

INOVASI RESQ-NUTRI BOX : SMART NUTRITION EMERGENCY SYSTEM

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Article Info	ABSTRAK
Article History: Received 21/08/2026 Revised - Accepted 02/09/2026 Keywords: Bencana Intervensi Gizi Darurat Terintegrasi Pangan Lokal Resq-Nutri Box Fifth Keyword	Indonesia adalah salah satu negara paling rawan bencana di dunia, dimana anak-anak di pengungsian kehilangan akses terhadap gizi yang layak yang berdampak meningkatkan risiko stunting. Permasalahan utama bukan sekadar kurangnya makanan, tetapi bantuan pangan tidak spesifik untuk kebutuhan gizi anak; tidak praktis di kondisi pengungsian serta tidak ada sistem yang memastikan makanan benar-benar dikonsumsi. Artinya, masalahnya bukan hanya ketersediaan, tetapi juga efektivitas konsumsi. Tujuan penelitian ini untuk mengembangkan ResQ-Nutri Box, sebuah sistem intervensi gizi darurat terintegrasi, bukan sekadar produk makanan tetapi Smart Nutrition Package yang terdiri dari pangan lokal (tempe, ikan, kelor) dan siap konsumsi; NutriTrack Monitoring System (Kartu indikator konsumsi anak); serta Smart Packaging berbasis QR (edukasi orang tua). Metode yang digunakan Engineering Design Process (EDP) yaitu identifikasi kebutuhan, desain produk dan sistem, pembuatan prototipe, uji organoleptik, uji kepatuhan konsumsi (NutriTrack). Target capaian yaitu produk memenuhi $\geq 70\%$ kebutuhan gizi anak; tingkat penerimaan $\geq 80\%$; serta kepatuhan konsumsi meningkat melalui NutriTrack. Dampak yang diharapkan dalam jangka pendek pemenuhan gizi anak di pengungsian; Jangka menengah penurunan risiko stunting; Jangka panjang: model intervensi gizi darurat nasional. ResQ-Nutri Box dapat direplikasi di berbagai daerah karena berbasis bahan lokal dan teknologi sederhana. ABSTRACT <i>Indonesia is one of the most disaster-prone countries in the world, where children living in evacuation shelters often lose access to adequate nutrition, increasing their risk of stunting. The primary challenge is not merely food scarcity, but the provision of emergency food assistance that is not tailored to children's nutritional needs, is impractical in displacement settings, and lacks a system to ensure actual consumption. Therefore, the problem lies not only in food availability but also in the effectiveness of nutritional intake.</i> <i>This study aims to develop the ResQ-Nutri Box, an integrated emergency nutrition intervention system. Rather than being merely a food product, it is designed as a Smart Nutrition Package comprising ready-to-eat local foods (tempeh, fish, and moringa), a NutriTrack Monitoring System (a child dietary intake monitoring card), and Smart QR-Based Packaging that provides nutrition education for parents.</i> <i>The study employs the Engineering Design Process (EDP), including needs assessment, product and system design, prototype development, organoleptic evaluation, and consumption</i>

adherence testing using the NutriTrack system. The expected outcomes are a product capable of providing at least 70% of children's daily nutritional requirements, achieving an acceptance rate of at least 80%, and improving dietary adherence through the NutriTrack monitoring system.

The anticipated short-term impact is improved nutritional intake among children in evacuation shelters; the medium-term impact is a reduced risk of stunting; and the long-term impact is the establishment of a national model for integrated emergency nutrition intervention. The ResQ-Nutri Box is highly scalable and can be replicated across diverse regions because it is based on locally available food resources and simple, accessible technology.

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