



RECOMMENDATIONS OF THE INDONESIAN FORTIFICATION COALITION FOR A LARGE-SCALE FOOD FORTIFICATION POLICY IN THE NATIONAL DEVELOPMENT PLAN (RPJPN) 2025-2045

DEVELOPMENT OF AN ARCHIPELAGIC FOOD SYSTEM BASED ON RESOURCES AND LOCAL WISDOM AND IMPROVED NUTRITION THROUGH LARGE-SCALE FOOD FORTIFICATION (LSFF) TO ACHIEVE QUALITY AND PRODUCTIVE INDONESIAN HUMAN RESOURCES

The population of Indonesia in 2045 is estimated to be 318.96 million people living in various large and small islands throughout the archipelago, which is a country with mega biodiversity. The potential of its agro-ecosystems is able to support the food needs of the entire population, even the production of some commodities is the largest in the world. As an archipelagic country, it is necessary to manage a food system that relies on the diversity of biodiversity potential of inter-island food sources and the distinctiveness of the locality of each region. Maintaining food biodiversity is not only good for the environment, but will also save energy for food transportation in such a vast and separated country, reduce dependence on food imports, and can revive local economic potential through the development of industrialization (small and medium scale) of local food and the development of food corporations. Food sources are not only from land, but also from the abundant waters/sea ranging from various types of fish, seaweed, etc. Staple food sources are also not only rice, but could be tubers, sago, corn, sorghum, hotong, etc according to the potential of each archipelago. Each island or region also has its own food culture and local wisdom, including peculiarities in food storage, processing and serving. These various aspects should certainly be maintained in the food system of an archipelagic country.

The Development Agenda in the RPJMN 2020-2024 is to improve quality and competitive human resources which will be achieved through 7 approaches, three of which require support for food and nutrition improvements, namely: increasing productivity and competitiveness; poverty alleviation, and improving the quality of children, women and youth.

A WFP study (2021) shows that only 1% of Indonesians are unable to afford an adequate calorie diet, but as many as 48-57% of people cannot afford a healthy diet. Indonesia's biggest challenge today is no longer lack of energy and protein, but hidden hunger, in the form of micronutrient deficiencies, especially deficiencies in iron, iodine, folic acid, zinc, vitamin A, and other micronutrients. The potential economic loss is more than 50 trillion rupiah just from low work productivity alone due to Iron Deficiency Anemia (IDA), not including

health care costs due to severe micronutrient deficiencies.

Based on Riskesdas 2018 data, the prevalence of IDA in Indonesia is 23.7%. Meanwhile, according to WHO (2009), the prevalence of vitamin A deficiency in pregnant women in Indonesia was 17.1%, the risk of iodine deficiency in women of reproductive age was 22.1%, in pregnant women was 24.3%, and in lactating women was 23.9% (MOH 2013). According to the WHO report, micronutrient deficiencies (MDS) make a major contribution to the global burden of disease. It is estimated that 0.8 million deaths (1.5% of the total) can be attributed to iron deficiency each year, a 5-17% reduction in productivity in anemic factory workers and manual or heavy laborers, and its impact on impaired child growth and development (Mrimi et al. 2022). A recent study in Majene and Enrekang districts conducted by the Hasanuddin University Faculty of Medicine Team in 2022 revealed the prevalence of stunting was higher in goiter endemic areas than non-endemic areas and the average height of students in Enrekang district was significantly different between goiter endemic and non-endemic areas for the 7-9 year old group.

According to Milward (2017), an adequate diet of iodine, zinc and other multi-micronutrients together with adequate energy and protein and access to clean water and environmental hygiene and sanitation together affect linear growth, especially during pregnancy. Therefore, efforts to tackle micronutrient deficiencies integrated with efforts to increase energy and protein intake and WASH (Water, Sanitation and Hygiene) are critical.

Large-scale food fortification (LSFF) has been shown to be effective in reducing hidden hunger, while being highly cost-effective. According to Olson et al. (2021), food fortification was found to be the most cost-effective method at a cost of USD 66 USD per Disability-Adjusted Life Years (DALYs). The estimated health benefit-cost ratio was USD 17 for every USD 1 invested. The cost of food fortification to address iodine, vitamin A and iron deficiency in many countries is generally less than 0.5% of the product price, with no additional costs for distribution to consumers.

Considering the importance of wide-scale food fortification (LSFF), the Indonesian Food Fortification Coalition (KFI) proposes that food



**YAYASAN KEGIATAN PENGEMBANGAN
FORTIFIKASI PANGAN INDONESIA**

Komp. Bappenas A1 Jl. Siaga Raya, Pejaten
Jakarta 12510, Indonesia
Phone / 62-021-26966290
Email : kfi@kfindonesia.org

fortification be part of the long-term national strategy in Indonesia's RPJPN 2025-2045 as follows. Note that this proposal is integrated with

the food, agriculture-marine and health development approach based on the food system of an archipelagic country.

Recommendations for Policy (RPJPN) 2025-2045

Transformation of the national food system to achieve food security, independence and sovereignty through regionalization of food systems of archipelagic countries based on agroecosystems, resources and local wisdom. The policy directions taken are: (i) fulfillment of the basic right to food for all individuals, especially the poor in a sustainable manner; (ii) fulfillment of adequate, diverse food and nutrition in accordance with the guidelines for balanced, safe and affordable nutrition to ensure a healthy, active and productive life; (iii) increasing the intake of essential micronutrients to build quality and productive human resources

through the development of large-scale food fortification and biofortification (LSFF) supported by an effective institutional coordination forum for cross-actor cooperation; (iv) ensuring access and affordability of diverse, nutritionally balanced and safe food in the period of the first 1000 days of life (HPK) for the poor, living in 3T areas (underdeveloped, frontier and outermost), or affected by disasters; (v) implementing conservation agriculture, regenerative, adaptive and low-carbon agriculture, and (vi) developing food from the sea/water (blue food), bioeconomy for food and other future food potentials.