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Introduction

- Poultry farming occupies an important role in the Malagasy rural economy and the livelihoods of its people.

BUT: Consumption of eggs is uncommon, despite health benefits and significant poultry numbers in rural households (Fig. 2).

- Food insecurity and malnutrition remain big problems in the south and southeast (Atsimo Atsinanana, Fig 1.)

- Eggs have the potential to improve maternal and child nutrition, and health of the rural population.

- The government and NGOs are keen to know how to target egg production and consumption sufficiently.



Fig. 2: Map of Madagascar with marked region Atsimo Atsinanana

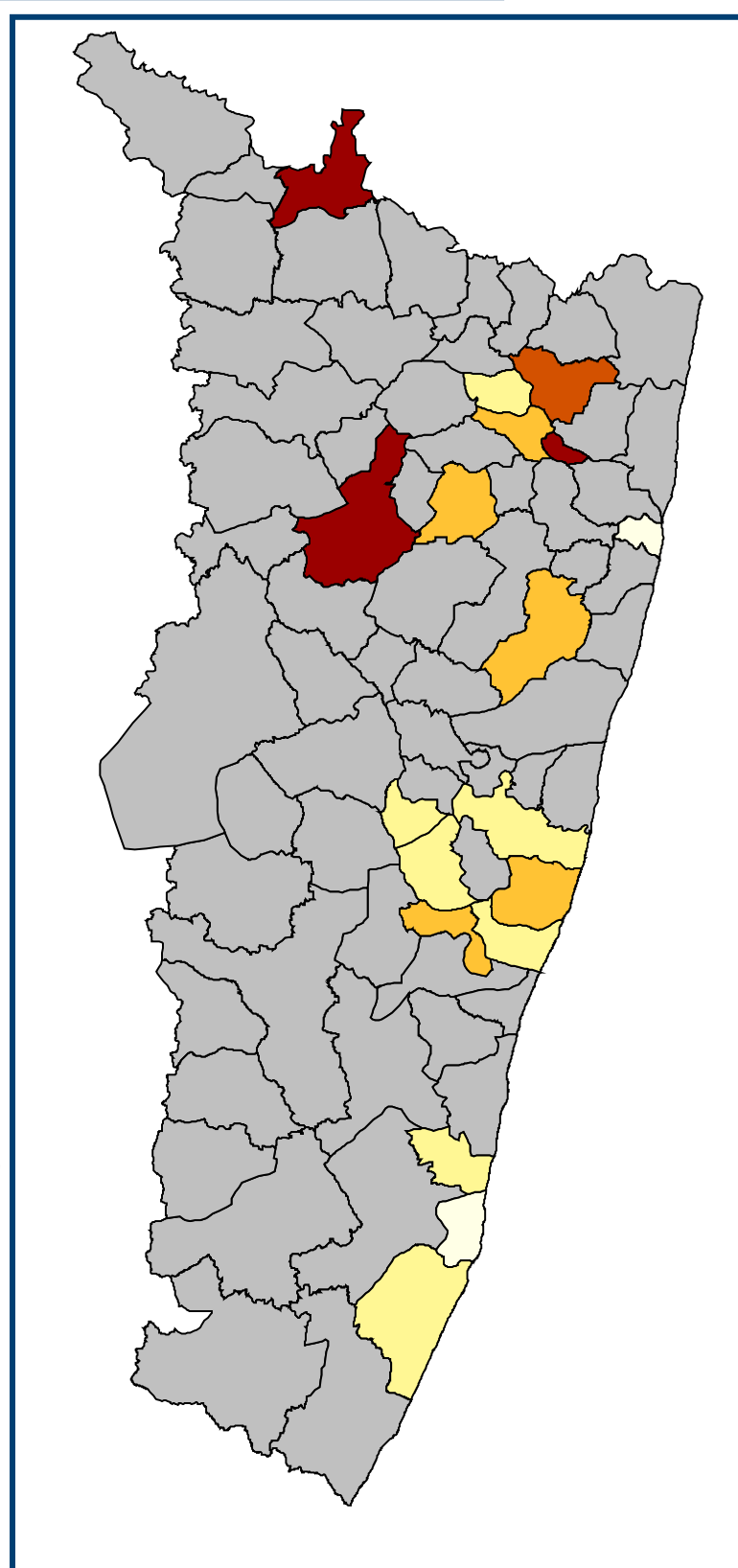
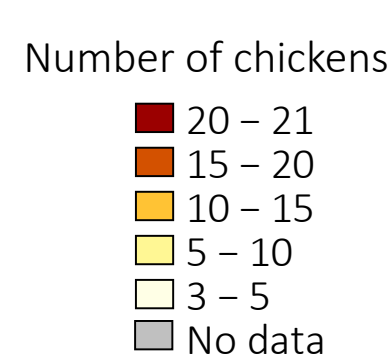


Fig. 1: Average number of chickens per household in the study region

Results: Constraints & Opportunities

- Constraints: high mortality due to disease and predation, poor husbandry, lack of market access, lack of veterinary services, and low productivity of local chickens. Major health constraint: Newcastle disease (ND).



