



# Report on Bird Conservation Education Program

## Funded by International Bird Partners



Enhancing Bird Conservation Awareness Among Secondary School Students in Buea, Cameroon

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## EXECUTIVE SUMMARY

This report outlines the activities, outcomes, and expenditures of the bird conservation education program funded by International Bird Partners. The initiative aimed to enhance students' understanding, perception, and engagement in bird conservation through structured lessons, interactive field activities, and the establishment of bird clubs.

As part of our monitoring and evaluation strategy, we conducted a pre-test and post-test at GHS Bonakanda which served as the pilot school. This was done with the use of a structured and semi-structured questionnaire. (Appendix 1), While for the other two schools; Muea High School and Beps High School, we conducted only the pre-test within this project phase. However, we plan to conduct a long-term post-test after several years to better assess the program's lasting impact on students' attitudes and knowledge retention. Within the Pilot school, it was found that the program successfully increased student awareness of local bird species and conservation issues, fostering a stronger connection between young students and their natural environment.

Funding Received	450,000 FCFA
Implementing Schools	GHS Bonakanda, Muea High School, Beps High School
Program Duration	October 30, 2024 – March 20, 2025



## PROGRAM OBJECTIVES

1. Increase students' knowledge of local bird species and their ecological significance.
2. Foster positive attitudes and perceptions toward bird conservation.
3. Equip students with basic birdwatching and conservation skills.
4. Establish and strengthen school-based bird clubs for long-term engagement.

## PROGRAM IMPLEMENTATION

### 1. PRE-TRAINING ASSESSMENT

A baseline questionnaire was administered at GHS Bonakanda (Plate 1) as a pilot test to assess students' initial knowledge, perception, and attitudes toward bird conservation (Appendix 1). The results revealed:

- Limited awareness of local bird species.
- Minimal understanding of the ecological roles of birds.
- Little prior engagement in bird conservation activities.

These findings guided curriculum revisions to address identified knowledge gaps and misconceptions more effectively. At Muea High School and Beps High School, only the pre-test was administered. The post-test will be conducted over a multi-year period of three years to evaluate the sustained impact of the training. This longitudinal assessment will provide valuable insights into the effectiveness of targeted educational interventions in fostering long-term learning and conservation awareness.

### 2. TRAINING SCHEDULE:

School	Training Duration	Sessions per Week
GHS Bonakanda	Six weeks period	2
Muea High School	Eight weeks period	2
Beps High School	Six weeks period	2

### 3. CURRICULUM OVERVIEW

The program combined theoretical knowledge with hands-on activities to ensure an engaging and practical learning experience.

Key Activities:

**Interactive Lessons:** Focused on bird species identification, ecological roles, and conservation strategies.

**Field Excursions:** Students practised birdwatching, learned species identification techniques, and observed bird behaviour in natural settings.

**Formation of Bird Clubs:** Students formed clubs to continue conservation activities beyond the training period. These clubs were formed in all three respective schools. The detailed curriculum is presented in Appendix 2

#### 4. POST-TRAINING EVALUATION & OBSERVATIONS FOR GHS BONAKANDA (ANALYSIS OF PRE-TEST AND POST-TEST RESULTS)

A pre-test and post-test results highlight a significant improvement in students' **knowledge, attitudes, and behaviours** regarding bird conservation. The data indicate that the training program effectively increased awareness and fostered a stronger commitment to bird conservation efforts (Appendix 3).

##### Knowledge Improvement

The students demonstrated a considerable increase in their understanding of birds' ecological roles. Before the training, only **30%** of students correctly identified the role of birds in the ecosystem, while **60%** admitted they did not know. After the training, **76%** answered correctly, reflecting a **46% improvement in knowledge**. Additionally, students' awareness of threats to bird populations improved. Initially, only **20%** of students recognized all major threats (deforestation, climate change, and urban development). Post-training, this number increased to **38%**, showing a more comprehensive understanding of conservation challenges. Awareness of bird conservation organizations also increased significantly. Before the training, **80%** of students did not know any bird conservation organizations. After the training, **44%** recognized BirdLife International, while **16%** became aware of the Cameroon Wildlife Conservation Society, demonstrating a notable increase in conservation awareness (Appendix 3).

