

Instructor Note: To facilitate understanding, I have provided two different examples from two different projects. This first page shows how your Methods maps onto the ToC logic model you created, while the second page shows an example of what a fully completed Methods section would look like in your grant submission. The two examples both come from real ASPIRE awardees, but are otherwise unrelated.

Problem statement: Over half of central Africa’s sea turtles are considered threatened or endangered, yet their biggest threats are unclear. These species are important food sources for locals.

Inputs	Activities	Outputs	Short and Medium Term Outcomes	Long Term Outcomes (Impacts)
Resources	How you will use your resources	What is produced by your activities	Changes in learning and action	Changes in conditions
<ul style="list-style-type: none"> ASPIRE grant financing Connections with WWF and Cameroon’s Ministry of Forestry & Wildlife 	<ul style="list-style-type: none"> Interviews with over 100 fishermen in 8 communities Daily reports of turtle bycatch numbers Community training program planning 	<ul style="list-style-type: none"> Written report outlining turtle bycatch causes and solutions Fisherman reporting network Sensitization campaign presented to 200 people 	<ul style="list-style-type: none"> Increased community skills for removing turtles stuck in nets Better guidance for policy design protecting turtles 	<ul style="list-style-type: none"> Fewer turtle bycatch deaths Turtle decline slows or stops More available food for locals

Example: Methods

*Adapted from 2016 awardee Ursula Bénédite Koumbo Tabacum's CARN ASPIRE research <https://www.conservationactionresearch.net/articles/a-sheros-journey-to-saving-sea-turtles>

II-Methodology:

Study area

The field work will take place in 10 cocoa farms in the west region of Cameroon. Cocoa cultivation is among the main economic activities in this part of the country. The targeted area is located between 5°16'N and 9°58'E. The annual average temperature is 22.5 °C., and relative humidity is 92%. Its climate is equatorial of the Guinean type and has four unequal seasons, namely: the long rainy season which runs from mid-August – October ; the small rainy season (from March to June); the great dry season (mid-October to March) and the short dry season (June – mid-August). Laboratory analyses of bird blood will be carried out in a laboratory of the 6 Applied Biology and Ecology Research Unit, Department of Animal Biology, University of Dschang.

Materials and methods

Two weeks field research will be conducted during each season from December 2023 to January 2024. Targeted birds will be captured in each cocoa plantation using 10 mist nets (12 m long, 4 shelves, 2.6 m high, 30 mm mesh) set in parallel and perpendicularly with sampling effort of 6 h per day (from 6 a.m. to 12 p.m.). Opened nets will be checked every 15 min, and all captured birds will be identified using standard reference (Borrow and Demey, 2014). Birds will then be weighed using a Pesola scale of 100 and 1000 g; measured using a manual caliper of with precision of 0.05; banded with numbered rings; sampled for blood and then released, after bleeding had stopped. The date, plantation sites, GPS coordinates, common and scientific names of birds, families, band numbers and other related information will be noted at for each targeted birds.

*(continued on next page)

Adapted from 2022 awardee Mélanie Adèle Tchoumbou's project: <https://www.conservationactionresearch.net/projects/which-native-shade-trees-will-attract-pest-eating-birds-to-cameroonian-cocoa-farms>

Materials and methods con't

Same day recaptures identified through leg bands will not be included in the study. Blood samples from all captured birds will be collected by venipuncture from the brachial vein. Immediately following blood collection, two thin blood films will be quickly prepared, fixed in absolute methanol for at least 1 min, air-dried and packed into slide boxes for subsequent staining in the laboratory. Once in the laboratory, all the blood films will be stained for 1 h with Giemsa diluted in 1/10 with phosphate buffer (obtained by dissolving 1g of Na₂HPO₄ and 0.7g of KH₂PO₄ in 1 liter of distilled water), and rinsed in tap water. After staining, blood films will be air dried and examined at high magnification (X100) under a light microscope using immersion oil. Morphometric features and parasites identification will be made according to Valkiunas (2005).

Statistical analyses

The prevalence of parasite will be determined as the number of infected birds over the total number of sampled birds. Intensity of infections will be estimated as a percentage by actual counting of the number of parasites per 1000 red blood cells for heavy infections (>1 parasites per microscopic field) or per 10 000 red blood cells for light infections (<1 parasites per microscopic field) (Godfrey et al., 1987). Seasonal effect on the prevalence and intensity of parasite will be assessed using chi-square test, while the variation of parasite prevalence among risk factors will be performed using Kruskal-wallis test.

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