

## Terms of Reference

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**Assignment title:** Seed/Food Storage Assessment

**Dates & duration:** July-November 2021

**Location(s):** Timor-Leste

**Reports to:** TOMAK national program manager and Social & Behavior Change and Nutrition Specialist

**Seeking:** An organisation/firm to carry out seed/food storage assessment

**TOMAK Contract Representative:** Tammy Theikdi, TOMAK Program Manager

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### Background:

#### TOMAK

The *To'os Ba Moris Di'ak* Program (TOMAK) is a A\$25 million, 5-10 year agricultural livelihoods program funded by the Australian Government in Timor-Leste. Its goal is to ensure rural households live more prosperous and sustainable lives. TOMAK works in partnership to implement parallel and linked interventions that aim to:

- Establish a foundation of food security and good nutrition for targeted rural communities.
- Build capacity so these communities can confidently and ably engage in profitable agricultural markets.

The first phase of the TOMAK program ended on 31 May 2021 and TOMAK is currently undergoing a redesign in preparation of the second phase of the TOMAK program. An extension period leading into TOMAK Phase 2 began on 1 June 2021.

Component 1 of the program (Food Security and Nutrition) promotes nutrition-sensitive agriculture (NSA) approaches to improve the availability and utilisation of nutritious food. Component 2 (Market Systems Development) promotes the development of commercial agriculture following a market systems development approach, focussing on selected higher-potential value chains. Gender approaches are embedded in the planning, implementation and monitoring of activities across the program, in order to promote gender equality and women's economic empowerment.

#### The Assignment

TOMAK is seeking an organization/firm to undertake a seed/food storage assessment using quantitative and qualitative methods, including development of the methodology, data collection in the field, analysis of results and presentation back to TOMAK and relevant actors.

Improved seed/food storage technologies<sup>1</sup> have the potential to increase food stability by allowing rural households to reduce post-harvest losses and use their agricultural production over a longer period. Along with food availability, access and utilisation, stability is one of the four pillars of food security.

During Phase 1 implementation, TOMAK and implementing NGO partners focused on improved grain storage methods and promoted drums/silos, jerry cans and sack storage techniques for maize and rice. TOMAK Component 1 Midline results (carried out in October 2020) show that respondents are practicing seed/food storage and to some extent utilisation of improved techniques. The Component 1

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<sup>1</sup> Such as: jerrycans, jumbo sacks, steel drums, silos, sugar sacks

midline assessed which crops were stored for food, the storage duration and storage method. The results show higher rates of improved storage for maize between midline and control groups. While the midline results on storage provide useful data, there is a need for a separate study to assess this topic in-depth that goes beyond the scope of the Component 1 midline. This assessment will then be used to help inform potential approaches towards strengthening food stability in TOMAK Phase 2.

In addition to TOMAK, there have been several other projects that have focused on improved seed/food storage. From 2011-2015, The International Fund for Agriculture Development (IFAD) in partnership with the Ministry of Agriculture and Fisheries (MAF) Timor-Leste implemented a maize storage project which introduced subsidised drums and training to reduce maize losses during storage and before consumption/use. Over 41,000 steel drums were distributed to households. There were successes including reduced storage losses for farmer adopters (from 15% to less than 1%) which had a positive impact on food security.<sup>2</sup> Additional projects with a strong focus on storage include: Effective Seed Storage in Timor-Leste (2011) and Climate-Smart Resilience Opportunities through Post-Harvest Storage (2017) implemented by Mercy Corps and Catholic Relief Services and Resilient Di'ak (2019) implemented by Mercy Corps. The Food and Agriculture Organization and the Seeds of Life project have also implemented multiple storage-related interventions over the past fifteen years and have captured important lessons learned. Other examples are likely to be uncovered through an extensive literature review of projects that have focussed on improved storage technologies in Timor-Leste.

Despite the long history of government and development partner interventions on seed/food storage, multiple challenges to sustained and correct uptake in improved storage methods remain. This provides an ongoing opportunity to assess sustained use of improved storage methods once projects.