##### Shift in Attitude Toward Birds

The training led to a major shift in students' attitudes towards birds. Interest in birds increased dramatically, with **40%** of students initially expressing no interest at all, while post-training, **50%** rated their interest at the highest level (5). Perceptions of the importance of birds to environmental health also improved. Initially, only **28%** of students agreed or strongly agreed that birds were essential, but this number increased to **64%** after the training. Concern for threats to birds also grew significantly, with the number of students who strongly agreed that they were concerned about these threats rising from **4% to 38%**, while those who disagreed dropped from **30% to 6%** (Appendix 3).

##### Behavioural Change Toward Conservation

Behavioural willingness to engage in bird conservation activities showed a significant positive shift. Before the training, only **16%** of students strongly agreed that they were willing to participate in conservation activities, but post-training, this number increased to **38%**. Similarly, willingness to support conservation efforts increased, with **68% of students agreeing or strongly agreeing** to support such initiatives, compared to only **48% before the training**. A major success of the program was seen in the formation of bird clubs. Before the training, only **54%** of students expressed interest in joining a bird club, but after the training, this number rose sharply to **96%**, indicating a strong commitment to continued conservation efforts (Appendix 3).

## Demographics and Knowledge of Native Birds

The majority of students who participated in the training were between the ages of **12 and 15 years (96%)**, with a **slight female majority (54%)**. Knowledge of native birds in Buea also improved significantly. Before the training, **50%** of students could not identify any local bird species, and many provided incorrect names such as "Witch Bird" and "Dirty Bird." Post-training, **62%** of students could correctly identify species such as the Eurasian Sparrowhawk, Common Swift, and Weaver Birds, demonstrating a substantial improvement in their knowledge of local biodiversity (Appendix 3).

## Post-test Conclusion

The training program effectively enhanced students' knowledge, attitudes, and behaviors related to bird conservation. The post-test results indicate a significant improvement in awareness and engagement, particularly in students' willingness to participate in conservation efforts. However, to assess the long-term impact, a **multi-year post-test** (three years) will be conducted to evaluate knowledge retention and sustained behavior changes over time. It is worthy of note that at Muea High School & Beps High School, since only the pre-test was conducted, the long-term impact will be measured through a post-test conducted several years later to analyze sustained behavioural changes and knowledge retention. Within Muea High School, we had a special time teaching students the relationships between birds and other Animals; in doing this our case was between birds and elephants and we called an Elephant organization to join us in this two times training

## STUDENT FEEDBACK

The program generated significant enthusiasm among students, with many expressing a newfound appreciation for birds and conservation efforts: it is worthy of note that most of the feedback could not be captured on video because of security restrictions from the schools. Below are three feedbacks from the three different schools

**Student Feedback Quotes:**

- Grace, GHS Bokova:** "Now I notice birds around my home and can even name some of them. I love the bird club. We should go on more field trips!"
- John, Beps High School:** "Making posters about birds and sharing them with the school was fun. I learned so much! I want to be a conservationist when I grow up!"
- David, Muea High School:** "I used to think birds were just ordinary animals, but now I understand their importance in nature. The birdwatching activities were so exciting! I even made a bird feeder at home."

## EXPENDITURES

Item	Cost (FCFA)
Printing of Sensitization T-Shirts	50,000
Printing of Bird Posters	15,000
Gifts for three Schools (Trash Cans)	60,000
Snacks for Students	187,500
Stipend for Assisting Staff	20,000
Equipment Rental (GPS, Binoculars)	15,000
Printing of Questionnaires & learning Materials	20,000
Transportation to schools for five months	50,000
Miscellaneous/Unforeseen Costs	12,000
<b>Total Expenditures</b>	<b>430,000</b>

## CHALLENGES FACED

1. Limited Time for Comprehensive Testing: A full pre-test and post-test assessment was completed only at GHS Bonakanda, limiting immediate comparison across schools.
2. Budget Constraints: Rising costs for student engagement (e.g., snacks) limited the ability to acquire additional conservation materials.
3. Scheduling Conflicts: Some sessions were rescheduled due to school exams, affecting continuity.

## LESSONS LEARNED & RECOMMENDATIONS

- Standardizing training durations across schools will enhance consistency in future programs.
- A multi-year evaluation approach will provide deeper insights into long-term student retention of conservation knowledge.
- Future funding should prioritise field equipment (binoculars, field guides) to enhance practical learning experiences.
- Strengthening partnerships with school administrations can help integrate conservation topics into regular class curricula.

