Initiative for Climate Action Transparency (ICAT) Phase II Project Technical Workshop.



Livestock Prototype Survey Vanuatu

10–12 August 2026

DISCLAIMER

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, recording or otherwise, for commercial purposes without prior permission of Vanuatu. Otherwise, material in this publication may be used, shared, copied, reproduced, printed and/or stored, provided that appropriate acknowledgement is given of Vanuatu and ICAT as the source. In all cases the material may not be altered or otherwise modified without the express permission of the Vanuatu.

PREPARED UNDER

The Initiative for Climate Action Transparency (ICAT), supported by Austria, Canada, Germany, Ireland, Italy, and the Children's Investment Fund Foundation.

Supported by:

Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety

based on a decision of the German Bundestag

IKI INTERNATIONAL CLIMATE INITIATIVE

MINISTERO DELL'AMBIENTE E DELLA SICUREZZA ENERGETICA

Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, Innovation and Technology

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Rialtas na hÉireann Government of Ireland

CIFF CHILDREN'S INVESTMENT FUND FOUNDATION

ICAT is hosted by the United Nations Office for Project Services (UNOPS)

UNOPS

ICAT Vanuatu PHASE II Project Technical Workshop. Validation of the Livestock Production Survey

Initiative for Climate Action Transparency – ICAT

Output F

AUTHOR

Johnethy Roy Morris
ICAT Project Consultant

August 2026

Table of Contents

DISCLAIMER 2
PREPARED UNDER 2

ICAT Vanuatu PHASE II Project Technical Workshop. Validation of the Livestock Production Survey 3
Output F 3

Abbreviations and Acronyms 5

Introduction 6

Workshop Programme and Objectives 6

Day 1 – Technical Foundations and Data Gaps 6
Key Technical Discussions Topics 7
Vanuatu Data Gap Findings 7

Day 2 – Survey Prototype and Guidance Manual 8
Survey Purpose and Structure 8
Guidance Manual and Initial Feedback 8
Train-the-Trainer Assignment 8

Day 3 – Practical Application and Survey Validation 9
Using Livestock Survey Data for GHG Emission Estimation 9
Survey Testing Exercise 9
Survey Validation and Participant Feedback 10
Institutional Discussion and Closing 10

Conclusion 11

Annex 1 12

Annex 2 13

Abbreviations and Acronyms

CH_4	Methane
GHG	Greenhouse Gas
ICAT	Initiative for Climate Actions Transparency
N_2O	Nitrous Oxide
VNAC	Vanuatu National Agriculture Census

Introduction

Reliable livestock activity data are essential for transparent and accurate national GHG inventories. The three-day Livestock Greenhouse Gas (GHG) Survey Prototype Workshop was designed to strengthen Vanuatu's national capacity for livestock emissions reporting. The workshop brought together technical officers and stakeholders from climate change, livestock, forestry, energy and related sectors to build a shared understanding of agricultural GHG emissions, national reporting requirements, and the activity data needed for reliable livestock inventories.

A central feature of the workshop was learning-by-doing. Participants reviewed the proposed extension to the Vanuatu National Agriculture Census (VNAC), worked through the livestock survey prototype and Guidance Manual, and practiced communicating technical material to others. This approach was intended not only to improve the 2026 Livestock Agriculture Survey, but also to develop a wider pool of national practitioners who can explain, apply and sustain GHG data collection and reporting processes over the long term.

Workshop Programme and Objectives

The livestock validation survey workshop was held in Le Life on Monday 10th - 12th August 2026. The workshop progressed from technical foundations to survey familiarization and practical validation. The objectives of the livestock validation survey workshop are to:

- Strengthen understanding of agricultural GHG emissions, especially livestock sources and inventory methods for estimating GHG emissions from enteric fermentation and manure management.
- Clarify the activity data requirements for Tier 1 and future Tier 2 livestock estimates.
- Review Vanuatu's existing livestock data, identify critical gaps, and assess the proposed survey as a response.
- Introduce and test the agriculture livestock survey (the Survey) prototype and collect feedback.
- Introduce the Guidance Manual for the Survey and validate the clarity, relevance, and practicality of survey questions.
- Use a train-the-trainer approach to build a wider pool of national experts who can confidently explain GHG concepts, train others, and support routine data collection and reporting

Day 1 – Technical Foundations and Data Gaps

Day 1 established the technical basis for the workshop and connected livestock activity data to Vanuatu's GHG inventory and international reporting obligations.

Key Technical Discussions Topics

- Agricultural GHG sources, with emphasis on enteric fermentation (CH_4) and manure management (CH_4 and N_2O).
- Tier 1 relies mainly on livestock population, livestock type and IPCC default emission factors; Tier 2 requires enhanced livestock characterization and more country-specific information.
- Important Tier 2 variables include animal body mass, feed and feeding situation, productivity, reproduction, growth and manure-management practices.
- Comparison of national and international data sources, including agriculture censuses, livestock records and FAO datasets.
- Discussion of key limitations such as missing years, incomplete metadata, inconsistent categories and insufficient detail for Tier 2.
- Vanuatu's climate-policy and reporting context, including BTR requirements, institutional responsibilities, QA/QC, time-series consistency and the need for sustainable data arrangements.