Fig. 5: Code cloud created on head category "constraints" with MAXQDA 2020; size of words equals coded segment amounts

- Opportunities for nutrition and income; promote gender equality and empowerment (women tend to have more control over poultry); slaughtered for sociocultural purposes and sold to meet household needs.

Research objective

- Understand importance of poultry rearing in rural livelihoods; poultry is traditionally reared with little inputs into the system (poultry is kept under the house)
- Describe challenges and opportunities to small-scale family poultry rearing and egg consumption in the study region and explore viable development interventions
- Contribute to local nutritional situation and health of rural population; focus on women of reproductive age and children in the 1000-day window (from the beginning of pregnancy until the age of two).

Research question:

What are viable development interventions for improving poultry rearing and increasing egg consumption in the study region?



Fig. 3: Traditional house on stilts (photographed by Arielle Sandrine Rafanomezantsoa)

Results: Interventions

- Interventions on health, animal husbandry and nutrition; training for farmers on poultry management practices, marketing, and poultry health; awareness campaigns and sensitisation.

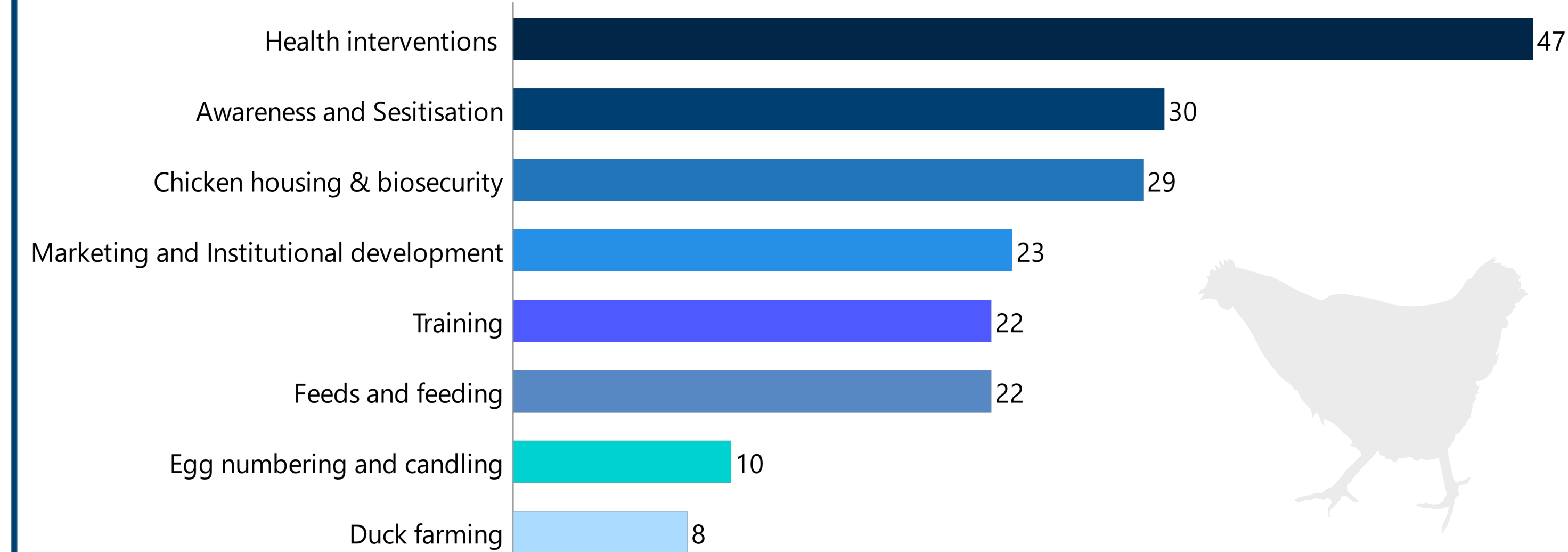


Fig. 6: Intervention options, hierarchically sorted by coded segment amounts, created with MAXQDA 2020

- Small numbers of eggs consumed: people prefer hatching instead of eating them due to the low egg-laying potential of local chickens.
- Possible solutions: breeding and production improvements, egg candling and numbering.