## REQUEST FOR ADDITIONAL FUNDING

To scale up the impact of this initiative, we propose a request for \$1,000 (approximately 600,000 FCFA) to:

1. Strengthen bird clubs with educational resources (binoculars, field guides, conservation kits).
2. Expand to three additional schools, reaching 300 more students.
3. Host a community birdwatching event to involve residents and raise broader awareness about conservation.

These steps will solidify conservation education in schools and ensure that students continue engaging with bird protection efforts.

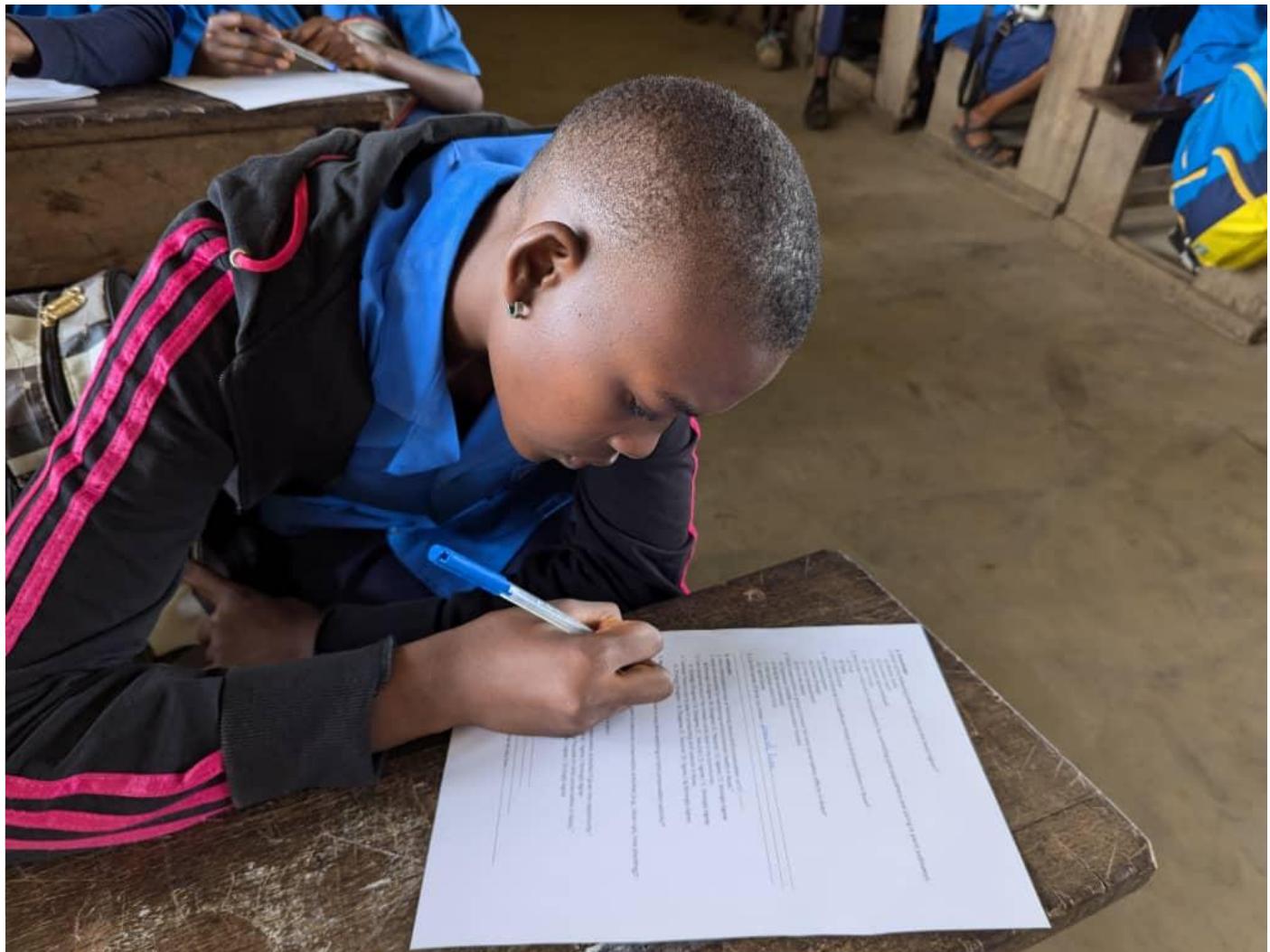
## CONCLUSION

The bird conservation education program was a success, equipping students with knowledge and practical conservation skills. The enthusiasm displayed by students, teachers, and communities highlights the program's impact and potential for long-term change. We extend our gratitude to International Bird Partners for their support and look forward to future collaborations in advancing bird conservation in Cameroon.



