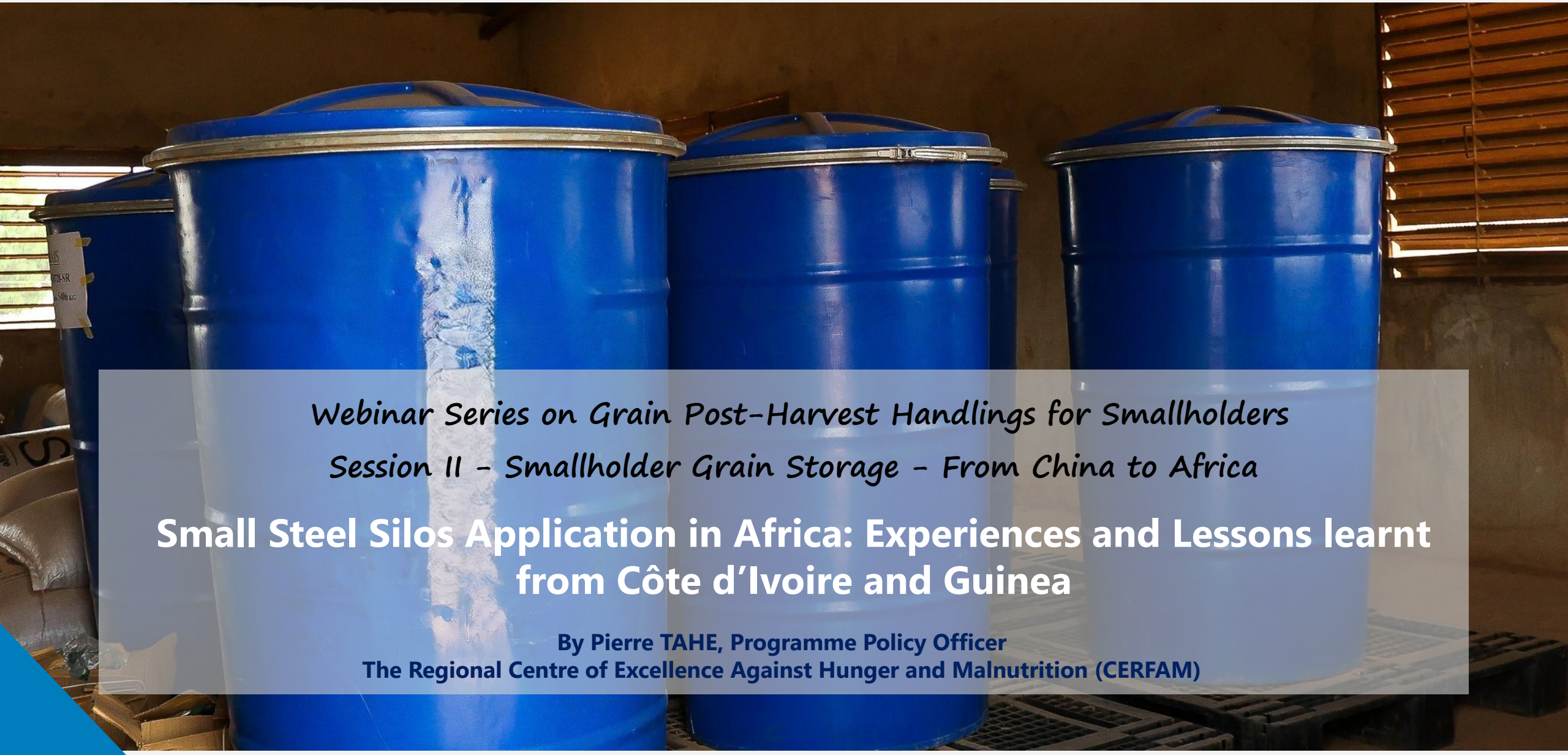

Webinar Series on Grain Post-Harvest Handlings for Smallholders

Session II – Smallholder Grain Storage – From China to Africa

Small Steel Silos Application in Africa: Experiences and Lessons learnt from Côte d'Ivoire and Guinea

