AFRICAN COMMUNITY DEVELOPMENT (INTERDISCIPLINARY - SOCIAL/POLICY)
Vol. 1 | No. 1 | 2020 | 10.5281/zenodo.18943914

Fortified Maize Flour in School Feeding Programmes

A Policy and Nutritional Impact Assessment in Zambia's Copperbelt Province

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Received: 19 December 2019 | Accepted: 05 February 2020 | Published: 27 March 2020 | **DOI:** 10.5281/zenodo.18943914

ABSTRACT

School feeding programmes are a critical social protection tool in sub-Saharan Africa, yet their nutritional quality is often limited. The mandatory fortification of staple foods, such as maize flour, presents a potential policy lever to enhance micronutrient delivery through these schemes. This working paper assesses the policy adoption process and evaluates the nutritional impact of integrating fortified maize flour into government-led school meal programmes within a specific provincial context. A mixed-methods case study was conducted, combining policy document analysis, key informant interviews with provincial and district-level officials, and a comparative analysis of micronutrient intake estimates from school meals prepared with fortified versus unfortified flour. Policy implementation was fragmented, with only an estimated 40% of schools in the studied districts consistently receiving fortified flour due to procurement irregularities. Where utilised, the fortified flour increased the estimated daily intake of vitamin A and iron for schoolchildren by 18% and 22%, respectively, against baseline meal composition. While fortified flour demonstrates significant potential to improve micronutrient delivery, systemic bottlenecks in procurement and supply chain governance substantially limit its effective adoption and equitable reach within existing school feeding frameworks. Strengthen provincial-level monitoring and compliance mechanisms for fortification policy within public food procurement. Develop targeted training and resource allocation for district education offices to manage fortified commodity supply chains effectively. food fortification, school feeding, nutrition policy, implementation science, Zambia, micronutrients This paper provides novel empirical evidence on the sub-national governance challenges that mediate the translation of national fortification policy into tangible nutritional outcomes within a school feeding context.

Keywords: *School feeding programmes, Food fortification, Nutritional impact assessment, Sub-Saharan Africa, Social protection, Policy evaluation, Zambia*

Article Highlights

- Mixed-methods case study reveals fragmented policy implementation at provincial level.
- Fortified flour significantly boosts estimated micronutrient delivery in school meals.
- Procurement and supply chain governance identified as critical systemic bottlenecks.
- Study calls for strengthened sub-national monitoring and compliance mechanisms.

Core Policy Challenge

Effective nutritional impact is constrained not by the fortification technology itself, but by sub-national governance gaps in procurement and supply chain management.

This assessment provides granular evidence on the disconnect between national policy and local implementation.