## LIST OF PLATES

### PLATE 1. ADMINISTERING QUESTIONNAIRES TO STUDENTS



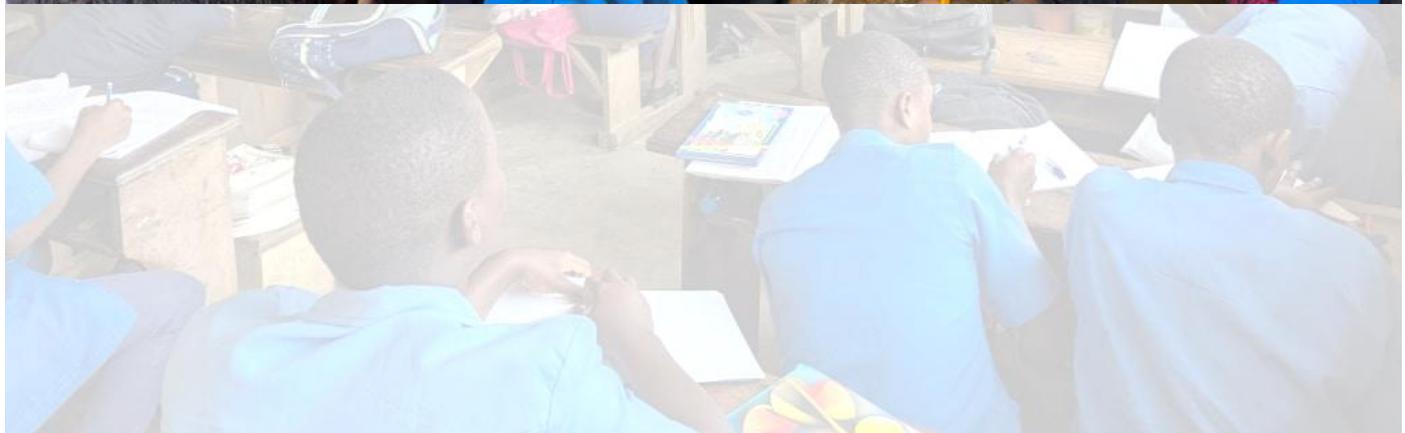