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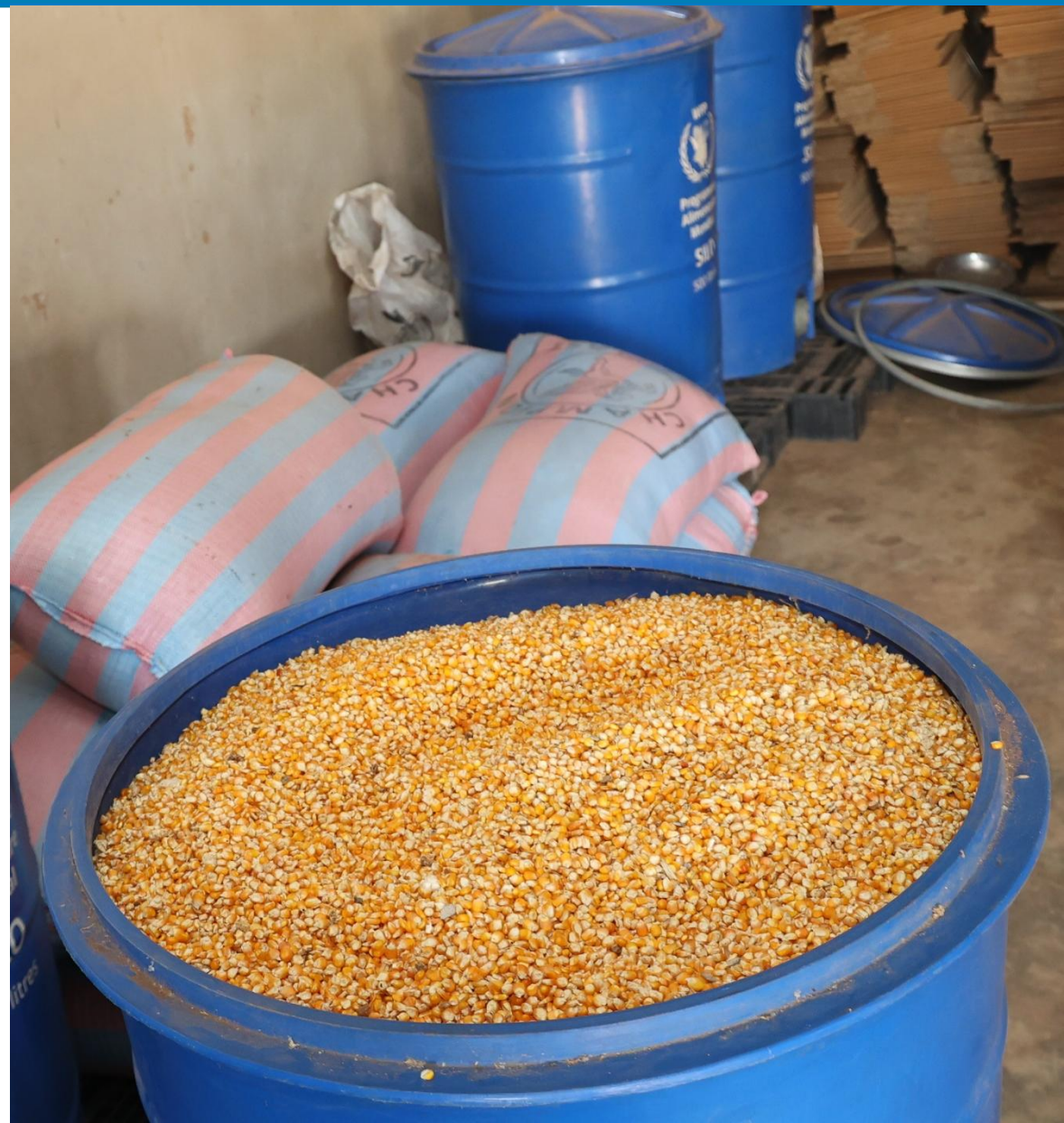
CONTEXT

- Traditional and poor-quality storage infrastructures, prone to infestations and rodents, are a major constraint to food security, income growth, and the valorization of local production.
- In West Africa, post-harvest rice losses can reach 30–50% in certain areas.
- Residual moisture levels above 14% promote the development of toxic fungi (e.g., aflatoxins).
- In Guinea and Côte d'Ivoire, 15 to 25% of rice losses can be attributed to storage-related issues alone (AfricaRice, 2021).
- To address these challenges, WFP Cos Guinea & Côte d'Ivoire, CERFAM & WFP China CoE supported the distribution of small steel silos in Côte d'Ivoire and Guinea (2022–2024) to improve storage and reduce post-harvest rice losses, through a South-South Cooperation project funded by the Gates Foundation.