Methods

Multi-tiered survey approach:

- 1 - Literature review
 - 2 - Expert interviews (local and international) analysed with content analysis
 - 3 - Interviews with rural farmers (local context exploration) conducted by enumerators:
- 16 focus group discussions and 16 positive deviant interviews

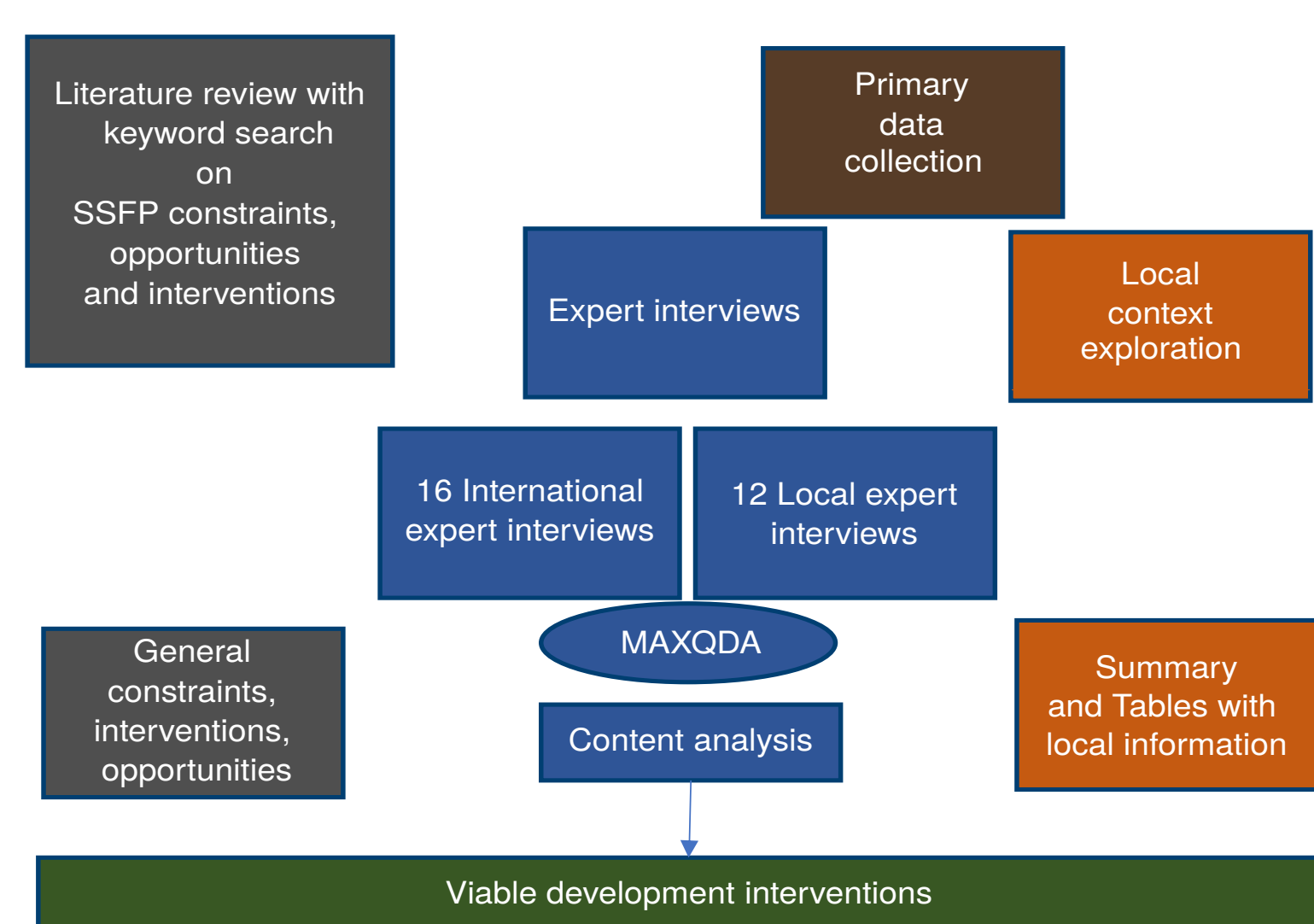


Fig. 4: Overview data collection and analysis

Picture sources: <https://de.vecteezy.com/vektorkunst/92757-free-chicken-silhouette-vektor>, accessed 26.08.2021; <https://www.17goalsmagazin.de/17goals/>, accessed 30.08.2021

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Conclusion

- Poultry are a suitable food source for Malagasy society, regardless of religion, socioeconomic level, gender, or age (SDG 2).
- Entire household benefits from interventions; women empowerment + protection of vulnerable women and children; usage of additional incomes to purchase other nutritious foods or fulfil household needs (SDG 1, 3, 5, 4).
- Health and husbandry interventions increase poultry survival rates = surplus in chickens and eggs + training and awareness campaigns: increase in poultry product consumption (SDG 2, 3, 4).
- Indirect effects on food security: enhances nutrient utilisation + recycling in the environment.
- Combination with other nutrition sensitive interventions (e.g., kitchen gardens).
- Community supported ND preventive schemes (community vaccinators) can create jobs (women and vulnerable groups) and greater output can boost rural economic growth (SDG 1, 8, 10).