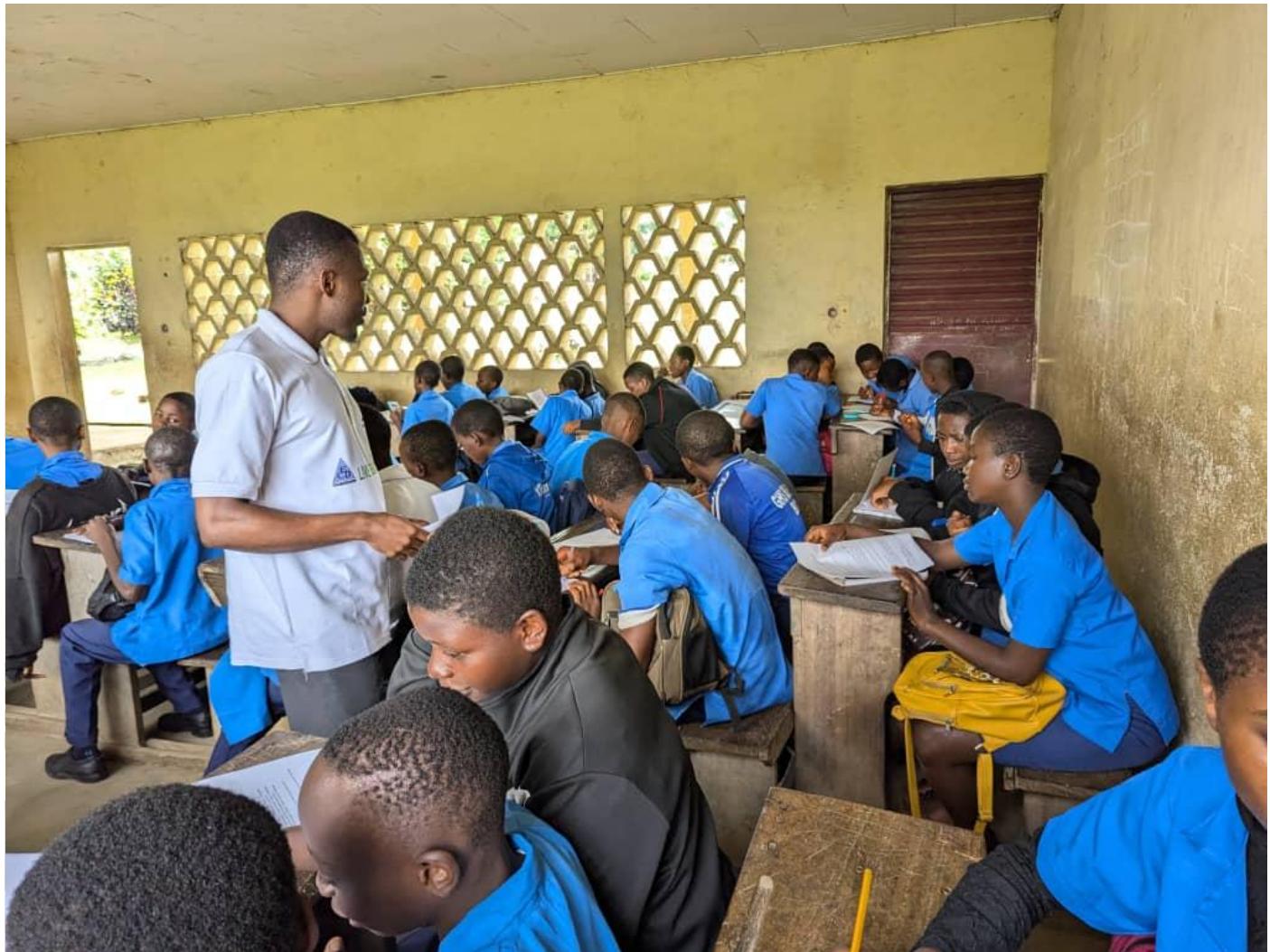
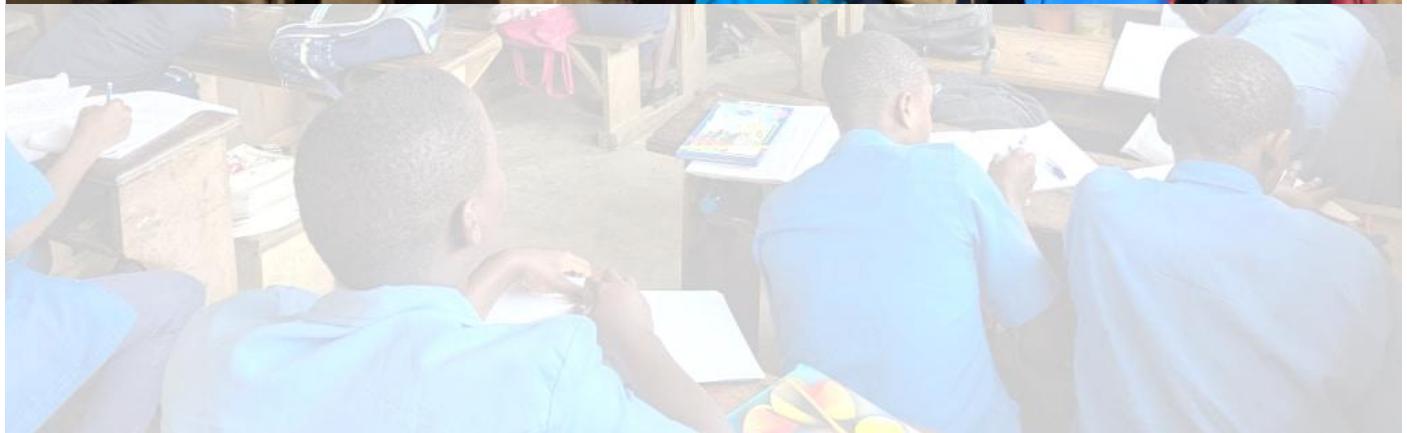