This targeted assessment will focus on multiple aspects of seed/food storage and should include:

- Key informant interviews (KIIs) with key actors past and present working in seed/food storage in Timor-Leste including MAF;
- Identification of the different storage technologies currently available (including price and supply chain);
- Consolidation of different types of technologies utilised in Timor-Leste, including their rate of use and advantages and disadvantages of different methods;
- Analysis of community willingness to pay for improved storage technologies;
- Exploration of the sustainability of improved storage technology over time (e.g. data collection with farmers in areas of previous projects).
- Consolidation of lessons learned around the different models for disseminating seed/food storage technologies in Timor-Leste;

## **Key research questions**

### *General*

- What are the various seed/food storage options for staple crops (e.g. rice, maize), protein rich crops (e.g. mung beans, black beans) and tubers (e.g. orange flesh sweet potato) and their comparative advantages?

### *Factors affecting uptake (assessment of previous project areas)*

- To what extent are farmers aware of the importance of seed/food storage? To what extent have farmers been trained on how to store excess production appropriately?

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<sup>2</sup> <https://www.oneplanetnetwork.org/initiative/timor-leste-maize-storage-programme-tlmsp>

- What are the most prevalent constraints to sustained uptake in improved seed/food storage? Examples may include:
  - Insufficient harvest to store
  - Insufficient time/labour to dry and store
  - Prioritisation of seed/food storage technologies for water storage
  - Storage practice/technology too complex to carry out
  - Access (including type)
  - Prevailing norms/preference for traditional methods
  - Cost of improved storage methods
- Related to the above constraints, what are the factors for success in uptake of seed/food storage technologies?
- What are the prevalent pre- and post-harvest practices that affect uptake of seed/food storage technologies?
- How does access to water across agricultural seasons relate to uptake in seed/food storage technologies?
- To what extent are farmers willing to pay/invest in seed/food storage technologies?

#### *Gender and social inclusion*

- What are the relevant gender dynamics in seed/food storage and how do these affect uptake of improved seed/food storage methods (e.g. division of labour per task, participation in storage training, women's time during planting season, household decision-making)?
- How are the various seed/food storage technologies accessible for people with disabilities? (assessed through literature review)

#### *Government service provision*

- How can government agriculture extension workers help to strengthen promotion of improved storage options?

## **Overview of Assignment**

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### **Assignment responsibilities:**

- Develop assessment methodology (and sample size) including a proposed report format in coordination with TOMAK
- Carry out literature review and KIIs
- Data collection (survey and direct observation) in locations of ongoing and previous seed/food storage interventions in six municipalities with farmers and agriculture extension workers
- Carry out preliminary findings presentation
- Finalise assessment report that includes: compilation of key lessons learned and successes across Timor-Leste, identification of key barriers to uptake, payment options and community willingness to pay, and recommendations for storage method approaches (including approaches that directly affect seed/food storage) and dissemination models

### **Timeline:**

Finalisation of the timeline to be determined with the selected organisation.

- Initial planning and discussions with the TOMAK technical team (July);
- Carry out literature review (July)
- Liaise with MAF (throughout the process)
- Develop assessment methodology in coordination with TOMAK (July)
- Data collection (August-Sept)
- Carry out preliminary findings presentation (Oct)
- Finalise assessment report (Nov)

**Skills and experience required:**

- a. Extensive experience completing assessments and evaluations in Timor-Leste.
- b. Capacity to manage all aspects of data collection including hiring and training of enumerators, coordination with local leaders and MAF, transportation, etc.
- c. Advanced skills in qualitative and quantitative data analysis.
- d. Experience in the nutrition and agriculture sector in Timor-Leste, particularly in seed/food storage technologies.
- e. Ability to synthesise a variety of research data and draw concrete conclusions and recommendations.
- f. Excellent written English report writing skills.

To apply:

- For further information or to submit your application please contact [Tammy.Theikdi@adamsmithinternational.com](mailto:Tammy.Theikdi@adamsmithinternational.com)
- Applications close 21 June 2021
- Organisations should provide a cost estimate
- Submit details describing knowledge and experience relevant to conduct the assessment