Objectives of the initiatives

- Reduce post-harvest losses.
- Improve smallholder farmers' incomes, food security, and reduce imports.
- Strengthen storage capacity and autonomy for smallholder farmers, particularly women.
- Support School Feeding program (HGSF)



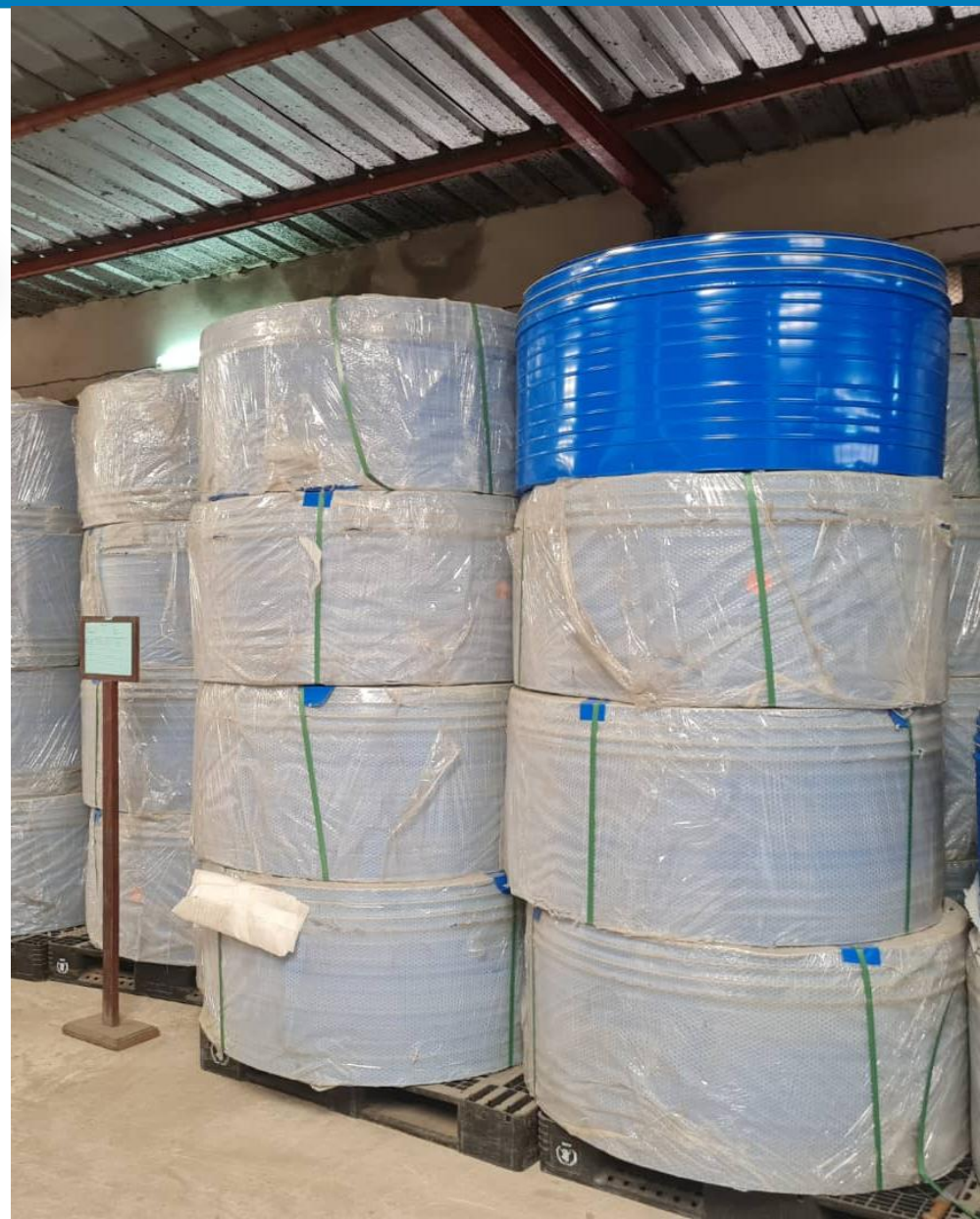
Implementation & adoption

Key actions / Activities

- About 650 Small Steel Silos were distributed in Côte d'Ivoire & Guinea of which 50 where locally manufactured in CIV.

- High adoption rates: 89% of beneficiaries use the mini-silos; 99% use the processing units.