Vanuatu Data Gap Findings

The review confirmed that the VNAC provides a useful base, but important information is not consistently available at the level required for more representative livestock emission estimates. Key findings regarding Vanuatu's data gaps include:

- Livestock population by detailed species/class, age and sex.
- Typical animal mass and lifespan.
- Milk and other productivity information.
- Feeding practices, feed types and feeding situations.
- Manure-management systems and the proportion of manure handled by each system.



Day 1 Technical session on livestock activity data and manure management

Day 2 – Survey Prototype and Guidance Manual

Day 2 focused on the application of the developed livestock survey as a practical mechanism for collecting data addressing the identified data gaps and supporting improved Agriculture GHG reporting.

Survey Purpose and Structure

The national experts have presented the survey prototype as an extension to the VNAC, with the long-term intention of integrating the survey questions into future census rounds or a complementary survey. The key components and specific data types in the survey have been clarified for the workshop participants.

During the practical session, the workshop participants reviewed the survey in small groups and prepared their feedback and questions on the survey.

Guidance Manual and Initial Feedback

- The Guidance Manual explained how each survey field links to livestock GHG estimation and provided instructions for consistent data entry.
- Participants recommended clearer definitions, practical examples, consistent units, additional drop-down options and Bislama/local-language explanations for technical livestock terms.
- Practical concerns included estimating animal body weight where scales are unavailable and ensuring questions are realistic for farmers who may not keep formal records.

Train-the-Trainer Assignment

Participants were divided into four groups, with each group receiving a different technical presentation and supporting reference materials. Groups were given time to study the content and full flexibility to adapt the slides, add examples, create new slides and reorganize the material so it could be delivered in a clear and user-friendly way.

The goal of the assignment was to prepare the participants to deliver this material in a simple form and to explain the key concepts of data requirements for livestock and emissions estimation methods, according to the MPGs and the 2006 IPCC Guidelines, to their colleagues and policymakers



Day 2. Agriculture lead consultant presentation of the detailed breakdown of the survey

Day 3 – Practical Application and Survey Validation

Day 3 moved from theory to application. Participants revisited the link between farm-level activity data and national emission estimates, then tested the survey prototype for clarity and field practicality.

Using Livestock Survey Data for GHG Emission Estimation

- Participants reviewed how information collected through the livestock survey is used as activity data in livestock GHG emission calculations.
- The basic relationship Emissions = Activity Data × Emission Factor was demonstrated using livestock examples.
- For enteric fermentation, participants reviewed how livestock population by category is combined with the relevant CH_4 emission factor to estimate emissions.
- For manure management, participants reviewed how livestock population and manure-management information are used in estimating CH_4 emissions.
- Participants also discussed the main national data sources that can support these calculations, including the Vanuatu National Agriculture Census, Department of Livestock records, and targeted farm surveys.

Survey Testing Exercise

- Participants worked in small groups and carried out a role-play activities based on a real-life field scenario. One participant acted as an extension officer/enumerator posing the survey questions, while another acted as a farmer providing livestock information and data.
- The exercise tested whether the survey questions were clear, practical and easy to understand in an actual interview situation.

- Participants identified questions that needed simpler wording, clarification, examples, or local-language explanations.
- The activity also helped assess whether farmers would realistically be able to provide the information requested and whether extension officers could record the responses accurately.
- Feedback from the role-play was then used to suggest improvements to the survey prototype before field implementation.

Survey Validation and Participant Feedback

- Add missing administrative options and improve fields for village, farm owner identification, respondent details, and date/time of data collection.
- Simplify technical land-tenure and livestock terminology and provide definitions/examples for data collectors.
- Clarify units for animal age, animal numbers, body weight, land area and feed intake.
- Use more validated drop-down lists and automatic administrative selections where possible.
- Provide practical approaches for estimating animal body weight and other Tier 2 variables where equipment or farm records are unavailable.
- Ensure questions are understandable in the Vanuatu context and consider Bislama/local-language explanations where useful.

Institutional Discussion and Closing

Closing remarks emphasized the need for building a durable pool of experts across climate change, livestock, forestry, energy, environment and related sectors. The proposed approach is to work sector by sector, beginning with livestock and later addressing waste and energy sectors, while institutionalizing data collection and reporting practices that can support Vanuatu over the next 10–20 years.



Day 3 Practical review linking survey activity data to GHG calculations

Conclusion

The three-day workshop achieved more than a technical review of livestock emissions and survey questions. Through the train-the-trainer exercise, participants demonstrated that they could interpret technical material, adapt it to the Vanuatu context, teach it to peers and communicate it in both English and local language. Combined with the practical survey review and emissions exercises, this created a strong foundation for a more self-sustaining national capacity for the collection and reporting of livestock GHG data.

The Livestock Agriculture Survey 2026 was highlighted as the immediate practical deliverable. Follow-up work should refine the prototype and Guidance Manual, support field implementation, continue sector-specific capacity building, and strengthen institutional arrangements for sustained national GHG data collection and reporting.

Group Photo of Stakeholders



Annex 2

Workshop Agenda

Agenda_Ag Survey Workshop.pdf