PLATE 2. INTERACTIVE SESSIONS WITH STUDENTS FROM DIFFERENT SCHOOLS









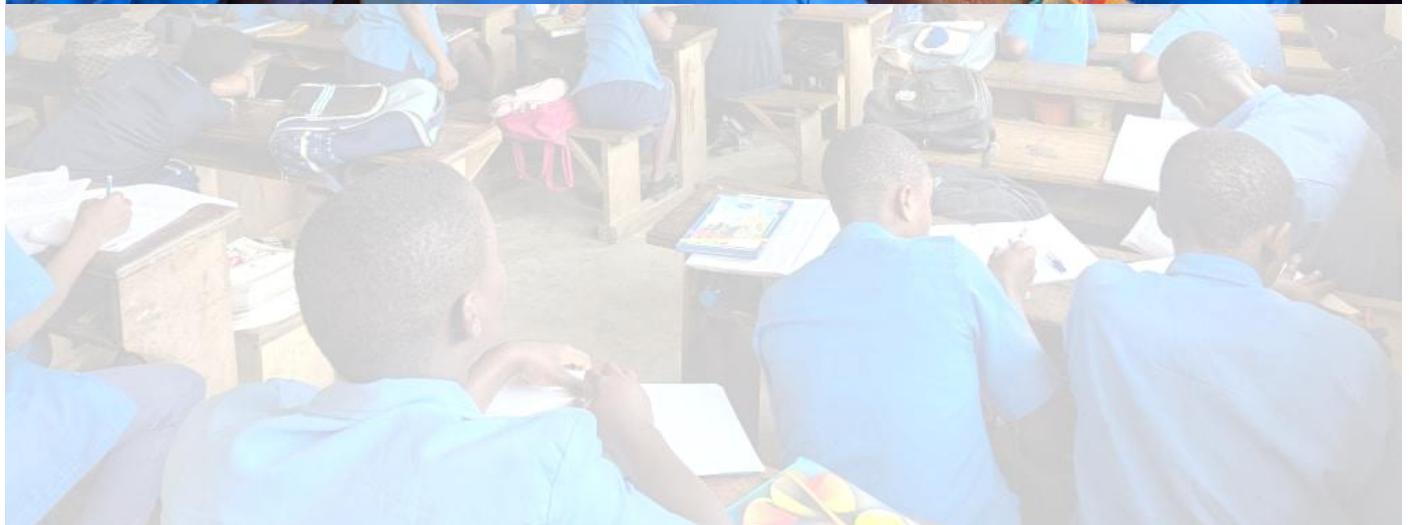










PLATE 3. STUDENTS PRACTICING BIRDWATCH AND LEARNING HOW TO USE BINOCULARS AROUND SCHOOL FARMS





## APPENDICES

### APPENDIX 1. QUESTIONNAIRE

#### A. Knowledge

1 Which of the following birds are native to the Buea region?"

- A) Weaver birds
- B) Common Swift
- C) Eurasian Sparrowhawk
- D) I don't know

2. Birds play a vital role in the ecosystem by controlling pest populations and aiding in plant pollination.

- A) True
- B) False

C) I don't know

3. Which of the following is a significant threat to bird populations in Buea? - A) Deforestation

- B) Climate Change
- C) Urban Development
- D) All of the above

4. Which organization or group is known for bird conservation efforts in Buea?

- A) Cameroon Wildlife Conservation Society
- B) BirdLife International
- C) Bio Conservation Club
- D) I don't know

5. List the names of birds you know-----

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#### B. Attitudes

1. How interested are you in learning about bird conservation on 5? -----

2. birds are essential to maintaining environmental health in Buea."