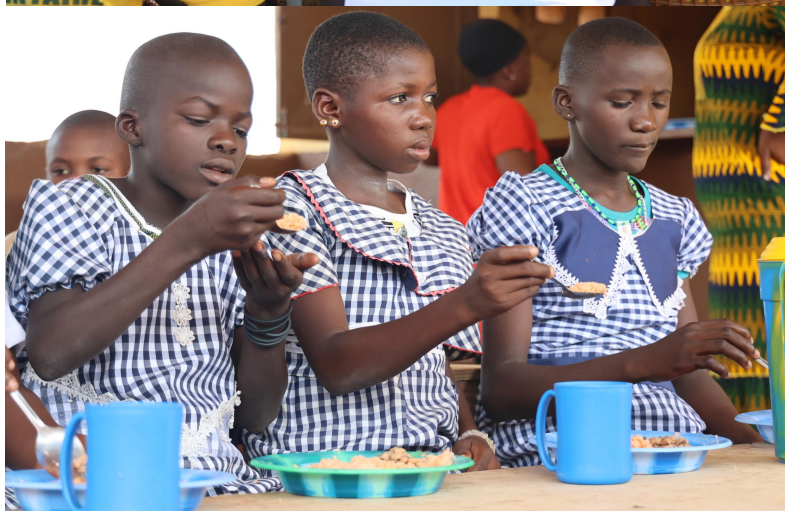
- A manufacturing unit was established in Guiguidou, with local artisans trained by Chinese experts.



Implementation & adoption

❑ Criteria for Identifying and Selecting Beneficiary Communities

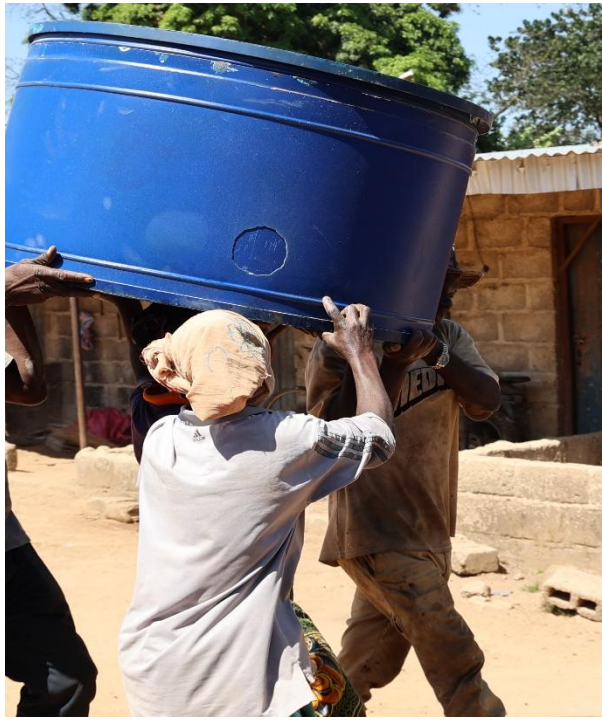
- ❖ Priority was given to groups of smallholder farmers with a strong female representation (98% of members in targeted villages).
- ❖ Communities were selected based on their rice production potential, availability of basic infrastructure, and willingness to engage in collective action.
- ❖ Strong commitment to supporting home-grown school feeding efforts, either by directly supplying local schools (Côte d'Ivoire) or by selling part of their production to WFP for school feeding (Guinea)..

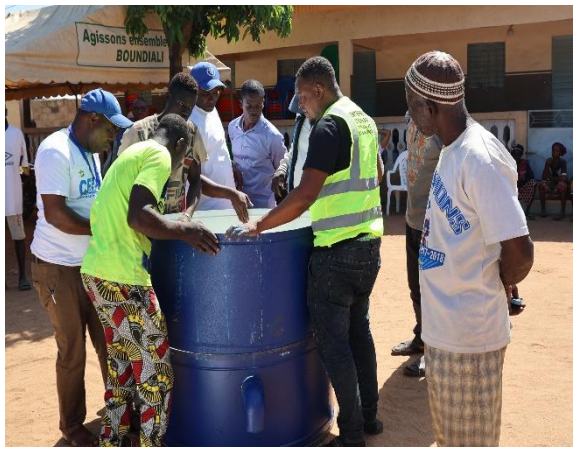


Implementation & adoption

❑ Challenges in Introducing the Technology

- ❖ Insufficient Awareness and Capacity Building: Many beneficiaries lacked adequate information and technical guidance, particularly regarding the use, and assembly, an issue further compounded in low-literacy settings.
- ❖ Technical Limitations of Locally Produced Silos: Several locally manufactured silos presented structural flaws such as excessive weight, poor sealing, and material defects, which compromised their usability and compatibility with imported models.
- ❖ Limited Operational Readiness: The absence of suitable communal storage areas and the lack of prior organizational arrangements hindered effective and collective use of the technology in some communities.





