in the focus group discussions gave their consent in the registration list of their participation in the consultation process.

[5] The detailed statistical data was provided by Lic. Edda Muller, Methodologist of the Project, compiled through the directors of each nucleus. Physical files with signature and seal in each format by the directors.

[6] Results and indicators defined in the Logical Framework for the mediation project performance.