-A. Strongly Disagree /B. Disagree /C. Neutral / D. Agree / E. Strongly Agree

3. I am concerned about the threats birds face in my community.

- A. Strongly Disagree / B. Disagree /C. Neutral / D. Agree / E. Strongly Agree

4. I believe I have a role to play in protecting bird species in Buea.

- A. Strongly Disagree / B. Disagree / C. Neutral / D. Agree / E. Strongly Agree

### C. Behavior

1. Have you ever participated in any bird-watching or bird conservation activity?"  
-A Yes B. No
2. How often do you participate in nature or conservation activities (e.g., clean-ups, tree planting)?
  - A) Never
  - B) Rarely (Once a year)
  - C) Occasionally (A few times a year)
  - D) Often (Monthly or more)
3. I am willing to participate in bird conservation activities if given the opportunity."  
- Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree

3. I would support initiatives or campaigns focused on bird conservation in Buea." - Strongly Disagree / Disagree / Neutral / Agree / Strongly Agree

### D. Demography

1. Age-----
2. Gender-----
3. If we create a club, will you join-----
4. In which quarter/Neighborhood or area do you live-----

## APPENDIX 2. BIRD CONSERVATION CURRICULUM

### Bird Conservation Education Curriculum

#### For Secondary Schools in Buea, Cameroon

Program Title: Enhancing Bird Conservation Awareness Among Secondary School Students

Duration: 1.5 – 2 months (Flexible)

Target Group: Secondary School Students (Grades 8–12)

Approach: Interactive lessons, field excursions, and bird club formation

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### Program Objectives

By the end of this program, students should be able to:

1. Identify common local bird species.
2. Understand the ecological roles of birds in the environment.
3. Recognize the threats facing bird populations and conservation strategies.
4. Develop birdwatching skills and field data collection techniques.
5. Establish and sustain school-based bird clubs for ongoing conservation action.

### Module 1: Introduction to Birds and Birdwatching

#### Lesson 1: Understanding Birds

Duration: 1 hour

Key Topics:

- What are birds? (Definition and characteristics)
- Why are birds important? (Roles in nature and benefits to humans)
- The unique adaptations of birds (Beaks, feathers, flight, vision)

Interactive Activity:

- Display images of different bird species and ask students to describe their features.
- Discuss how bird features relate to their environment and diet.

#### Lesson 2: Birdwatching Basics

Duration: 1 hour

Key Topics:

- What is birdwatching?
- Essential equipment (Binoculars, field guides, notebooks)
- How to observe and record birds in the field

## Interactive Activity:

- Demonstrate proper use of binoculars and field guides.
- Practice identifying birds from pictures before heading into the field.

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## Module 2: Bird Species Identification

### Lesson 3: Common Birds in Buea and Their Habitats

Duration: 1 hour 30 Minutes

#### Key Topics:

- Common birds in urban areas, forests, wetlands, and farmlands
- Recognizing birds by sight, song, and behaviour
- Migratory vs. resident birds

#### Interactive Activity:

- Play recorded bird calls and challenge students to match them with species.
- Group students into teams to research and present on different bird species.

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## Module 3: Ecological Roles of Birds

### Lesson 4: Birds as Ecosystem Engineers

Duration: 1 hour

#### Key Topics:

- Birds as pollinators (e.g., sunbirds)
- Birds as seed dispersers (e.g., hornbills)
- Birds as pest controllers (e.g., owls and insect-eating birds)

#### Interactive Activity:

- Show videos of birds feeding and pollinating plants.
- Have students discuss how the disappearance of a bird species could affect the ecosystem.

### Lesson 5: Threats to Bird Populations

Duration: 1 hour

#### Key Topics:

- Habitat destruction (deforestation, urbanization)
- Climate change and its effects on birds

- Poaching and illegal pet trade
- Pollution and its impact on bird habitats

Interactive Activity:

- Brainstorm solutions to bird conservation challenges.
- Conduct a school survey on student awareness of bird conservation.

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## Module 4: Conservation Strategies

### Lesson 6: How Can We Protect Birds?

Duration: 1 hour

Key Topics:

- Community-led conservation (planting trees, reducing plastic use)
- Creating bird-friendly habitats (bird feeders, water sources)
- Laws and policies protecting birds

Interactive Activity:

- Students design posters on how to protect birds.
- Discussion: How can students contribute to conservation at home and school?

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## Field Excursions: Practical Birdwatching

### Excursion 1: Guided Birdwatching Trip

Location: Nearby forest, wetland, or schoolyard

Objectives:

- Observe birds in their natural habitat
- Practice using binoculars and field guides
- Record species seen, their behaviours, and habitats

Activities:

- Field checklist: Students list birds they identify
- Discussion: What bird behaviors did they observe?