Implementation & adoption

❑ Strategies Implemented to Overcome The Challenges

- ❖ Capacity-building and awareness sessions reinforced by WFP country offices in Côte d'Ivoire, and Guinea with support from CERFAM & Chinese experts based in Côte d'Ivoire.
- ❖ Technical follow-up missions in the villages (e.g., ANADER intervention in Nakaha, Korhogo, CIV).
- ❖ Support for social cohesion in fragile areas (e.g., the merger of group cooperatives in Sissédougou, Boundiali, CIV).

Key Results of the Initiatives

❖ Post-harvest losses reduced for 85% of beneficiaries, with 44% reporting a reduction of over 20%.

❖93% of beneficiaries saw increased income, enabling reinvestment in health, education, and agricultural expansion.

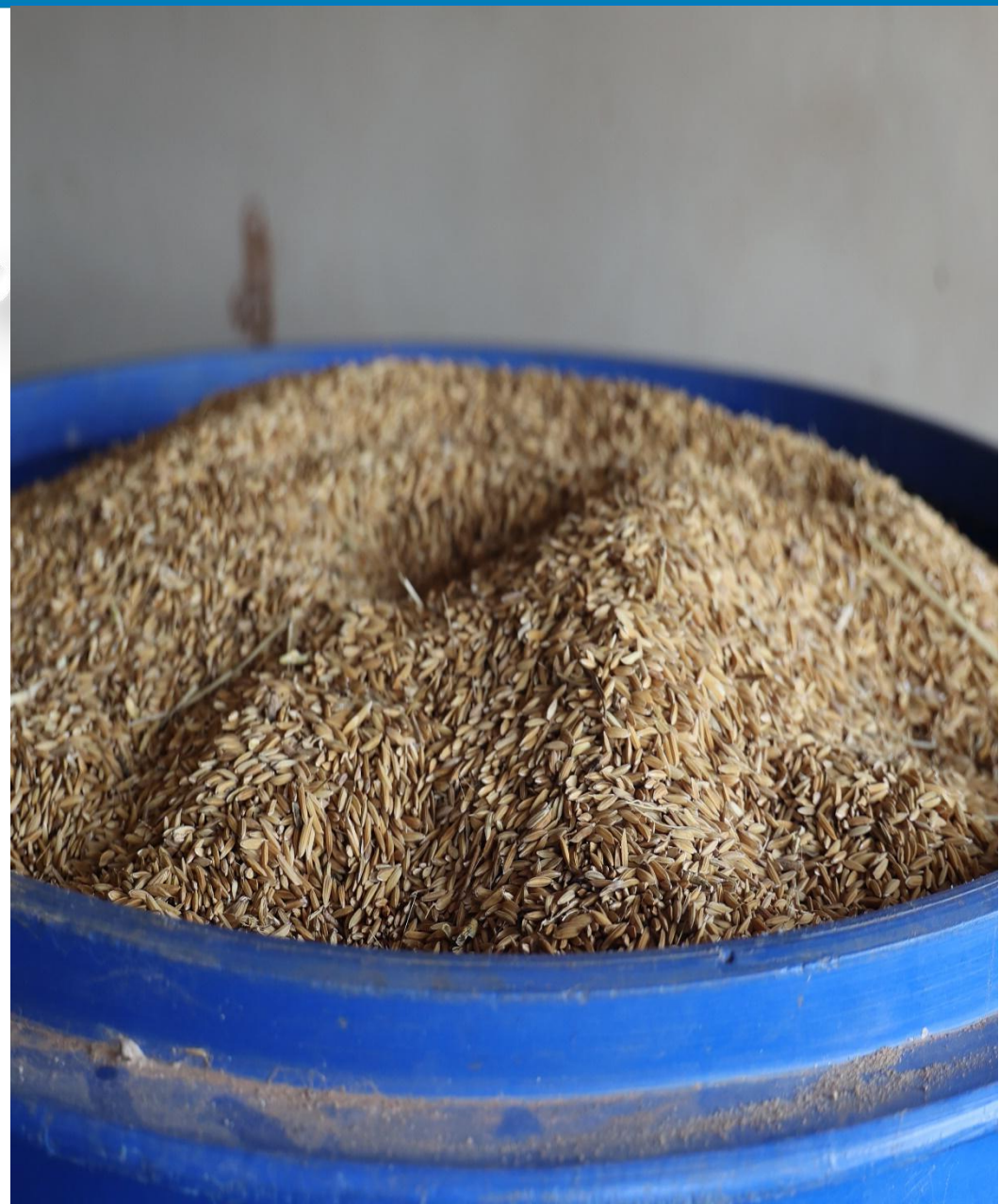
❖81% were able to secure their stocks for more than 6 months, reducing lean season periods.