### Excursion 2: Data Collection & Mapping (Optional)

Location: School or community

Objectives:

- Understand how scientists collect bird data
- Map bird species locations in the school environment

## Activities:

- Students work in teams to collect bird data
- Groups present findings on bird diversity and threats

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## Formation of Bird Clubs

### Lesson 7: Establishing a School Bird Club

Duration: 1 hour

#### Key Topics:

- Why school bird club's matter
- How to organize a bird club (roles and responsibilities)
- Planning club activities (birdwatching trips, art projects, awareness campaigns)

#### Interactive Activity:

- Students brainstorm a name, motto, and logo for their bird club.
- Plan the first bird club meeting and activities.

## End-of-Training Evaluation

#### Activities:

- Conduct a post-test at GHS Bonakanda
- Have students write a reflection on what they learned.
- Award certificates of participation to active students.

## Next Steps & Sustainability Plan

1. Monitor bird club activities – Monthly check-ins with club leaders.
2. Encourage competitions – Inter-school bird quizzes and art contests.
3. Connect with conservation organizations – Link students to national/global bird conservation initiatives.
4. Long-term impact assessment – Conduct follow-up tests after several years.

### APPENDIX 3. RESULTS FROM PRE-TEST AND POST-TEST ANALYSIS

N=50

Category	Question	Responses	Pre-test		Post-Test	
			Frequency	Percentage	Frequency	Percentage
Knowledge	Do you have Knowledge of Bird role in the Ecosystem	True	15	30	38	76.0
		False	5	10	5	10.0
		I don't know	30	60	7	14.0
	Thread to birds' population	Deforestation	20	40	8	16.0
		Climate Change	10	20	17	34.0
		Urban Development	10	20	6	12.0
		All of the above	10	20	19	38.0
	Organizations known for bird conservation	Cameroon-Wildlife Conservation Society	0	0	8	16.0
		Birdlife International	10	20	22	44.0
		Bird Partners	0	0	10	20.0
		I don't know	40	80	10	20.0
Attitude	Interest in birds on the scale of 5	0	20	40	0	0
		1	10	20		
		2	10	20	3	6.0
		3	5	10	8	16.0
		4	5	10	14	28.0
		5	0	0	25	50.0
	Birds are essential to maintaining environmental health	Strongly disagree	4	8	3	6.0
		Disagree	22	44	11	22.0
		Neutral	10	20	4	8.0
		Agree	10	20	15	30.0
		Strongly agree	4	8	17	34.0
		Strongly disagree	2	4	4	8.0

	I am concerned about the threats birds face in my community.	Disagree	15	30	3	6.0
		Neutral	30	60	10	20.0
		Agree	1	2	14	28.0
		Strongly agree	2	4	19	38.0
	I believe I have a role to play in protecting bird species in Buea	Strongly disagree	9	18	3	6
		Disagree	20	40	2	4
		Neutral	20	40	5	10
		Agree	1	2	15	30
		Strongly agree	0	0	25	50
Behavior	I am willing to participate in any bird conservation activity	Strongly disagree	1	2	3	6.0
		Disagree	12	24	5	10.0
		Neutral	19	38	8	16.0
		Agree	10	20	15	30.0
		Strongly agree	8	16	19	38.0
	I am willing to support bird conservation activity if given the chance	Strongly disagree	12	24	6	12.0
		Disagree	14	28	1	2.0
		Neutral	10	20	9	18.0
		Agree	13	26	17	34.0
		Strongly agree	1	2	17	34.0
	Willingness to join a club	Yes	27	54	48	96.0
		No	23	46	2	4.0

## Demography

Demography	Category	Frequency	Percentage
The age range of students	Less than 12 years	26	52
	13- 15 years	22	44
	16+ years	2	4

Gender	Male	23	46.0
	Female	27	54.0

#### Knowledge of bird's native to Buea pre-test

Category	Frequency	Percentage
I don't know	25	50
Witch bird	10	20
Palm bird	5	10
Dirty bird	15	30

#### Knowledge of bird's native to Buea post test

Category	Frequency	Percentage
Weaver birds	10	20.0
Common Swift	10	20.0
Eurasian Sparrowhawk	11	22.0
I Don't Know	19	38.0
Total	50	100