❖Enhanced decision-making power for women: 55% reported a positive shift in their roles within households and communities.

Lessons learnt & Stakeholder expectations

- **Improved Grain Preservation**: The use of silos allows safe storage of cereals for over six months, reducing lean periods and enabling farmers to sell at better market prices.

- **Positive Impact on Income**: Beneficiaries reported increased earnings due to reduced post-harvest losses and enhanced stock management.

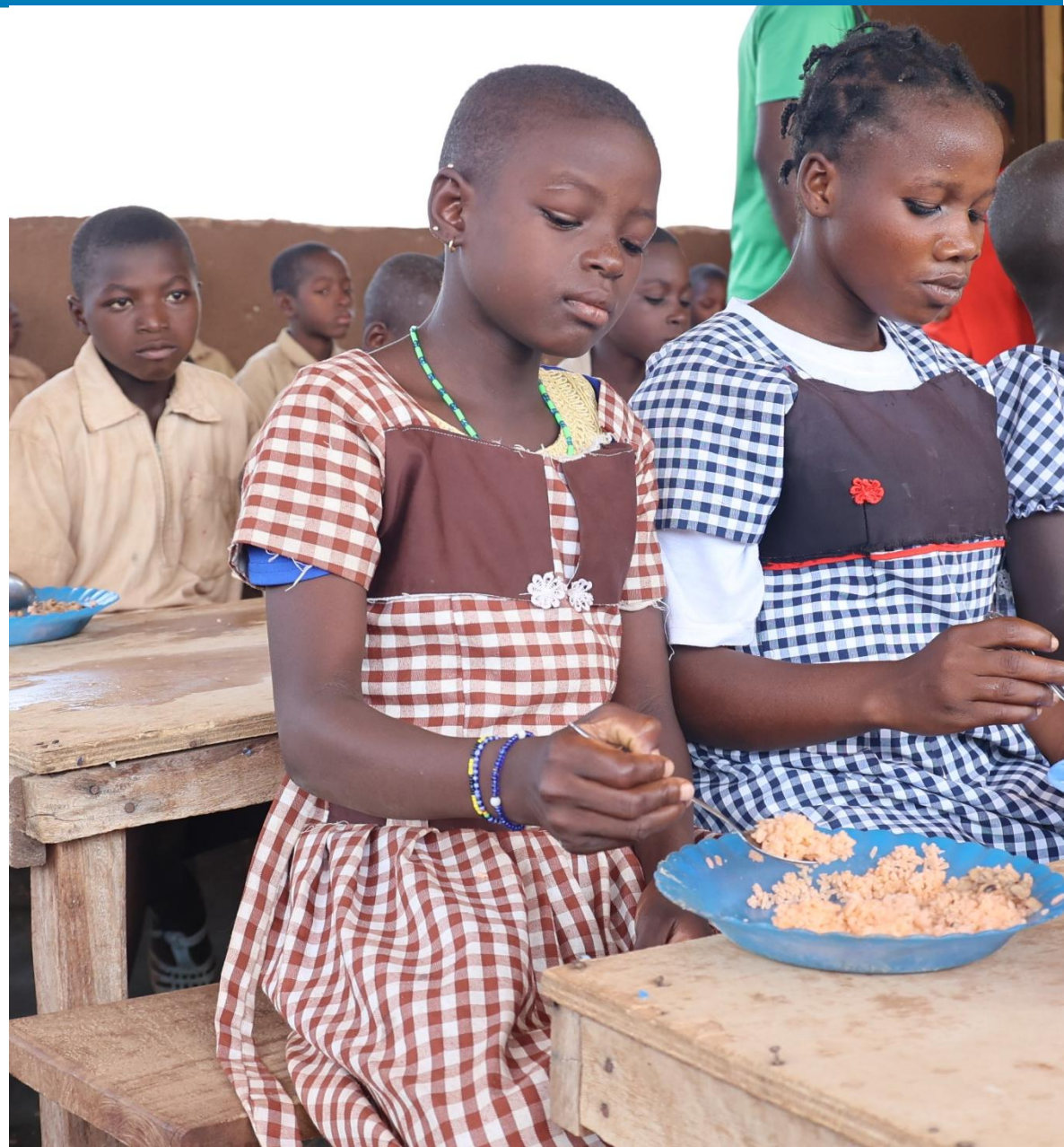


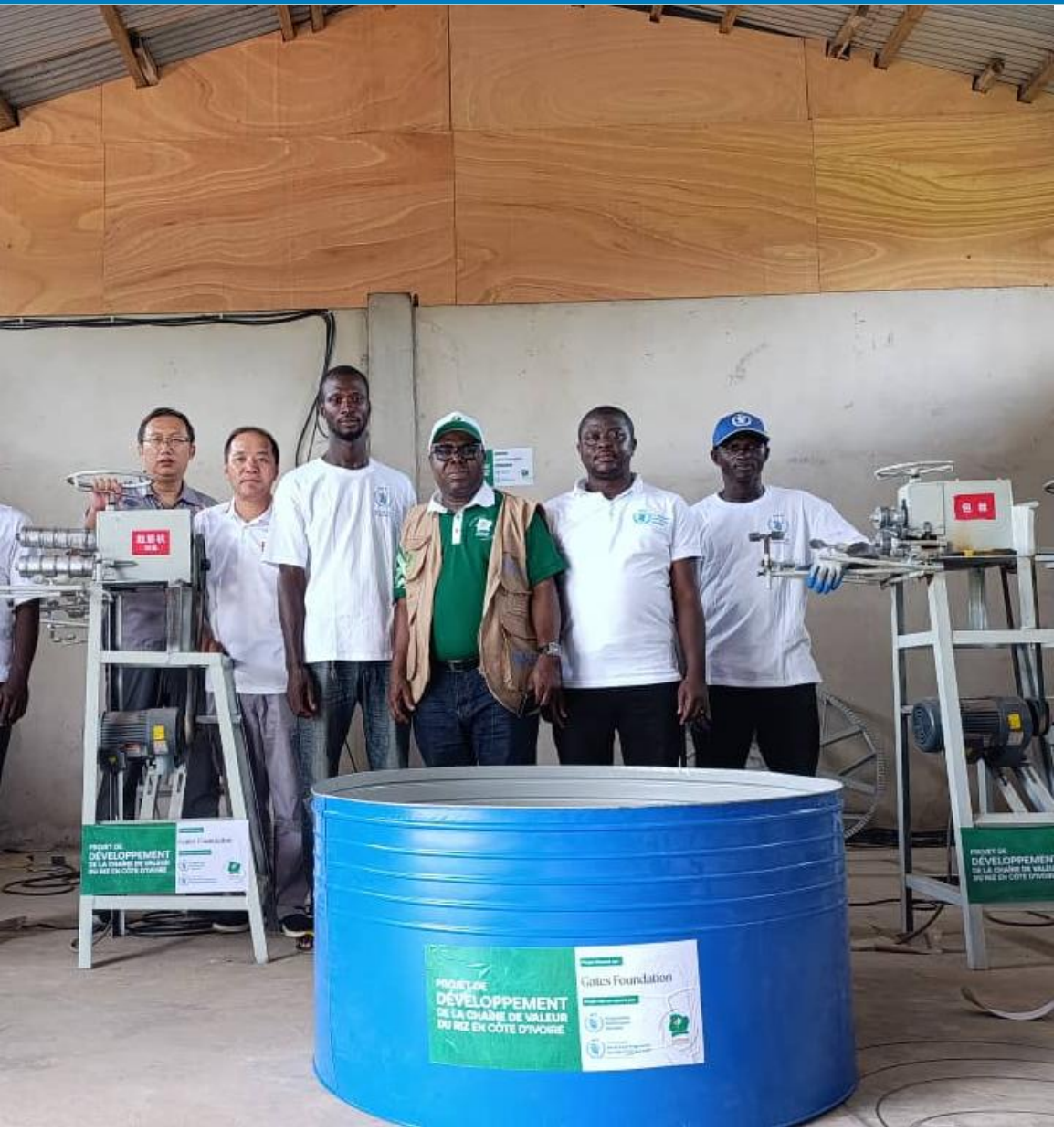
Lessons learnt & Stakeholder expectations

- **Support for Local Procurement**: The initiative contributed to reducing cereal imports by enabling local sourcing for WFP's school feeding programme in Guinea and Côte d'Ivoire.

- **Strong Interest and Demand for Scale-Up**:
  - ✓ 97% of non-beneficiaries surveyed expressed strong interest in adopting the innovation.

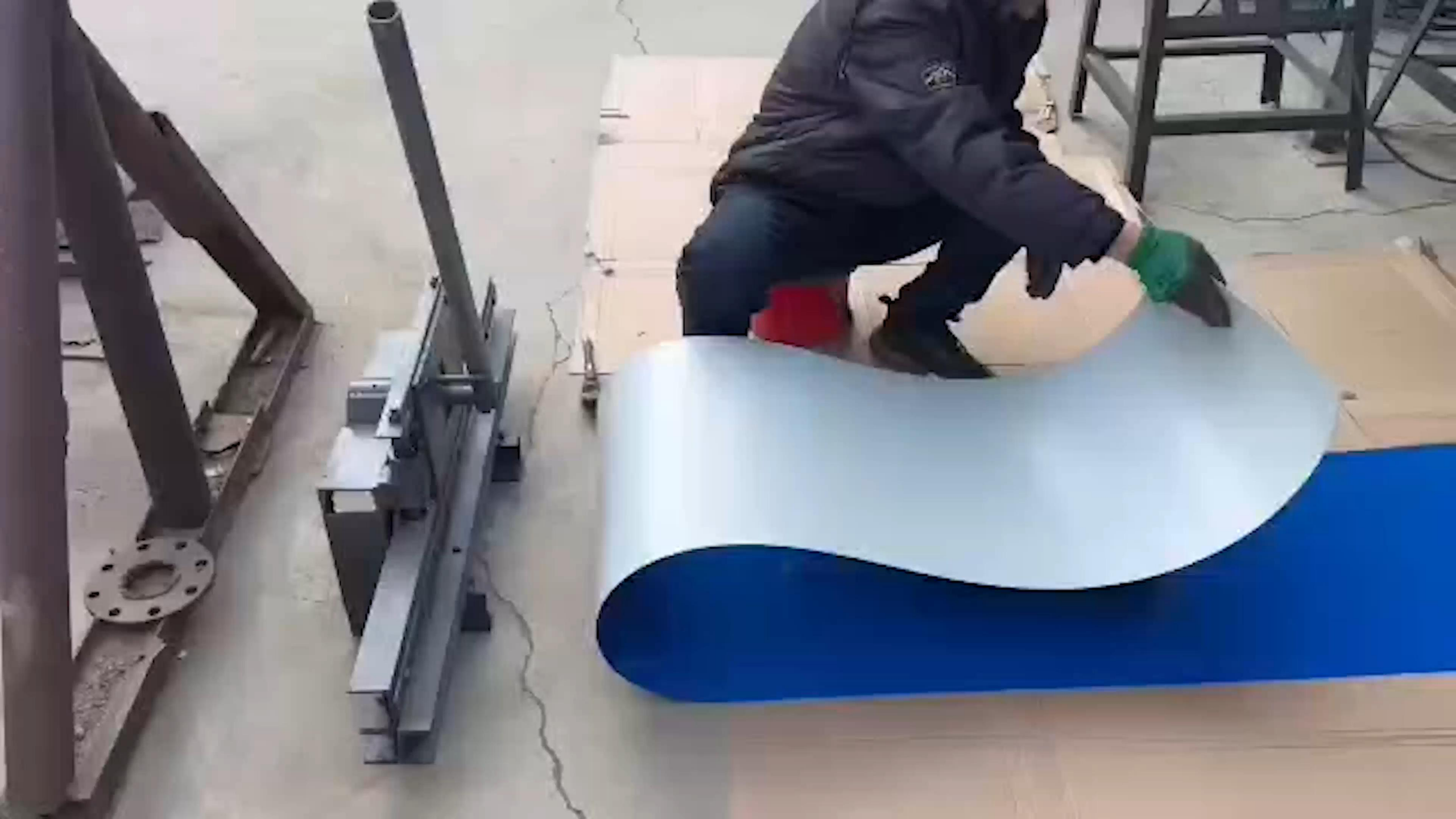
  - ✓ Stakeholders called for expansion to other villages and replication for other crops, such as maize and millet and to countries in the region.





Conclusion

- Mini-silos are an effective lever for transforming local value chains, reducing losses, and strengthening community resilience.
- Their success relies on an integrated approach: technological innovation + community engagement + institutional support.
- CERFAM, in collaboration with WFP China COE, remains committed to catalyzing this momentum at the continental level.



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